

**THE FAMILY’S FINANCIAL SUPPORT AS A “POISONED GIFT”: A FAMILY
EMBEDDEDNESS PERSPECTIVE ON ENTREPRENEURIAL INTENTIONS**

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Abstract

We argue that greater availability of financial support by the family for creating a new venture entails stronger financial and non-financial obligations. Cognizant of these obligations, potential founders anticipate negative performance implications for the planned firm and threats to the family system in the case of their non-fulfillment. We thus postulate that the formation of actual entrepreneurial intentions is less likely the greater the available financial support. We confirm this by studying a sample of 23,304 respondents from 19 countries and find the negative relationship to be dependent on family cohesion and on individual entrepreneurial self-efficacy.

Introduction

Scholars have undertaken intensive investigation of what drives individuals' entrepreneurial intentions, meaning the intention to create a new firm (cf. Schlaegel and Koenig 2014), and agree that the resources that are available to potential founders are crucial in that regard (Hindle, Klyver and Jennings 2009). Financial resources, for instance, are regarded as the *conditio sine qua non* for new venture creation (cf. Steier 2003). Family members, in turn, are often assumed to be the most relevant providers of financial resources (cf. Astrachan, Zahra and Sharma 2003; Bygrave, Hay, Ng and Reynolds 2003; Coleman and Robb 2011; Steier 2003) because financial capital from family members likely has important advantages such as lower transaction costs (Au and Kwan 2009), favorable interest and payback requirements (Steier and Greenwood 2000), and availability when other sources are not available (Steier 2003). Consequently, the literature tends to assume implicitly that the more money from the family is available, the more likely there are to be entrepreneurial intentions.

However, recent literature using a family embeddedness perspective which describes the intertwining of entrepreneurship and family (cf. Aldrich and Cliff 2003) provides initial evidence that this might not necessarily be the case. On the one hand, strong ties with family members as described by family embeddedness may indeed have advantages for potential entrepreneurs such as facilitated access to (financial) resources (Aldrich and Cliff 2003). On the other hand, accessing resources through strong family ties implies financial and non-financial obligations (Arregle, Batjargal, Hitt, Webb, Miller and Tsui 2015; Granovetter 1985; Uzzi 1997). These may include reciprocity demands, sense of duty, social indebtedness, and moral burden (Kohli and Kuenemund 2003). This points to a potential downside of family-provided financial capital and raises the question of whether the availability of financial capital from the family actually fosters or impedes entrepreneurship. In particular, how financial support by the family affects individual intentions to start a firm is not fully clear yet (cf. Chang, Memili, Chrisman, Kellermanns and Chua 2009; Matthews, Hechavarria and Schenkel 2012).

To address this gap we take a family embeddedness perspective and argue that potential entrepreneurs are aware of three main related issues: 1) that the more of a family's financial support is used to create a planned firm, the stronger the related obligations will be; 2) that these obligations are likely to impede the future performance of the planned venture (Au and Kwan 2009; Stewart 2003); and 3) that the consequences for the family system in the not unlikely case of non-fulfillment of those obligations will be severe (Arregle et al. 2015; Olson, Zuiker, Danes, Stafford, Heck and Duncan 2003). The availability of financial support by the family is thus a "poisoned gift": it is a "gift" that helps to overcome pressing resource constraints for new venture creation (Steier 2003), but it is "poisoned" in that it indicates strong embeddedness and related obligations (cf. Arregle et al. 2015; Batson and Powell 2003), which may have negative anticipated consequences for the planned venture (such as

impeded performance) and for the family. The greater the availability of this support, the more potential entrepreneurs will perceive it as “poisoned” and thus be less willing to use it. This leads us to postulate a negative relationship between the availability of the family’s financial support and individuals’ entrepreneurial intentions.

We also hypothesize that the relationship just described is moderated by three factors. First, it should be intensified by strong family cohesion which captures the emotional strength of family ties beyond the structural dimension of family embeddedness (Gulati 1998) and leads to even stronger obligations. Second, it should be weaker when a potential entrepreneur plans to include a co-founder from his or her family (cf. Dyer and Handler 1994) because he or she will then anticipate performance advantages (Schjoedt, Monsen, Pearson, Barnett and Chrisman 2013). This, in turn, will lead to enhanced confidence about fulfilling family embeddedness-based obligations. Third, confidence should also be higher, and our main relationship should thus also be weaker, when the potential entrepreneurs’ level of entrepreneurial self-efficacy, meaning their perceived entrepreneurial ability (Chen, Greene and Crick 1998), is high. We test these predictions on a sample of 23,304 individuals from 19 countries using multi-level mixed effect logistic regression and find overall support for our reasoning.

Our study offers several main contributions. First, we advance entrepreneurial intention literature by extending the knowledge about how the family’s financial support relates to entrepreneurial intentions (cf. Alvarez and Busenitz 2001; Basu and Parker 2001; Chang et al. 2009; Hughes 2004; Steier 2003); specifically, we provide family embeddedness-based theorizing and empirical evidence that the availability of financial support by the family can actually impede entrepreneurial intentions. This challenges the implicit assumption in the literature that more financial support is always better, particularly when it comes from the family (cf. Dyer, Nenque and Hill 2014; Fairlie and Robb 2008; Kim, Longest and Aldrich

2013). We further enrich general research on the formation of entrepreneurial intentions (cf. Schlaegel and Koenig 2014) by showing how different family- and individual-related moderators of our main relationship enhance or impede entrepreneurial intentions.

Second, we contribute to research on family embeddedness. We add to emerging literature about the potential downsides of family embeddedness (Arregle et al. 2015; Ermisch and Gambetta 2010; Uzzi 1997) by offering explicit theorizing and empirical findings about how family embeddedness-related obligations that arise when individuals would rely on their family's financial support impede the formation of entrepreneurial intentions. This complements existing findings that strong family ties can inhibit entrepreneurial action and cognition (Au and Kwan 2009; Khavul, Bruton and Wood 2009; Stewart 2003) and further highlights the importance of the family context when the embedded nature of entrepreneurial processes is studied (cf. Jack and Anderson 2002).

Third, our work advances existing research on entrepreneurial family teams and entrepreneurial families. We show that the plan to include a family co-founder enhances the formation of entrepreneurial intentions, which supports the claim that family involvement in entrepreneurial teams has positive (expected) outcomes (Schjoedt et al. 2013). Also, we address scholars in the field of transgenerational entrepreneurship in business families (e.g., Laspita, Breugst, Heblich and Patzelt 2012; Zellweger, Nason and Nordqvist 2012) as we indicate that intergenerational transmission of entrepreneurship could be impeded by the potential provision of financial support and related family embeddedness considerations.

Literature Review

The Family's Financial Support as an Antecedent of Entrepreneurial Intentions

Scholars agree on the paramount social and economic importance of new venture creation (Audretsch and Thurik 2000; Sternberg and Wennekers 2005; Wong, Ho and Autio 2005). Consequently, entrepreneurial intentions as central antecedents of entrepreneurial

activity have been investigated intensively (cf. Schlaegel and Koenig 2014). Although not all activity can be predicted by intentions, they are seen as the most effective and stable predictors of behavior (cf. Armitage and Conner 2001; Kautonen, van Gelderen and Fink 2015). Entrepreneurial intentions are defined as intentions to start a new self-owned firm (Krueger, Reilly and Carsrud 2000; Liñán and Chen 2009). Investigating entrepreneurial intentions is appropriate as starting a firm is not a reflex but is intentionally planned (Krueger et al. 2000).

Entrepreneurial intentions critically depend on several factors such as personality traits (Rauch and Frese 2007), entrepreneurial role models (Laspita et al. 2012), family business exposure (Carr and Sequeira 2007), and, importantly, the potential entrepreneur's ability to obtain and leverage necessary tangible and intangible resources, wherefore research should better integrate resource considerations and entrepreneurial intentions (Hindle et al. 2009). Human and social capital (Hindle et al. 2009; Schenkel, Hechavarria and Matthews 2009) as well as financial capital (Aldrich, Renzulli and Langton 1998) are regarded as most important. Acquiring and mobilizing financial capital are very difficult without an entrepreneurial track record but are perhaps the most critical tasks (Steier and Greenwood 2000); they can thus be regarded as the *conditio sine qua non* for new venture creation (cf. Steier 2003). Financial capital is generally defined as the funds (i.e. cash or other financial assets) that are owned or can be used by an individual (Basu and Parker 2001).

