



# The impact of family support on young entrepreneurs' start-up activities



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## ABSTRACT

In this paper, we use a social support perspective and hypothesize that the scope of start-up activities is positively associated with two types of instrumental family support, financial and social capital. We further argue that the effect of instrumental family support is enhanced by the level of emotional support, in the form of family cohesiveness. To test our hypotheses, we draw from the 2011 Global University Entrepreneurial Spirit Students' Survey (GUESSS), a survey of university students from 19 countries. We focus on those nascent entrepreneurs who are in the process of starting their new venture ( $n = 12,399$ ). Our findings indicate that family social capital is positively associated with the scope of start-up activities, family financial capital is negatively associated with the scope of start-up activities, and family cohesiveness amplifies the effect of family social capital on the scope of start-up activities. Theoretical, practitioner, and public policy implications are discussed.

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## 1. Executive summary

Receiving a college degree is no longer a guarantee of future employment. To address this, colleges and universities are offering courses in entrepreneurship (Katz, 2015). As new venture development is increasingly perceived as an essential weapon in the youth employment arsenal, it is critical to gain an understanding of those factors that influence the ability of young people to start a new business.

In this paper, we use a social support perspective to explore the effect of family support on the scope of start-up activities undertaken by young nascent entrepreneurs, in our case, university students. Social support is the perception or experience that one is loved, cared for by others, esteemed, valued, and part of a mutually supportive social network (Taylor, 2011; Wills, 1991). Relatively less well explored is *how* family social support matters. Some authors suggest that being embedded in a family that provides strong emotional support is what encourages youth entrepreneurship, while others suggest that it is the tangible support provided to the entrepreneur (Sørensen, 2007). We address that tension and in doing so we add to the growing literature on the significance of families in entrepreneurship (Aldrich and Cliff, 2003; Dunn and Holtz-Eakin, 2000; Eddleston and Kellermanns, 2007; Eddleston et al., 2008) and on the importance of social support in an entrepreneurial setting (Powell and Eddleston, forthcoming).

To test the study's hypotheses, we use data from the "Global University Entrepreneurial Spirit Students' Survey" (GUESSS) project. The GUESSS project is an ongoing study of university students, which records founding intentions and activities on a biannual

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basis. We use data from the 2011 GUESSS survey, selecting only those respondents who were actually involved in the process of starting up a business, to a usable sample of 12,399 students.

Our study makes a number of contributions. Specifically, we ask if instrumental social support, in the form of social and financial capital alone is enough to lead to more start-up activities, or is the number of start-up activities enhanced when a young entrepreneur receives both instrumental and emotional social support from their family. In addition, our research reminds public policy makers about the importance of the family, and cautions them not to forget the family as they make decisions about what entrepreneurial activities to encourage.

## 2. Introduction

More and more university students are realizing that upon graduation, they can no longer trade their degree in for a job. In response, increasingly colleges and universities are positioning their graduates for careers in entrepreneurship. Conservative estimates indicate approximately 224 colleges and universities have programs in entrepreneurship globally (Katz, 2015). Young people are well situated to engage in entrepreneurship. Lévesque and Minniti (2006, 2011), found that the majority of people who start a business are between 25 and 34 years old. Other researchers suggest that the education and technological shrewdness of university graduates equips them to start growth-oriented new ventures (Lüthje and Franke, 2003; Mowery and Shane, 2002). Therefore, if new venture development is an essential weapon in the youth employment arsenal, it is critical to gain an understanding of those factors that influence the ability of young people to start a new business.

One area that has received relatively less attention in the entrepreneurship literature is the role played by the family in young people's entrepreneurial initiatives. This is surprising, when we consider that families are an important source of early stage funding (Bygrave et al., 2003; Steier, 2003), information and contacts (Steier, 2007, 2009), mentoring (Sullivan, 2000), and moral support (Renzulli et al., 2000) and often perform important incubation functions in the new venture creation process (Rodriguez et al., 2009; Steier et al., 2009). Aldrich and Cliff (2003), in their work on the family embeddedness of entrepreneurship, suggest the lack of attention paid to the family in entrepreneurship, is more due to academic institutional arrangements, where family and business are studied in different departments or colleges, than to practice.

Family influences on entrepreneurship have been examined in a number of literatures: family business research (Koropp et al., 2013; Rodriguez et al., 2009), social network research (Dubini and Aldrich, 1991; Grossman et al., 2012; Newbert et al., 2013), or intergenerational transfer of entrepreneurship (Barnir and McLaughlin, 2011; Jaskiewicz et al., 2015; Laspita et al., 2012; Litz, 2010; Sørensen, 2007). However, there appears to be a “missing link” in the literature regarding the relationship between the family support provided to nascent entrepreneurs and the realization of their entrepreneurial initiatives.