Potential entrepreneurs can rarely finance a new venture fully by themselves and thus need to raise capital elsewhere (Steier and Greenwood 2000). Although for instance bank loans may sometimes be most important (Au, Chiang, Birtch and Kwan 2014; Robb and Robinson 2012), literature tends to agree that informal family investors seem to predominate in new venture financing (Astrachan et al. 2003; Bygrave et al. 2003; Coleman and Robb 2011; Steier 2003). In fact, family financial capital, often characterized as quickly mobilized

(Dyer et al. 2014) and as patient capital (Rodriguez, Tuggle and Hackett 2009), is described as “the largest single source of start-up capital in the world” (Steier 2003, p. 598).

The availability of financial capital in general has been positively linked to self-employment (Fairlie and Robb 2008; Kim et al. 2013; Rodriguez et al. 2009). However, the role of family-provided financial capital in that context is under-researched and little understood (cf. Chang et al. 2009; Hughes 2004; Matthews et al. 2012; Rodriguez et al. 2009). The few existing studies tend only to use parental wealth as a proxy for financial support (e.g., Dunn and Holtz-Eakin 2000) or refer to the generic 3F (*family, friends and fools*) sources (Kotha and George 2012) and thus “ignore the family dimension of investment activity” (Steier 2003, p. 598). Even though empirical evidence is scarce and the underlying cognitive processes are unclear (cf. Basu and Parker 2001; Steier 2003), literature thus tends to assume that the availability of financial capital is positively related to entrepreneurial intentions. This, however, is not necessarily true because of family embeddedness considerations.

Entrepreneurial Intentions: The Role of Family Embeddedness

On a general level, social embeddedness describes the nature, depth, and extent of individuals’ ties with their environments and how such ties affect their cognition and behavior (cf. Dacin, Beal and Ventresca 1999; Granovetter 1985; Le Breton-Miller, Miller and Lester 2011). According to this perspective, actors are embedded in ongoing systems of social relations and are thus not “atomized decision-makers” whose behavior is independent of others (Aldrich and Cliff 2003, p. 577). The literature distinguishes between weak and strong, or embedded, ties (Granovetter 1985; Uzzi 1996). In contrast to weaker “arm’s length” relations, strong ties such as those with family members imply frequent exchanges and interactions between individuals (Granovetter 1973; 1985).

Family embeddedness represents a specific lens of social embeddedness as it refers to strong or embedded ties between the entrepreneur and family members (cf. Aldrich and Cliff 2003), thereby suggesting that the family and the business are strongly intertwined (see also Dyer and Handler 1994). Family embeddedness is thus an appropriate perspective to investigate the role of the family in the decision-making of (intentional) entrepreneurs (cf. Arregle et al. 2015).

Family embeddedness may stimulate entrepreneurial intentions thanks to enhanced recognition of opportunities (Aldrich and Cliff 2003), encouragement, the prospect of better firm performance, and facilitated access to and acquisition of critical resources (Chang et al. 2009; Uzzi 1999; Welsh, Memili, Kaciak and Ochi 2014). Examples of such resources are cheap labor, knowledge, emotional support, business contacts (cf. Brush, Greene, Hart and Haller 2001), and in particular, financial capital (e.g., Chua, Chrisman, Kellermanns and Wu 2011). In fact, Arregle et al. (2015) argue also that “the embeddedness of entrepreneurs increases as they draw upon their families for resources” (p. 4).

However, family embeddedness also creates constraints (cf. Arregle et al. 2015; Uzzi 1997; Werbel and Danes 2010). Specifically, the frequent interactions among strong ties establish expectations and obligations for exchange (Granovetter 1985). A main obligation is the need to reciprocate favorable behavior (Kohli and Kuenemund 2003). In fact, strong ties “contain an implicit principle of reciprocal obligations” (Aldrich 1999, p. 82), and norms of family and kin are believed to “revolve at one pole of exchange: long-term generalized reciprocity” (Stewart 2003, p. 385). These obligations, in turn, create social indebtedness, a sense of duty and a moral burden (cf. Kohli and Kuenemund 2003). Applied to our case, the family’s financial support for potential entrepreneurs thus does not seem to be an unconditional “gift.” The motivations for providing that support are likely to include but are not limited to, for instance, altruism (cf. Batson and Powell 2003); business- or non-business-

related obligations and an expected financial and/or non-financial return are very likely to exist (Arregle et al. 2015; Arregle, Hitt, Sirmon and Very 2007). Even when altruism, defined as action that benefits others at relative cost to oneself, is present, likely in the form of “kin altruism” in our case (cf. Zwick and Fletcher 2014), this may still imply incentives to reciprocate, as people’s actions are guided by an explicit or implicit obligation to treat others as they are treated (cf. Schulze, Lubatkin, Dino and Buchholtz 2001). In general, the obligation to “return the favor” applies in particular to potential founders who do not have sufficient funds of their own to create a new firm because having insufficient resources and conditional giving by others are closely related (Kohli and Kuenemund 2003).

Hypothesis Development

Availability of Financial Support by the Family and Entrepreneurial Intentions

The obligations and particularly reciprocity demands that will emerge because of family embeddedness when potential founders would utilize their family’s financial support are likely to have unfavorable consequences. First, *inter vivos* money transfers between family members likely constitute a “bribe” for children to provide parents with services and treat them better (Kohli and Kuenemund 2003, p. 128), beyond the repayment of the money. The need to reciprocate the favorable act of helping to overcome the resource constraints related to the creation of a new venture may result in a resource-intensive “need for conspicuous generosity” (Stewart 2003, p. 385) in a “web of obligations” (Stack 1974, p. 39). An example is normative pressure to support the extended family (non-)financially (cf. Khavul et al. 2009). This, in turn, would put the logic of business at odds with the logic of kinship (Stewart 2003), which could lead to conflicts related to the new venture’s strategy and development (Au and Kwan 2009) and ultimately impede performance. For instance, entrepreneurs must resist the pressure to support their extended families if they wish to reinvest in their firms (Stewart 2003). The probability of a new venture’s success may also be undermined because

entrepreneurs who rely on financial support by their family may be forced to seek legitimization for their investments by investing in assets with high prestige but low productivity (Stewart 2003). In addition, the pressure to reciprocate the favorable behavior may induce them to choose less risky strategies with less upside potential. To conclude, because reciprocity demands likely interfere with market principles, we argue that potential founders expect detrimental effects on the future performance of the planned new venture if they would utilize financial support by the family.

Second, starting a new firm involves high risk and high failure rates (Shepherd, Douglas and Shanley 2000); the likelihood that financial and non-financial obligations cannot be fulfilled is thus considerable. This, in turn, can have severe consequences. The partial or complete loss of the family's money would not only threaten family members' financial well-being and likely lead to disputes and anger (Rosenblatt 1991) but it would also mean that obligations could not be fulfilled, that social indebtedness could not be repaid, and that the moral burden could not be shouldered (Kohli and Kuenemund 2003). This violates the norm of reciprocity, which is invariably disruptive of the family system (Gouldner 1960). When entrepreneurs fail to reciprocate this can not only reduce their legitimization (Stewart 2003) and trustworthiness (Lumpkin, Martin and Vaughn 2008) but can also put family relationships at risk and threaten the survivability of the family system (Arregle et al. 2015; Olson et al. 2003). Thus, "family peace" may be threatened, which is critical given family members' desire to preserve family harmony (Kellermanns and Eddleston 2004). Individuals are likely to be aware of these downsides and will thus not risk the family's wealth and the survival of the family system by using family assets just "in hopes of success" (Gudmunson, Danes, Werbel and Loy 2009, p. 1099).

Third, even when the entrepreneur is very successful and creates a windfall profit, satisfying financial supporters in the family may be difficult. In such a case, family members

may have differing perceptions of what everyone's fair share of the profit should be compared with what was originally agreed upon; even paying back all the money at the agreed interest rate or supporting the extended family as initially expected by family members may leave them unhappy and cause conflict (Steier 2003).

Finally, intentional founders are assumed to have certain underlying motives such as the desire for autonomy, independence, freedom, and financial success (cf. Carter, Garnter, Shaver and Gatewood 2003). These motives, however, seem quite difficult to satisfy by becoming an entrepreneur under the conditions just described. For instance, when family obligations interfere with the business, the entrepreneur's decision-making latitude and autonomy are likely to be reduced significantly.

To conclude, we argue that the greater the availability of financial support by the family for creating a new venture, the stronger family embeddedness-related obligations. Potential entrepreneurs will be aware of those obligations and their serious downsides and will anticipate potential consequences. They will thus increasingly perceive the primary source of new venture financing as "poisoned" and will be less and less willing actually to use it. With the commonly used source of finance being more and more unattractive, even though it is comparatively easy to acquire and has other helpful advantages, the likelihood that entrepreneurial intentions are actually formed will be lower:

H1: The greater the availability of financial support by the family for an individual's planned new venture the lower the likelihood that the individual actually forms entrepreneurial intentions.

Family Cohesion as a Moderator

If our reasoning is correct, we expect this negative relationship to be even stronger when family cohesion is high. This is because the family embeddedness literature implicitly assumes that structurally positioning actors in a network of family relationships is sufficient; in other words, ties between two types of family members (e.g., children and parents) are

assumed to be invariably strong. However, families differ in terms of the strength of emotional bonding and closeness among members (Kohli and Kuenemund 2003; Lansberg and Astrachan 1994), and social bonds between family members may deteriorate even in intact nuclear families (Aldrich and Cliff 2003). This suggests that socio-cognitive and emotional aspects of inter-actor ties (cf. Dacin et al. 1999) need to be considered as well; in other words, the rather structural perspective needs to be complemented with a relational perspective (cf. Tatli, Vassilopoulou, Özbilgin, Forson and Slutskaya 2014). To achieve this, the concept of family cohesion is appropriate, as it refers to the degree to which family members are emotionally attached and committed to each other (Olson and Gorall 2003). Although family cohesion may seem desirable, for instance because cohesive families may have lower standards of performance among members (Long and Mathews 2011) and may be more understanding and exhibit stronger solidarity (Zahra 2012), there may also be a downside (cf. Penney and Combs 2013).

Specifically, even when parents who have strong emotional bonds with their children (i.e. in cohesive families) are more generous and altruistic, reciprocity obligations will still exist (Schulze et al. 2001; Zwick and Fletcher 2014). Also, the level of group cohesion has been found to be related to the extensiveness of reciprocal obligations among members (Long and Mathews 2011); logically, the social indebtedness and moral burden because of family embeddedness are likely to be even stronger when family cohesion is high. Cohesive families may also have a more collectivist than individualist orientation, with interactions characterized by stronger reciprocity (Lansberg and Astrachan 1994). When reciprocity obligations are stronger, it is more likely that family and business logic are at odds, and the planned venture's future performance is more likely to be compromised. Moreover, stronger obligations are more difficult to fulfill; negative consequences in the case of non-fulfillment are thus more likely.

Second, cohesiveness triggers feelings of responsibility for preserving and enhancing family assets (Lansberg and Astrachan 1994), and the sharing of norms, values and beliefs in cohesive families creates strong trust among members (Ensley and Pearson 2005). Thus, when family assets are partly or completely lost, the entrepreneur has not met responsibility expectations; this failure to reciprocate, to fulfill social duties, and to pay back social debts (Kohli and Kuenemund 2003) is likely to destroy trust and to threaten a family system's well-being to an even greater extent (Gouldner 1960). Members of cohesive families also need to exhibit "clique or club-like behaviors" caused by moral pressure within this type of family (Kotha and George 2012, p. 529). Members who fail to do so by failing to reciprocate risk ostracism (Lin 1999). We argue, in turn, that failing to act as the family desires, and ultimately being sanctioned or even ostracized by the family in extreme cases, is likely to constitute a major threat to familial peace. This suggests that the negative consequences in the case of non-fulfillment of obligations are more severe in cohesive families.

Third, when an entrepreneur is very successful, members of cohesive families are more likely to feel entitled to gain their "rightful" share of the whole profit, above and beyond what was originally agreed upon, than family members in less cohesive families, because of the more collectivist orientation in cohesive families (Lansberg and Astrachan 1994).

Finally, these arguments suggest that creating a business with financial support by a cohesive family would be in even stronger opposition to the most common motives for becoming an entrepreneur, such as autonomy and independence, than with support by a less cohesive family. Thus, the perceived and anticipated family embeddedness-related downsides of the family's financial support are even greater when family cohesion is high; family cohesion thus negatively moderates our main relationship. Formally:

H2a: When family cohesion is high, the negative relationship between the availability of financial support by the family and an individual's entrepreneurial intentions is stronger (i.e. more negative) than when family cohesion is low.

The Planned Inclusion of a Family Co-Founder as a Moderator

We also argue that the planned inclusion of a family co-founder acts as a positive moderator. This is because potential founders anticipate important relevant advantages that family-based teams, a common phenomenon and a key aspect of the family-entrepreneurship intersection (Dyer and Handler 1994; Schjoedt et al. 2013), possess. First, the plan to include a family co-founder is likely to be sparked by goal congruence, shared identity, and a shared vision (Discua-Cruz, Howorth and Hamilton 2013). The potential entrepreneur and the family member that is planned to be included should have greater tacit understandings and consensus regarding the firm's strategy (cf. Ensley and Pearson 2005), and thus potential entrepreneurs can expect that they will be more effective and successful (Farrington, Venter and Boshoff 2012). Also, we argue that they should anticipate less emotional conflict and more efficient decision-making, which are two characteristics of entrepreneurial family teams (Eisenhardt and Schoonhoven 1990; Ucbasaran, Lockett, Wright and Westhead 2003). When potential founders plan to include a family co-founder, they anticipate further general performance advantages; for instance, family co-founder commitment to a firm is likely to be high and they may put the firm's interests before their own (Eddleston and Kellermanns 2007); in fact, founding teams that include a family co-founder are assumed to have performance advantages (cf. Schjoedt et al. 2013). Taken together, these positive expectations should increase potential entrepreneurs' perceived likelihood that the family's financial support will be paid back and that other family embeddedness-based obligations, such as subsidizing the extended family, will be fulfilled.

Second, potential entrepreneurs should also expect fewer problems in terms of fulfilling family demands, which alleviates the expected negative family embeddedness-related aspects of utilizing the family's financial support because they and the family co-founder that is planned to be included should normally both follow a familial logic (Miller, Le Breton-Miller

and Scholnick 2008). They should thus exhibit better stewardship of the family's wealth and well-being (Dyer 2006); the plan to include a family co-founder may also be based on the wish to increase the family's wealth because of a shared commitment to entrepreneurial stewardship of family assets (Discua-Cruz et al. 2013).

Third, because of the shared entrepreneurial stewardship of the family's assets that occurs when a family member is planned to be included, potential entrepreneurs may expect an enhanced legitimacy of the founding team in general. Planning to have an additional family member on board may also lead potential entrepreneurs to anticipate a higher bargaining power of the team versus family members who provide financial support. For instance, it could better counter high compensation demands from family members in the case of great success, which would also increase the founding team's autonomy and independence. Potential founders who plan to include a family co-founder are also likely to expect that they can share the moral burden of fulfilling family embeddedness-related obligations with their family co-founders; in the case of failure to reciprocate, this particular burden could be shared as well. In sum, potential founders who plan to include a family co-founder anticipate the above-mentioned advantages, which implies that they perceive the disadvantages caused by family embeddedness as less severe:

H2b: When individuals plan to include a family co-founder, the negative relationship between the availability of financial support by the family and their entrepreneurial intentions is weaker (i.e. less negative) than when individuals do not plan to include a family co-founder.

Individuals' Entrepreneurial Self-Efficacy as a Moderator

We further theorize that entrepreneurial self-efficacy (cf. Bandura 1997) is another positive moderator. Entrepreneurial self-efficacy is one of the main drivers of entrepreneurial intentions (McGee, Peterson, Mueller and Sequeira 2009; Schlaegel and Koenig 2014); it reflects an individual's conviction that he or she will be able successfully to perform the relevant entrepreneurial tasks, such as the creation and management of a new enterprise (Chen

et al. 1998). Potential entrepreneurs with a high level of entrepreneurial self-efficacy are therefore very confident of leading their planned venture to success (Chen et al. 1998; Krueger et al. 2000). In fact, entrepreneurial self-efficacy has been positively linked to new venture performance (Hmieleski and Corbett 2008) and new venture growth (Baum and Locke 2004). This affects our reasoning in different ways.

First, when potential entrepreneurs are convinced that they have the entrepreneurial skills and abilities to become a successful entrepreneur, this signals their confidence that they will be able to fulfill the financial and non-financial obligations induced by family embeddedness. The fear of not being able to reciprocate favorable behavior thus looms less large than when entrepreneurial self-efficacy is low. The perceived risk of threatening the family system and family well-being by not being able to shoulder the moral burden and repay social debts will thus be lower (Olson et al. 2003; Steier 2003).

Second, as a result, potential entrepreneurs with high entrepreneurial self-efficacy will not put family assets and family relationships at risk by simply hoping for success (Gudmunson et al. 2009) but will be truly optimistic and convinced of their success. They will likely base their future business decisions on economic and entrepreneurial considerations and less on legitimacy or justification concerns, which enhances the probabilities of success even more, and makes them believe that they can act independently and autonomously, which satisfies general entrepreneurial motives (Carter et al. 2003). In sum, we argue that potential founders with high entrepreneurial self-efficacy will be very confident of being able to fulfill family embeddedness-related obligations and will anticipate that their entrepreneurial motives will be fulfilled. The negative relationship between availability of family financial support and entrepreneurial intentions will thus be weaker (i.e. positively moderated). Our conceptual model is illustrated by the figure below.