In this study, we use a social support perspective (Cohen and Wills, 1985; Taylor, 2011) to test the effects of emotional and instrumental family support on the scope of start-up activities undertaken by young nascent entrepreneurs, in our case, university students. A family is defined as “two or more persons living together and related by blood, marriage, or adoption” (U.S. Census, 2000: 20). Family emotional support involves listening and empathy (Adams et al., 1996) while family instrumental support involves tangible assistance aimed at solving a problem (Beehr and McGrath, 1992; McIntosh, 1991). Some authors suggest that being embedded in a family that provides strong emotional support is what encourages youth entrepreneurship, while others suggest that it is the tangible, or instrumental, support provided to the entrepreneur (Cohen and Wills, 1985; Sørensen, 2007). We address that tension and in doing so we add to the growing literature on the significance of families in entrepreneurship (Aldrich and Cliff, 2003; Dunn and Holtz-Eakin, 2000; Eddleston and Kellermanns, 2007; Eddleston et al., 2008) and on the importance of social support in an entrepreneurial setting (Powell and Eddleston, 2013). In essence, we draw on theory to test how family social support shapes the micro-foundations of entrepreneurial action (Shepherd, 2015).

To test the study hypotheses, we use data from the 2011 “Global University Entrepreneurial Spirit Students' Survey” (GUESSS) survey, selecting only those respondents who were actually involved in the process of starting up a business, to a usable sample of 12,399 students. The GUESSS project is an international study of university students, which records founding intentions and activities on a biannual basis. Extensive prior research has explored the entrepreneurial intentions of university students (Autio et al., 2001; Carey et al., 2010; Kolvereid, 1996; Krueger et al., 2000; Zellweger et al., 2011), but the actual realization of these intentions is relatively less well studied.

In this paper, we document how university students' entrepreneurial intentions translate into entrepreneurial action. In doing so we ask if instrumental social support, in the form of social and financial capital alone is enough to lead to more start-up activities, or is the number of start-up activities enhanced when a young entrepreneur receives both instrumental and emotional social support together. This is our contribution. On the ensuing pages, we present our theory and hypotheses, followed by our empirical analysis, our findings and discussion and our overall conclusions.

## 3. Start-up activities and social support

### 3.1. The nascent entrepreneur and entrepreneurial start-up activities

Organizational emergence is a process that is comprised of multiple start-up activities-up activities. Start-up activities are the events and behaviors of individuals who are engaged in the process of starting a new venture (Carter et al., 2004; Gartner et al., 2004) and constitute the “micro-foundations of entrepreneurial action” (Shepherd, 2015: 490). These activities are important for a

number of reasons; principally, if the entrepreneur and the entrepreneurial team fail to engage in start-up activities, there is no new business formation.

Early studies on start-up activities found that there was no particular order in which start-up activities were performed; nor was there a specific set of activities in which all entrepreneurs engaged. However, research confirmed that those entrepreneurs who successfully started a new venture engaged in different sets of activities from those who were not successful (Carter et al., 1996; Gatewood et al., 1995; Reynolds and Miller, 1992). These early studies of start-up activities were not without issues; specifically, they suffered from problems associated with small sample size and retrospective bias (Gartner et al., 2004). Recent work has benefitted from the availability of nationally representative panel data on nascent entrepreneurial activity such as the Panel Study of Entrepreneurial Dynamics (PSED I and II) in the United States or the Comprehensive Australian Study of Entrepreneurial Emergence (CAUSEE) in Australia.

Delmar and Shane (2003) examined planning, legitimacy, and market activities and their effect on the probability of starting a firm in 223 Swedish new ventures. They found that planning and legitimacy were significantly correlated with the probability of starting a new venture but that market activities had no effect. Lichtenstein et al. (2007) studied the dynamic patterns in start-up activities in U.S. nascent organizations, finding that new organizations emerge when the rate of start-up activities is high, start-up activities are spread over time, and firms are more likely to emerge when start-up activities are concentrated later in the start-up phase. Parker and Belghitar (2006) documented that individuals further into the process of starting a new venture were significantly less likely to remain nascent entrepreneurs (especially after two years) and significantly more likely to start-up. Davidsson and Honig (2003) focused on the social and human capital of nascent entrepreneurs finding that human capital was important in initiating entrepreneurial start-up activity while social capital remained critical throughout the entire start-up process. Finally, Brush et al. (2008) used the Katz and Gartner (1988) framework in their empirical examination of the properties of emerging organizations, finding that all four properties are necessary for firm survival in the short-term, and those firms that organize more slowly are more likely to continue the organizing effort.