H2c: When individual entrepreneurial self-efficacy is high, the negative relationship between the availability of financial support by the family and their entrepreneurial intentions is weaker (i.e. less negative) than when entrepreneurial self-efficacy is low.

Insert Figure 1 about here

Method

Sample

We used a large student sample generated by the GUESSS project in 2011.¹ In the past few years, several studies based on GUESSS data from 2006, 2008, and 2011 that investigate entrepreneurial intentions (e.g., Laspita et al. 2012; Lima, Lopes, Nassif and Silva 2014; Sieger and Monsen 2015; Zellweger, Sieger and Halter 2011) have been published. Student samples are commonly used in such research because scholars advocate studying individuals at the earliest possible stage of entrepreneurial activities (Kim, Aldrich and Keister 2006), which applies to university students who have not yet made their first actual career choice. This allows a true prospective view without retrospective bias (Carter et al. 2003) and allows a nuanced light to be shed on the formation of entrepreneurial intentions. In addition, student samples represent a homogeneous population in terms of age and qualification (Liñán and Chen 2009). Student or adolescent samples are extensively used in entrepreneurship research (cf. Schlaegel and Koenig 2014). For our purposes, investigating students is particularly useful because the role of the family in the context of resource provision for entrepreneurial activities is generally very important (Basu and Parker 2001; Steier 2009), and it is particularly important for young individuals (Aldrich and Kim 2007), as they have normally not yet been able to accumulate the financial resources necessary for new venture creation by themselves.

In GUESSS, an English survey instrument was developed by a core team of senior faculty members at a major Swiss university. All the researchers involved were fluent in

¹ GUESSS (Global University Entrepreneurial Spirit Students' Survey) investigates students' career choice intentions across the world. See www.guesssurvey.org.

English and were assisted by a native speaker.² An email invitation to participate in the online survey was distributed to project teams in 26 countries and then forwarded to students at approximately 500 universities; not all countries and universities started data collection at the same time (starting dates were between March and May 2011 and closing dates between April and July 2011). In total, 93,265 responses were collected.³ The GUESSS survey asked all students to, “Please indicate if and how seriously you have been thinking about founding an own company.” The response options were “1) never”, “2) sketchily”, “3) repeatedly”, “4) relatively concrete”, “5) I have made an explicit decision to found a company”, “6) I have a concrete time plan when to do the different steps for founding”, “7) I have already started with the realization”, “8) I am already self-employed in my own founded firm”, and “9) I have already founded more than one company, and am active in at least one of them”. Detailed questions regarding the availability of family financial support and the planned inclusion of a family co-founder were not posed to students who had ticked options 1 or 2. This “minimum threshold” of having given the creation of an own firm at least some basic thought was introduced to ensure that students answered further questions with adequate care and knowledge (cf. Thompson 2009). This reduced the sample by more than 50 percent. In addition, we excluded those students who had already created a firm and who came from countries for which we could not retrieve data for all our country-level control variables. We only used questionnaires in which all necessary items received responses. The dataset finally consisted of 23,304 responses from 19 countries.

² Following a back-translation procedure, the German and French versions were also prepared (with the aid of two bilingual native speakers who were not involved in the original survey development). Some GUESSS country teams translated the English survey into their own preferred language and were requested to apply the same procedure. The translated versions were reviewed and checked for categorical and functional equivalence by the GUESSS core team.

³ In most countries, students could win iPads, travel vouchers, or other items. GUESSS reports a response rate of 6.3 percent (Sieger, Fueglistaller and Zellweger 2011). This compares favorably with previous GUESSS editions and with other online student surveys (Porter and Whitcomb 2003). It is likely to be an underestimation as not all universities necessarily invited all their enrolled students. Unfortunately, reliable estimates are not available for all universities. All GUESSS country teams were required to comply with any ethics-related requirements in their respective countries. Assistance and support for the corresponding applications were provided by the GUESSS core team.

Our data are clustered as our individual-level observations (level 1) are nested within countries (level 2). Combining individual-level variables and country-level variables in the same empirical models, as we do, may produce biased and inefficient parameter estimates because same-level observations are not random; thus, a multi-level mixed-effects regression approach is recommended, as it leads to accurate estimations because it includes both random and fixed effects (Rabe-Hesketh and Skrondal 2008). As our dependent variable is binary, we applied multi-level mixed effects logistic regression (“xtmelogit” in Stata).

Variables

Entrepreneurial Intention. We used a GUESSS variable that has already been used in previous GUESSS-based publications (Laspita et al. 2012; Zellweger et al. 2011). Students were asked: “Which career path do you intend to pursue *right after completion of your studies*, and which career path *5 years after completion of your studies*? Only choose 1 option for each point in time.” In line with Zellweger et al. (2011), we chose to use the second question (see also Peterman and Kennedy 2003; Schroeder, Schmitt-Rodermund and Arnaud 2011). This is because entrepreneurs typically work elsewhere, for instance to gain relevant work experience or to build up a network, before they start their own business (cf. Brockhaus and Horwitz 1986; Krueger et al. 2000; Raffiee and Feng 2014), which can also be seen in the 2011 GUESSS sample where students often intend to become employees directly after studies and entrepreneurs five years later (cf. Sieger et al. 2011). Students could choose from a comprehensive list of career paths, and we coded the entrepreneurial intention variable as “0” if students selected one of the non-entrepreneurial options (e.g., working in a small, medium-sized, or large firm, working as a researcher at a university, working in public service, or not pursuing a professional career at all). It was coded “1” if students selected the option “as a founder/foundation of an own firm” (for a similar approach see Laspita et al. 2012).

Availability of Family Financial Support (AFFS). To assess the extent to which financial support by the family would be available for the planned new venture, we used the GUESSSS question: “Please indicate to what extent the following statements about your family's support for your *intended* entrepreneurial activity apply to you.” This prompt ensured that respondents took a prospective view when assessing the availability of financial support by the family. Items and framing are based on existing definitions and operationalizations of family-provided financial capital (cf. Aldrich and Kim 2007; Danes, Stafford, Haynes and Amarapurkar 2009; Steier 2003). Here, we follow the literature and assume that support is not only available but that potential entrepreneurs are also in actual need of it (cf. Au et al. 2014; Cressy 1996). The items were: “My parents/family provide me with debt capital (capital that bears regular interest payments and that I have to repay)”, “My parents/family provide me with equity capital (capital without regular interest payment that may be lost in the case that the business fails)”, and “The capital provided by my parents/family has favorable and flexible conditions (e.g., low interest rates or long pay back periods)”, with answers ranging from 1 (strongly disagree) to 7 (strongly agree). For the actual measure we used the average value of the three items. Cronbach’s alpha was 0.85 (factor loadings between 0.86 and 0.90).

Moderator Variables. For *family cohesion* (H2a) we used four items from the FACES III scale (Olson 1986): “Family togetherness is important,” “Family members feel very close,” “When family gets together, everyone is present,” and “Family members ask each other for help.” Answers ranged from 1 (strongly disagree) to 7 (strongly agree). Cronbach’s alpha reached 0.86 with factor loadings between 0.80 and 0.91. For the *planned inclusion of a family co-founder* (H2b) we used two questions. The first was: “Do you plan to found your company with partners?” If students chose “yes,” they were asked a second question: “Where do you recruit your partners from?” One of the options was “Relatives/family circle (parents, siblings).” We combined those items into a binary variable coded “1” (planned family co-

founder), or “0” (no planned family co-founder). The average value was 0.18 (standard deviation=0.38). For *entrepreneurial self-efficacy* (H2c), we used three items based on previous studies that captured students’ perceived confidence in their abilities, capabilities, and skills in terms of becoming a successful entrepreneur (cf. Chen et al. 1998; Krueger et al. 2000; McGee et al. 2009). The reverse coded prompt was: “Please indicate to what extent the following issues represent a barrier to founding a company for you.” These were “Having the necessary skills and capabilities,” “Having relevant technical know-how,” and “Lack of the right business idea.” Cronbach’s alpha reached 0.81 (factor loadings between 0.76 and 0.91).

Control Variables. We controlled for students’ *age* and *gender* (0=male, 1=female) (Schroeder et al. 2011). As the proximity of a career choice decision might affect intentions (Lee, Wong, Foo and Leung 2011), we controlled for *study level*. We used dummy variables for *undergraduate (bachelor)* and *graduate (master)* level (“1” if the respective level applied; “0” if not; PhD level as holdout category). We also accounted for the *field of study* whereby we followed the classification applied in the GUESSS project (see Sieger et al. 2011) and used three dummy variables for *business/economics*, *natural sciences*, and *social sciences* (“1” if the respective field applied; “0” if not; “other” as holdout category). To account for *entrepreneurship education* (Souitaris, Zerbinati and Al-Laham 2007), we used a dummy variable to indicate whether the student had attended any entrepreneurship courses or seminars (“1” if yes, “0” if no). We also considered students’ *career motivations*. The GUESSS survey asked students: “How important are the following motives for your future work and career path?” 16 motives based on Carter et al. (2003) and Kolvereid (1996) were listed, such as “challenge myself”, “financial security”, or “realize my own dream” (all anchored from 1=very unimportant, 7=very important). We performed an exploratory factor analysis with varimax rotation; applying face validity, we labeled the two strongest extracted factors “*achievement motivation*” (4 items, Cronbach’s Alpha=0.79) and “*challenge*

motivation” (3 items, Cronbach’s Alpha=0.74). We controlled for *parents’ entrepreneurial status* (Laspita et al. 2012) with a dummy variable (“1” if the status applied, “0” if not). The relevance of financial capital may vary depending on the planned firm’s *industry sector*; building on students’ responses to the question “*In which industry will your company mainly be active in?*” we created and added two dummy variables for *service* and *manufacturing* sectors (“1” if the respective sector applied, “0” if not; “other” as holdout category). To control for economic country-level differences, we included each nation’s gross domestic product per capita (*GDPPC*) and its *unemployment rate*. As entrepreneurial intentions are embedded in the cultural context (Liñán and Chen 2009), we controlled for three cultural dimensions: *group collectivism*, *uncertainty avoidance* (Mueller and Thomas 2001), and *performance orientation*, which is based on the need for achievement (McClelland 1965).⁴

Data Quality Tests

To test the validity and distinctiveness of our measures, we first applied Harman's one-factor test (Harman 1967). An exploratory factor analysis with all study items revealed a 10-factor solution, accounting for 63.84 percent of total variance (first factor: 16.97 percent). These results, and in particular the fact that no factor explains the majority of variance, provide initial evidence that our measures are empirically distinguishable. Second, a confirmatory factor analysis with all our independent and moderator variables showed a good fit ($\chi^2(39)=6367.522$, RMSEA=0.042, CFI=0.976). The fit of a one-factor structure ($\chi^2(44)=94139.995$, RMSEA=0.151, CFI=0.645) was significantly worse (difference in $\chi^2=87772.473$, $df=5$, $p<0.001$). This further shows that our measures are empirically distinguishable and may also provide a first indication that common method bias is not a very

⁴ GDP per capita data are taken from the International Monetary Fund (IMF) World Economic Outlook database (see <http://www.imf.org/external/index.htm>). GDP data for Liechtenstein were not available there. Unemployment rates are taken from the CIA World Factbook (see <https://www.cia.gov/library/publications/the-world-factbook/index.html>). For the cultural dimensions we used corresponding indices from the GLOBE project (House, Hanges, Javidan, Dorfman and Gupta 2004). These were not available for Belgium, Chile, Estonia, Luxembourg, Pakistan, and Romania. This reduced our sample to 19 countries (Argentina, Austria, Brazil, China, Finland, France, Germany, Greece, Hungary, Ireland, Japan, Mexico, the Netherlands, Portugal, Russia, Singapore, South Africa, Switzerland, and the UK).

serious concern. To mitigate common method bias concerns further we used the common latent factor (CLF) approach (Podsakoff, MacKenzie, Lee and Podsakoff 2003). We allowed the items of our independent and moderator variables to load both on their theoretical constructs and on an uncorrelated common factor. Adding this factor did not improve model fit significantly; all original factor loadings remained significant. Moreover, Siemsen, Roth and Oliveira (2010) have shown that common method bias usually deflates interaction effects. We infer that finding significant interaction effects, as we did, may thus be a preliminary signal that common method bias might not be a very serious concern. Multicollinearity concerns are mitigated because the variance inflation factors (VIFs) of our independent and moderator variables did not exceed 1.239 (Hair, Black, Babin, Anderson and Tatham 2006). Social desirability concerns are alleviated because respondents were assured of strict confidentiality and because our variables were spread over the long GUESSS survey, which reduces the probability that respondents anticipated our research question and adapted their answers correspondingly (Podsakoff et al. 2003). We tested for potential endogeneity by using a two-stage least squares approach with multiple instrumental variables (Bascle 2008). Instrumental variables should be significantly correlated with the potentially endogenous variable (i.e. availability of family financial support) but not with the dependent variable (Kennedy 2008). We identified several variables in the GUESSS dataset that met these criteria through a correlation analysis. Then, we selected those where we would expect a correlation with AFFS and a non-correlation with our entrepreneurial intention variable also from a conceptual point of view: the industry sector dummy variable “agriculture,” GLOBE “power distance,” and “exchange student status”.⁵ Using these three variables we computed

⁵ The agricultural sector can be characterized by long-term and stable returns (Brewton, Danes, Stafford and Haynes 2010) which should be appealing to family members who might provide financial support. Also, family financing is particularly important for new ventures in this industry (Alsos, Carter and Ljunggren 2014). This suggests a positive correlation with AFFS. For power distance, we note that when a society accepts power differences between members and values hierarchy (Hofstede 2001), this could lead to lower AFFS (as the “more powerful” - parents - might be less willing to support the “less powerful” - children). Doing an exchange

the estimated values of the availability of the family financial support variable and then used those values to estimate a regression model for our entrepreneurial intention variable.⁶ The Durbin-Wu-Hausman chi-square test and the Wu-Hausman F-test were not significant (both $p=0.336$), which mitigates endogeneity concerns. We did not test for potential non-response bias by comparing early and late respondents (Oppenheim 1966). Because of the GUESS data collection procedure involving different starting and closing dates of countries and universities, it was not possible to identify early and late respondents in a reliable way.

Results

Means, standard deviations, and Pearson correlations are shown in Table 1. The correlations of our independent, dependent, and moderator variables are at or below 0.206 in magnitude, which indicates no apparent shared variance concern (Hair et al. 2006).

Insert Table 1 about here

Table 2 shows the results of our multi-level mixed effects logistic regression models. Model 1 includes our control variables only. Several control variables are significant, such as age (negatively) and having entrepreneurial parents; the latter is positively and significantly related to entrepreneurial intentions. Of our five country-level control variables, GDP per capita and unemployment are significant in most models (both negatively). In Model 2, we added the availability of the family's financial support variable (AFFS) and found it had a significant and negative relationship with entrepreneurial intention (coeff=-0.094, $p<0.001$). This supports Hypothesis 1. In Model 3, we added the main terms of our moderator variables. The interaction terms to test our moderation hypotheses were added in Model 4. The

term, in turn, constitutes a considerable financial investment that is very likely to be financed by parents or family members. For exchange students, it might thus be more likely that parents or family members would also support an entrepreneurial endeavor. For all these three variables, we believe there are no clear and convincing arguments why they should make the formation of entrepreneurial intentions more or less likely.

⁶ This was done by using the `ivreg2/ivendog` commands in Stata 13.

interaction between AFFS and family cohesion is significant and negative (coeff=-0.036, $p<0.05$), confirming Hypothesis 2a. The interaction term of AFFS and the family co-founder variable is not significant (coeff=-0.003, $p>0.05$); we thus cannot support Hypothesis 2b. The AFFS-entrepreneurial self-efficacy interaction term is positive and significant (coeff=0.030, $p<0.05$), providing support for Hypothesis 2c.

To assess incremental model fit, we conducted pairwise likelihood ratio (LR) tests and found that adding predictors always improved model fit significantly ($p<0.05$). To facilitate the interpretation of our significant interaction effects we followed Ai and Norton (2003) and plotted the marginal effects of the moderator variables using the “marginsplot” command in Stata. In both Figures 2 and 3, the main relationship between AFFS and entrepreneurial intentions is negative for both values of the moderator, whereby Figure 2 shows the negative moderation effect of family cohesion and Figure 3 shows the positive moderation effect of entrepreneurial self-efficacy. The plots therefore strongly support our findings.

Insert Table 2 and Figures 2 and 3 about here

Tests for Robustness and Alternative Explanations

To assess the empirical robustness of our results, we first ran binary logistic regression models that did not take the multi-level data structure into account (see Laspita et al. 2012) and found unchanged results. Then, as an alternative multi-level estimation method, we applied the “meqrlogit” procedure in Stata 13 and found unchanged results as well.⁷ In addition, we ran our models without our country-level control variables; also, in a separate test, we did not use our country-level control variables but added country dummies for all countries except one (the holdout category). In both cases, our results were unaffected. Also, we assessed whether our results were driven by exchange students that were included in their

⁷ We also used the “svy: logit” command (with country as the primary sampling unit) instead of the “xtmelogit” command and found stable results.

respective host country. Neither excluding all exchange students (1.89 percent of the total sample) nor adding exchange student status as a control variable changed our results. Furthermore, we split our sample according to the question that asked students if and how seriously they had been thinking about founding their own company. One group contained those who ticked options 3, 4, and 5, and the other group contained those who had a more concrete plan. The relationship between AFFS and entrepreneurial intentions remained negative and significant in both subsamples ($p < 0.05$). Furthermore, we tested for a curvilinear effect of AFFS by adding its squared term; the results show that a curvilinear effect does not exist. Also, we re-ran our models three times whereby we used a different single item of the AFFS measure as the independent variable each time. In all those models, the single AFFS item was always negatively and significantly related to entrepreneurial intentions.