In sum, with the advent of PSED I and II in the United States and similar studies in other countries, research on organizational emergence and nascent entrepreneurship has become both an important and a well-studied branch of entrepreneurship research. Findings from this work indicate that firms that engaged in more start-up activities were more likely to continue the organizing effort (Brush et al., 2008; Carter et al., 1996). In other words, the greater the scope of start-up activities undertaken by early-stage entrepreneurs, the greater the likelihood of successful organizational emergence. Thus, the outcome variable of interest in our study is the scope of start-up activities undertaken by aspiring young entrepreneurs. Specifically, we focus on activities such as serious thought given to the start-up, talking to customers, developing a model, looking for potential partners, purchasing or leasing a capital asset, promoting the good or service, completing a business plan, seeking external funding, and deciding on date of founding.

### 3.2. Social support

Social support is the perception or experience that one is loved, cared for by others, esteemed, valued, and part of a mutually supportive social network (Taylor, 2011; Wills, 1991). Significant research finds that social support is a causal contributor to overall health and well-being (for reviews, see Beehr and McGrath (1992); Cohen and Wills (1985); Vaux (1988)). There are two dominant hypotheses in the social support literature, the buffering hypothesis, and the direct effects hypothesis. The buffering hypothesis posits that social support buffers or protects individuals from the potentially negative effects of stressful events (Cohen and Wills, 1985; Seeman, 1996; Taylor and Seeman, 2000). The direct effects hypothesis argues that social support has a beneficial effect, irrespective of the stress levels of the individual. Research has found support for both hypotheses (Taylor, 2011).

This paper focuses on the direct effects hypothesis of social support. In the direct effects perspective, social support is related to overall well-being because it gives a sense of predictability and stability in one's life situation, and provides recognition of self-worth (Cohen and Wills, 1985). Social support has two dimensions, emotional support, and instrumental support. Emotional support involves listening and empathy (Adams et al., 1996) while instrumental support involves tangible assistance aimed at solving a problem (Beehr and McGrath, 1992; Caplan et al., 1975; Kaufmann and Beehr, 1986; McIntosh, 1991).

There is growing evidence that social support can come from both work and non-work sources. One of the most important non-work sources of social support is the family. The family social support perspective is conceptually similar to the family embeddedness approach, which argues that the family has the potential to exert a substantial influence on the firm (Aldrich and Cliff, 2003). Aldrich and Cliff (2003) went on to suggest that the characteristics of the entrepreneurs' family system, such as family resources, norms and values, influence new venture creation.

The focus of this study is on family-to-business support, or the social support provided by family members to help entrepreneurial activities (Baron, 2002; Jennings and McDougald, 2007; Powell and Eddleston, 2013). Research suggests that while social support in general is important, social support from families and in particular, task-related social support from family members is critical to the start-up persistence of entrepreneurs (Kim et al., 2013). Family member social support is particularly critical for young aspiring entrepreneurs. Young entrepreneurs are different from more experienced entrepreneurs (Sarasvathy, 1998). They have little, if any, business knowledge, few social relations, and little experience in how to make sense of the entrepreneurial process (Nielsen and Lassen, 2012). In addition, young entrepreneurs lack the necessary capital to start a new venture, and typically face liquidity constraints making borrowing difficult (Evans and Jovanovic, 1989). University students, in particular, often reside in their parents' homes and are thus part of their parents' households. The lack of social capital coupled with a lack of

financial capital lead young entrepreneurs to seek instrumental and emotional social support from their families in order to start a new business.

In the next section, we will explore some of the ways in which families support youth entrepreneurship. Specifically, we focus on the instrumental and emotional social support provided by the family to the young nascent entrepreneur. We explore two types of instrumental social support, financial and social capital, as these forms of capital are readily available through families and they contribute to the successful implementation of start-up activities. We go on to suggest that emotional support, in the form of family cohesiveness, moderates these relationships.

## 4. Hypotheses

### 4.1. Instrumental social support: family financial capital

Financial capital is the lifeblood of new ventures. It is fungible, easily transformed into alternative resources, and thus instrumental in the construction of the new venture's resource base and the execution of the key start-up activities necessary for the establishment of a new organization. Financial capital also acts as a buffer against random external shocks and allows nascent entrepreneurs to pursue more capital-intensive strategies, such as exploration and experimentation (Cooper et al., 1994). The availability of financial resources allows nascent entrepreneurs to simultaneously pursue several start-up activities, for example develop a product prototype alongside launching a market-research study and thus enlarges the scope of start-up activities.