We note that we did not explicitly consider intention theories such as the theory of planned behavior (TPB) (Ajzen 1991), which is in line with numerous other studies (e.g., Hmieleski and Corbett 2006; Schroeder et al. 2011; Virick, Basu and Rogers 2014; Walter, Parboteeah and Walter 2013; Wilson, Kickul and Marlino 2007). However, to test the reliability and validity of our conceptual and empirical arguments we checked whether our results hold in a TPB setting. We thus added established measures for attitude toward entrepreneurship and subjective norms as control variables. The four-item attitude measure (cf. Liñán and Chen 2009) exhibits a Cronbach's Alpha of 0.87; a sample item is "Being an entrepreneur implies more advantages than disadvantages to me". The three items for subjective norm have a Cronbach's Alpha of 0.83 (also based on Liñán and Chen 2009) and capture the expected reaction of the reference groups parents/other family members, friends/fellow students, and important people in general in case an entrepreneurial career would be pursued. AFFS still has a significant and negative relationship with entrepreneurial intention (coeff=-0.069, $p < 0.001$). Also, a separate analysis showed that AFFS is negatively

and significantly related to the above-mentioned attitude measure ($p < 0.05$) and that attitude mediates the negative relationship between AFFS and entrepreneurial intentions.

Lastly, statistical significance may be less informative in a large sample; effect size may be a more appropriate way to interpret the substantive importance of results. Thus, we calculated odds ratios (OR) as corresponding indicators (cf. Autio, Pathak and Wennberg 2013). An OR smaller than 1 indicates a negative association between two variables, and an OR greater than 1 indicates a positive association. For AFFS, the OR was 0.944; for the interaction with family cohesion it was 0.972; and for the interaction with entrepreneurial self-efficacy it was 1.028. We also calculated OR for simple logistic models without multi-level specification because these models are employed more frequently. The OR were 0.943, 0.974, and 1.027, respectively. Although we need to be careful when comparing OR with that reported in studies which use different data sets (Williams 2009), our OR and thus effect sizes could be regarded as satisfactory compared with other studies that test models with direct (Kam, Morin, Meyer and Topolnytsky 2013; Norman, Butler and Ranft 2013) and interaction terms (e.g., Barkema and Schijven 2008; McGinn and Milkman 2013). Compared with other studies that use GUESSS data from 2011 (Sieger and Monsen 2015; Zellweger, Richards, Sieger and Patel 2015) or from 2008 (Laspita et al. 2012), our effect sizes can be seen as satisfactory as well. Besides, effect sizes that may appear rather small in absolute terms can still have substantial practical and theoretical value (Aguinis, Beaty, Boik and Pierce 2005).

Referring to potential alternative explanations of our results, one could speculate that our main effect is contingent on parental wealth (Rodriguez et al. 2009). Unfortunately, GUESSS does not offer a corresponding variable. However, when parents were entrepreneurs, students were asked to evaluate the performance of their parents' firm compared with its competitors in four dimensions (growth in sales, market share, and profit as well as performance in job creation) from much worse (1) to much better (7) over the last three years

(cf. Eddleston, Kellermanns and Sarathy 2008). This should be a good proxy for the family's wealth, as families with a well-performing business should be wealthier than those with a poorly performing one. We estimated a model for the subsample of students with entrepreneurial parents (N=7,835) with this additional variable. The relationship between AFFS and entrepreneurial intention remained negative and significant (coeff=-0.054, $p < 0.05$).

Finally, entrepreneurial intentions could be driven by any positive or negative experiences that students have had in their parents' business (Zellweger et al. 2011). We therefore used the subsample of students with a family business background (N=7,835) and added a control variable that indicates working experience in the parents' firm in number of years (with no work experience represented by zero years). Our results remained unchanged.

Discussion

Using a family embeddedness perspective and a sample of 23,304 students from 19 countries, our study reveals a negative relationship between the availability of family's financial support and individual's entrepreneurial intentions. This relationship is strengthened by family cohesion, weakened by entrepreneurial self-efficacy, and unaffected by family co-founder considerations. These findings advance existing literature in numerous ways.

First, we contribute to entrepreneurial intention literature. While family-provided financial support may indeed be a *conditio sine qua non* for new venture creation (Steier 2003) and may have favorable economic conditions, we challenge the implicit assumption that more financial support by the family is generically better and universally beneficial for start-up intentions (cf. Chang et al. 2009; Dyer et al. 2014; Fairlie and Robb 2008; Kim et al. 2013). In fact, our theorizing suggests and our analyses show that the availability of family financial support can actually impede the formation of entrepreneurial intentions. In other words, our novel finding that the availability of the family's financial support and

entrepreneurial intentions are negatively related shows that the “gift” of being able to use family money - and thus be able to create a new firm in the first place might indeed be “poisoned.” This speaks to scholars who acknowledge the importance of family financial support but are also aware of potential disadvantages (e.g., Khavul et al. 2009) and adds a novel twist to existing research about how family resources can support (or impede) entrepreneurial intentions and activities (cf. Basu and Parker 2001; Chang et al. 2009; Dyer et al. 2014; Hindle et al. 2009). Our results also advance research on the role of resources in the entrepreneurship context in general (cf. Aldrich et al. 1998; Davidsson and Honig 2003; Kim et al. 2006). Furthermore, they support the idea that entrepreneurs “must be particularly adroit in sensing the resources and the limits that moral obligations provide them” (Stewart 2003, p. 390). Relatedly, we address research on resource valence that investigates whether resources are benefits or burdens (Wade-Benzoni and Tost 2009). For instance, as shown in our robustness tests, the availability of equity capital from the family, as captured with one of the AFFS items, is negatively related to entrepreneurial intentions, which may point to expected agency problems if family members would become shareholders in the planned firm. Similarly, more favorable and flexible conditions of available family money imply lower entrepreneurial intentions, which further illustrates that the larger the favor, the larger the obligation to reciprocate, with all the consequences this implies. These findings are also valuable because more insights are needed about family influence on nascent entrepreneurial activity in general (cf. Heck, Hoy, Poutziouris and Steier 2008; Matthews et al. 2012).

In addition, we further complement recent work on the role of the family in the context of start-up decisions (e.g., Chang et al. 2009; de Jong and Marsili 2013) with our finding that family cohesion is a relevant family-related factor. More specifically, we show that strong family cohesion is not necessarily beneficial. Although it can have certain advantages, we illustrate that family embeddedness-related obligations appear even stronger; ultimately,

strong family cohesion might thus impede the entrepreneurial activities of family members. This offers a new twist to family cohesion literature (e.g., Penney and Combs 2013; Zahra 2012). Importantly, our robustness checks show that our main relationship seems to be independent of the level of parental wealth. What is more, we also illustrate the relevance of individual-level factors in our setting, as we find that entrepreneurial self-efficacy mitigates our negative main relationship. In fact, when individuals perceive they have the skills and capabilities to become a successful entrepreneur, the potential downsides of family embeddedness-related obligations appear less severe.

We conclude that securing start-up financing from the family may be a necessary but not sufficient condition for actually starting a new venture (Rodriguez et al. 2009). Given the difficulties of raising financial capital outside the family sphere (Steier 2003), our findings point to a critical paradox: on the one hand, creating a firm may not be possible without financial support by the family; on the other hand, the higher the availability of this support, the lower the likelihood that actual entrepreneurial intentions will be formed.

As a second main contribution, we advance family embeddedness literature. Although we agree that family embeddedness may imply advantages, such as positive performance implications (Welsh et al. 2014) or facilitated access to resources (Arregle et al. 2015), both our theorizing and our empirical findings explicitly support the recent and increasingly important notion that family embeddedness can also have a downside (Arregle et al. 2015; Au and Kwan 2009; Ermisch and Gambetta 2010; Uzzi 1997). Specifically, we show that the family embeddedness-related obligations that arise when individuals rely on their family's financial support seem to impede the formation of entrepreneurial intentions. This is in line with and adds to existing findings that strong family ties can inhibit entrepreneurial action (Au and Kwan 2009; Khavul et al. 2009; Stewart 2003). In addition, our detailed elaborations on the specific characteristics of family-provided financial support and its family

embeddedness-related implications illustrate the unique nature of this resource type and emphasize the importance of considering the family context in investigating entrepreneurial activities (Aldrich and Cliff 2003). This is reinforced further by our finding that family cohesion indeed seems to vary (Lansberg and Astrachan 1994), which has important consequences. Whereas strong family cohesion may have advantages such as lower standards of performance among members (Long and Mathews 2011) and stronger understanding and solidarity (Zahra 2012), we find a negative moderation effect, which supports our claim that family embeddedness-related obligations are even more severe in cohesive families.

Third, we extend recent works on entrepreneurial family teams and entrepreneurial families (Schjoedt et al. 2013; Uhlaner, Kellermanns, Eddleston and Hoy 2012). We support the notion that family involvement in entrepreneurial teams has positive (expected) outcomes (Schjoedt et al. 2013) by showing explicitly that the plan to include a family co-founder affects individual-level cognitive processes, which makes the formation of entrepreneurial intentions more likely. However, this plan does not affect the magnitude of family embeddedness-related considerations, as we cannot confirm a moderation effect. A potential explanation could be that while planning to include a family co-founder might indeed be able to weaken individuals' family embeddedness-related concerns, those considerations might be offset by expected potential conflicts among family members (cf. Jehn 1995; Kellermanns and Eddleston 2004), which, in turn, reduces potential entrepreneurs' confidence in being able to fulfill family embeddedness-related obligations. Furthermore, our study is of value to scholars who investigate entrepreneurship across generations within business families (e.g., Laspita et al. 2012; Zellweger et al. 2012) as we indicate that intergenerational transmission of entrepreneurship might be impeded by the provision of financial support by entrepreneurial parents and corresponding family embeddedness considerations.

Finally, our study is of value to practice. Family members in general and parents and children in particular should be aware that providing financial support within the family has important implications for all parties involved and may actually discourage children from becoming entrepreneurs. In this context we suggest an open discussion of financial and non-financial obligations and expectations, be they implicit or explicit.

Limitations and Future Research

Notwithstanding the contributions of our study we need to note a few limitations which, at the same time, also open up promising future research avenues. First, we investigate intentions and not actual behavior. Naturally, not all intentions will lead to behavior; we thus cannot be fully sure whether all students who exhibit entrepreneurial intentions will actually create a firm in the future. However, a strong link between intentions and behavior certainly exists (Armitage and Conner 2001; Kautonen et al. 2015). We believe that our entrepreneurial intention variable is reliable because when individuals indicate that they are aiming at a particular career, they normally have already begun gathering relevant information and should thus have a realistic idea of what is to come (cf. Mitchell 2007; Zhao 2013). Nevertheless, future research using longitudinal data that allow the extension of our model to actual behavior would be welcome. Such data would also address the limitation that we cannot derive valid conclusions with regard to causality because of the cross-sectional nature of our survey data. Our theorizing, however, leads us to believe that causality exists as we expect it. Furthermore, reverse causality is one of the possible causes of endogeneity problems (Kennedy 2008); as our tests indicate that endogeneity may not be a major issue, we can thus deduce that reverse causality is not a fundamental problem in our data. In general, our numerous tests support the overall quality and robustness of our data and findings, even though we cannot explicitly test for non-response bias, for instance. Furthermore, although

using a student sample can be justified, we cannot rule out certain limitations regarding the full generalizability of our findings. Future research could use a general adult population sample to replicate our findings. This would also help in illuminating further whether the relevance of obligations varies depending on the life stage of individuals. What is more, although our robustness checks support the validity of our findings in a TPB setting, we did not theorize on and test all the possible connections between our study variables and the different TPB elements. Future research could move in that direction by exploring various potential moderation and mediation effects.

Turning to general potential future research avenues, we encourage scholars to investigate further the formation of entrepreneurial intentions. Scholars could delve deeper into the examination of how the availability of financial capital from family members affects the cognitive processes that lead to entrepreneurial intentions. Specifically, the exact conditions of the family's financial support in terms of interest or repayment conditions and related governance arrangements (Steier 2003) and the relational dynamics of intra-family financing (cf. Batson and Powell 2003) deserve further research attention. To this end, we strongly advocate using a family embeddedness perspective, where intra-family dynamics could be explored in greater depth by capturing the potential entrepreneurs' explicit perceptions of financial and non-financial obligations and their consequences. Family members' motivations for giving (Kohli and Kuenemund 2003) could also be explored in more detail. Also, we find a consistent negative and significant relationship of age with entrepreneurial intentions. Hence, older students are less likely to exhibit entrepreneurial intentions, which offers valuable insights to recent research on age and entrepreneurship (Kautonen, Down and Minniti 2014). Scholars could generate further insights in that regard by applying for instance a developmental career perspective (cf. Hall 2002) in that context. Furthermore, potential entrepreneurs who have a family business background could be of

particular interest. Future research could explore for instance how the family firm's size, age, performance, and corresponding socioemotional wealth considerations (Gomez-Mejia, Haynes, Nunez-Nickel, Jacobson and Moyano-Fuentes 2007) affect their offspring's entrepreneurial intentions as well as the new venture's characteristics and long-term performance. Resource transfers and cooperation or competition between the parents' firm and the new venture are worth investigating as well. Also, a comparative analysis that investigates the likelihood that a career as an entrepreneur is preferred to another career choice may provide additional nuanced insights (Douglas and Shepherd 2002; Kolvereid and Isaksen 2006; Krueger et al. 2000). For instance, it would be interesting to examine how the factors described above affect the likelihood of preferring to become an entrepreneur to becoming an employee in the private sector or a successor in the parents' firm (if existing). We also note that existing research is inconclusive about how family involvement and family support affect the performance of entrepreneurial firms (Stewart and Hitt 2012). Scholars could thus investigate how a family's involvement in a new venture in general, and the reliance on family financing in particular, affects its long-term success.

Finally, we believe that our findings are generalizable across contexts as they are based on a 19-country sample and because the phenomenon of obligations arising from strong family ties is observable in most types of society (Kohli and Kuenemund 2003). Nevertheless, GDP per capita and unemployment are significant country-level control variables in several models; hence, economic, cultural, institutional, or family factors, such as family cohesion, may still have specific effects that are worth exploring and comparing across countries (cf. Fairlie and Robb 2008).

To conclude, our study offers unique and novel insights that advance existing knowledge in numerous ways, and we hope that it will spark promising and fruitful future research efforts.

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Table 1
Means, Standard Deviations, and Pearson Correlations

	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1 Age	25.23	6.08	1																					
2 Gender	0.47		-.045**	1																				
3 Undergr. level	0.80		-.218**	.026**	1																			
4 Graduate level	0.15		.113**	-.028**	-.856**	1																		
5 Business & Econ.	0.35		-.091**	.019**	-0.002	0.011	1																	
6 Natural science	0.31		0.012	-.184**	0.005	-.015*	-.491**	1																
7 Social science	0.11		.068**	.134**	-.078**	.068**	-.240**	-.221**	1															
8 Entrepr. education	0.79		-.042**	0.006	-.035**	.036**	.013*	-.015*	.030**	1														
9 Achievement m.	5.88	0.49	-.041**	.066**	.159**	-.157**	.056**	-.020**	-.107**	-.042**	1													
10 Challenge m.	5.70	1.06	-0.001	-.032**	.091**	-.086**	.019**	.034**	-.095**	-.049**	.449**	1												
11 Parents' entr. status	0.62		-.099**	.038**	.045**	-.041**	.026**	-.029**	-.019**	-0.011	.031**	.047**	1											
12 Service	0.47		-0.011	.201**	-0.01	-0.001	.074**	-.220**	.119**	.015*	.018**	-.049**	0.011	1										
13 Manufacturing	0.09		0.012	-.102**	.025**	-.021**	-.037**	.110**	-.072**	-.015*	0.004	.029**	.022**	-.301**	1									
14 GDPPC	24911	14293	-.065**	-.055**	-.276**	.292**	0.01	-.042**	.091**	.084**	-.327**	-.168**	-.076**	.031**	-.072**	1								
15 Unemployment	6.58	3.22	-.036**	.036**	.060**	-.060**	.071**	-.019**	-.051**	-.045**	.127**	.060**	.042**	-0.004	.037**	-.454**	1							
16 Uncertainty avoid.	4.21	0.82	0.005	-.088**	-.279**	.282**	-.049**	0.003	.082**	.095**	-.317**	-.140**	-.061**	.022**	-.062**	.860**	-.485**	1						
17 Perf. orientation	4.14	0.40	.030*	-.078**	-.139**	.131**	-.047**	-0.011	.045**	.056**	-.200**	-.057**	-.020**	.033**	-.066**	.651**	-.612**	.833**	1					
18 Group collectivism	4.74	0.66	-.010**	.080**	.236**	-.254**	-0.011	.066**	-.093**	-.073**	.291**	.142**	.036**	-.027**	.071**	-.732**	.307**	-0.751	-.568**	1				
19 Av. fam. fin. support	2.78	1.74	-.151**	-.021**	.033**	-.020**	.038**	0	-.037**	-.025**	0.009	.045**	.131**	.018**	.024**	.026**	-.022**	.031**	.043**	.025**	1			
20 Family cohesion	5.63	1.26	-.027*	.117**	.045**	-.048**	.035**	-.014*	-.033**	-.016*	.234**	.228**	.045**	.040**	.022**	-.146**	.093**	-.160**	-.132**	.173**	.156**	1		
21 Family co-founder	0.18	0.38	-.057**	.043**	.054**	-.047**	.036**	-.023**	-.022**	-.020**	.057**	.039**	.033**	-0.009	.032**	-.093**	.043**	-.108**	-.074**	.116**	.093**	.129**	1	
22 Entr. self-efficacy	4.50	1.59	.115**	0.002	-0.009	-0.007	-.069**	.018**	.029**	-0.002	-0.007	0.011	0.009	-0.009	-.023**	-.072**	.039**	-.052**	-.050**	-0.01	-.206**	-.021**	-.024**	1
23 Entr. intention	0.55		-.091**	-0.016	0.043	-.015*	.068**	-.016*	-.055**	0.007	-0.003	.092**	.025**	-.043**	0.003	-.038**	.030**	-.064**	-.064**	.028**	-.027**	0.01	.032**	.060**