Because of their young age and lack of collateral and credit history, university students are locked out of most of the traditional channels for getting early stage financial capital, such as credit cards or bank loans (Ozgen and Minsky, 2013). They typically acquire early stage funding from friends and family (Bird, 1989; Van Auken and Neeley, 1996; Winborg and Landström, 2001). Family financial assistance often offers the benefits of lower transaction costs, fewer strings attached, the ability to maintain strategic control over the nascent venture, and access to family resources beyond the provision of start-up capital (Steier, 2003). For example, Colombatto and Melnick (2008) found that families are willing to provide extended credit to a new firm being launched by their offspring.

Although family investments in nascent ventures are often described as “love money” (Bygrave et al., 2003), or mostly altruistic support, this is not always the case. The deals do occur along a continuum that includes aspects of “selfless altruistic” and “selfish market” rationalities (Steier, 2003). Indeed, Au and Kwan (2009), in a study of 202 new ventures started by young entrepreneurs in Hong Kong and 130 entrepreneurs based in China, documented that Chinese entrepreneurs sought initial funding from their family rather than from outsiders only if they expected lower transaction costs and low levels of family inference in the business.

Existing literature on family finance assumes that family members have access to private information about a new venture based on their proximity to the venture's founder (Parker, 2009). Specifically, family members are likely to have information about the founders' work ethic and dedication to the start-up, which affect the start-up's value. This private information implies that family investment in a new venture is a signal to external investors of the quality of the founder (Conti et al., 2013). Thus, family involvement may have the added benefit of facilitating the obtaining of debt financing from outside sources (Chua et al., 2011), which further facilitates the engagement in start-up activities.

In sum, financial capital is instrumental social support that provides entrepreneurs with the flexibility to undertake a wider range of start-up activities (Pena, 2002) and family-provided finance is likely the greatest source of financial support for young entrepreneurs (Steier, 2003). Formally,

**H1a.** The greater the family support, in the form of financial capital, the greater the scope of start-up activities undertaken by the young nascent entrepreneur.

### 4.2. Instrumental social support: family social capital

Social capital refers to networks of relationships in which personal and organizational contacts are closely embedded (Bastie et al., 2013). Through these relationships, social actors can gain access to information, resources, and social approbation (Hoang and Antoncic, 2003; Newbert et al., 2013; Stuart and Sorenson, 2007). However, the likelihood of an exchange of resources, channeling of information, or ascribing legitimacy is a function of the quality of network relationships, measured in the strength of relationship ties (Hoang and Antoncic, 2003; Newbert et al., 2013). Strong ties tend to be long-standing relationships based on frequent contacts such as those existing among family members, friends, or tightly knit communities (Coleman, 1988). In contrast, weak ties tend to be short-term relationships based on infrequent interactions and exchange (Granovetter, 1973). In matters pertaining to the scope of start-up activities, the number of social network ties appears to be more beneficial than the strength of established ties (Kreiser et al., 2013).

Parents often assist younger generation family entrepreneurs by using their own connections. Through the introduction of young nascent entrepreneurs into family members' existing social networks, family social capital facilitates the mobilization of other resources and the implementation of founding activities needed for a successful start-up. By exploiting the previously established relationships between family members and resources holders, family involvement may be instrumental in the acquisition of debt financing, a critical start-up activity (Chua et al., 2011). Children may also access the social capital of parents-entrepreneurs, including contacts with suppliers, business partners, and customers, to facilitate the completion of other start-up activities (Laspita et al., 2012).

Very often, use of their parents' social capital can help children to gain information and access to new market opportunities (Sørensen, 2007). For example, Cringely (1992: 127–128); cf. Steier (2007)), describing the events that lead to Microsoft's watershed deal with IBM, remarks: "It did not hurt, either, that Mary Gates [Bill Gates' mom] sat on the national board of the United Way along with IBM chairman John Opel, and that the two had become friends".

Family social capital may have a strong influence on the venture creation process even when the family is not directly involved in the entrepreneurial initiative (Aldrich and Cliff, 2003; Renzulli et al., 2000; Steier, 2007). Affiliation with a well-respected family is often interpreted as a signal of positive personal traits and ascribed status. In addition, families take responsibility for the obligations and actions of their members. This allows social actors to "borrow" the family's established social capital in the process of completing early-stage start-up activities. In sum, family social capital is instrumental social support that provides information and opens doors for young entrepreneurs, thus facilitating the completion of founding activities. Formally:

**H1b.** The greater the family support, in the form of social capital, the greater the scope of start-up activities undertaken by the young nascent entrepreneurs.