N=23,304. * = p<0.05; ** = p<0.01. Standard deviations for dummy variables are not reported.

Table 2
Results of Multi-level Mixed Effects Logistic Regressions (xtmelogit)

	Model 1		Model 2		Model 3		Model 4	
	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.
Constant	0.363***	0.089	0.358***	0.087	0.355***	0.088	0.368***	0.089
<i>Control variables</i>				0				0
Age	-0.155***	0.015	-0.168***	0.016	-0.174***	0.016	-0.172***	0.016
Gender	-0.017	0.014	-0.02	0.014	-0.019	0.014	-0.019	0.014
Undergr. level	0.126***	0.028	0.126***	0.028	0.128***	0.028	0.129***	0.028
Graduate level	0.100***	0.028	0.100***	0.028	0.103***	0.028	0.104***	0.028
Business & Economics	0.074***	0.017	0.076***	0.017	0.083***	0.017	0.082***	0.017
Natural science	-0.015	0.017	-0.015	0.017	-0.012	0.017	-0.012	0.017
Social science	-0.070***	0.018	-0.072***	0.018	-0.072***	0.018	-0.071***	0.018
Entrepreneurship education	0.019	0.013	0.016	0.013	0.016	0.013	0.014	0.013
Achievement motivation	-0.165***	0.017	-0.167***	0.017	-0.159***	0.017	-0.157***	0.017
Challenge motivation	0.263***	0.017	0.268***	0.017	0.267***	0.017	0.270***	0.017
Parents' entrepreneurial status	0.028*	0.013	0.038**	0.013	0.035**	0.013	0.034**	0.013
Service	-0.067***	0.012	-0.065***	0.012	-0.063***	0.012	-0.063***	0.012
Manufacturing	-0.021*	0.01	-0.020*	0.01	-0.018	0.01	-0.017	0.01
GDPPC	-0.231*	0.104	-0.236*	0.102	-0.228*	0.103	-0.230*	0.104
Unemployment	-0.088	0.045	-0.088*	0.044	-0.090*	0.045	-0.090*	0.045
Uncertainty avoidance	-0.053	0.159	-0.046	0.157	-0.032	0.158	-0.03	0.16
Performance orientation	-0.008	0.112	-0.004	0.11	-0.006	0.111	-0.003	0.112
Group collectivism	-0.103	0.085	-0.088	0.084	-0.071	0.085	-0.066	0.086
<i>Independent variable</i>								
Availability family financial support (AFFS)			-0.094***	0.014	-0.069***	0.015	-0.058***	0.015
<i>Moderators: main effects</i>								
Family cohesion (FC)					-0.02	0.015	-0.028	0.015
Planned family co-founder (FCF)					0.035***	0.01	0.035***	0.01
Entrepreneurial self-efficacy (ESE)					0.142***	0.014	0.141***	0.014
<i>Interaction terms</i>								
AFFS * FC							-0.036*	0.015
AFFS * FCF							-0.003	0.01
AFFS * ESE							0.030*	0.013
<i>Model fit statistics</i>								
Degrees of freedom	18		19		22		25	
Log likelihood	-15564.218		-15542.112		-15486.138		-15479.809	
Wald chi ²	547.28		588.26		691.67		703.59	
AIC ^a	31168.44		31126.22		31020.28		31013.62	
LR test vs. linear regression: χ^2 ^b	102.52***		104.20***		115.76***		117.37***	
LR test of model fit: χ^2 ^c			44.21***		111.95***		12.66***	

Notes: Standardized variables used; N=23,304, countries=19; * p<0.05; ** p<0.01; *** p<0.001; ^a Akaike's information criterion (2k-2)*(log likelihood), k = degrees of freedom. Gradually smaller values denote improved model fit; ^b Statistical significance confirms that the country-level variance component is important; ^c LR test performed between models using maximum-likelihood estimates (MLE).

Figure 1
Conceptual Model

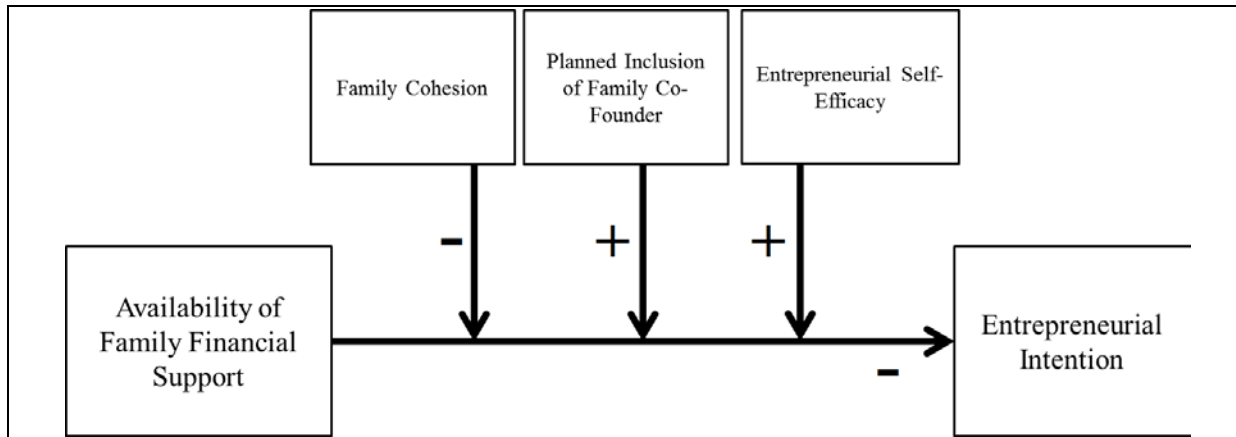


FIGURE 2
Availability Family Financial Support and Family Cohesion

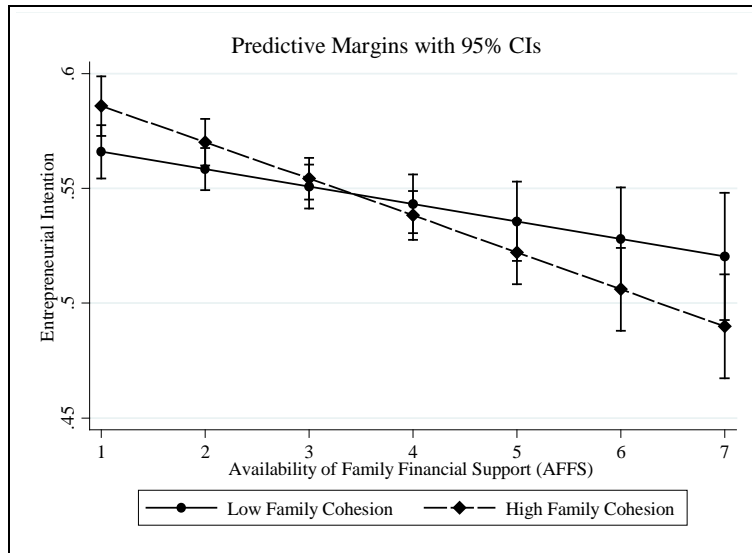


FIGURE 3
Availability Family Financial Support and Entrepreneurial Self-efficacy