#### 4.3. Emotional social support: the moderating role of family cohesiveness

Cohesiveness refers to the degree of connectedness and emotional bonding that family members experience within the family (Lansberg and Astrachan, 1994; Laspita et al., 2012; Olson and Gorall, 2003). Families with high cohesiveness are characterized by shared norms, behaviors, understanding and emotionally intense relationships (Granovetter, 1992). Cohesion increases solidarity and loyalty, creates a sense of togetherness, and enhances the pressures to support family members because of moral obligations. Thus, cohesive families can be a source of emotional support to their members. There is some evidence in the literature that the emotionally intense ties among family members provide access to resources, often at below-market rates, due to an inherent sense of obligation (Witt, 2004). Research also suggests that nascent entrepreneurs will seek out individuals with whom they have a strong emotional attachment for various forms of support during the new venture creation process (Newbert et al., 2013; Renzulli et al., 2000; Ruef et al., 2003).

We surmise that the degree of family cohesiveness will enhance the translation of family resources into a larger scope of start-up activities through two interrelated mechanisms. First, cohesive families readily exchange, share, and process experiences and information, facilitate the accumulation of experience in different areas, readily assist each other, and thus leverage the impact of instrumental family support towards the realization of the entrepreneurial initiative (Jaskiewicz et al., 2015; Zahra, 2012). Second, aspiring entrepreneurs coming from cohesive families may feel a strong moral obligation to accelerate their organizing activities in order to reciprocate the social and financial support offered by family members. Overall,

**H2a.** The greater the family cohesiveness, the stronger the relationship between family financial capital and the scope of start-up activities undertaken by the young nascent entrepreneurs.

**H2b.** The greater the family cohesiveness, the stronger the relationship between family social capital and scope of start-up activities undertaken by the young nascent entrepreneurs.

## 5. Method

### 5.1. Data collection and sample

To conduct our inquiry, we used data from the "Global University Entrepreneurial Spirit Students' Survey" (GUESSS) project. GUESSS was initiated by the Swiss Research Institute of Small Business and Entrepreneurship at the University of St. Gallen in 2003 and currently includes more than 50 countries. The data are collected biannually using an online survey. One coordinator who is responsible for data collection represents each participating country. The coordinator contacts different universities in the respective country with an invitation to take part in the survey. If the universities agree, they complete a registration form that indicates how many students will get the link to the survey.

The GUESSS project has three primary goals: 1) to observe systematically the entrepreneurial intentions and activities of students; 2) to identify the antecedents and boundary conditions in the context of new venture creation and entrepreneurial careers in general; and, 3) to observe and evaluate universities' activities and offerings related to the entrepreneurial education of their students (for more details see Sieger et al. (2011)). Data from the GUESSS project have been used, for example, to explore the career choice intentions of students with family business backgrounds (Zellweger et al., 2011), or the intergenerational transmission of entrepreneurial intentions (Laspita et al., 2012).

We used data from the 2011 GUESSS survey. In that year, 93,265 students from 26 countries completed the survey, to a response rate of approximately 6.3%.<sup>2</sup> As the interest of the present study is in young nascent entrepreneurs, and to ensure

<sup>2</sup> The estimation of the response rate is approximate because the nature of the sampling procedure does not allow an exact calculation. We do not know exactly whether the number of links reported in the registration form was achieved by local universities' representatives. There is also a chance that students shared the link to the survey among themselves.



comparability with the GEM youth entrepreneurship studies (e.g. Schøtt et al., 2015), we selected only the respective country nationals who were between 18 and 34 years of age. Further, we selected the “intentional founders”, i.e. individuals who had been thinking about founding their own company (as opposed to those who planned to succeed their parents in a family business or take over an existing business) or were in the process of establishing their own company, but had not founded it yet. To allow for within-country and within-university variability, we excluded the cases where there were fewer than four students per university and fewer than four universities per country. Finally, we selected only the observations with no missing values across all variables of interest to the study. This resulted in a final usable sample size of 12,399 students from 19 countries (Argentina, Austria, Brazil, Chile, China, Estonia, Finland, France, Germany, Hungary, Ireland, Netherlands, Portugal, Romania, Russia, Singapore, South Africa, Switzerland, and the United Kingdom).

To statistically diagnose and ex-post remedy common method variance, we utilized two techniques. First, we performed Harman's (1967) single-factor test by entering all variables included in the regression specifications into a principal components factor analysis. The single-factor solution showed that one factor explained only about 13.5% of the variance. Second, we included a common latent factor and marker in our confirmatory factor analysis (Podsakoff et al., 2003, 2012). Our marker was a twelve-item measure of entrepreneurial self-efficacy (single factor extracted, Eigen = 4.76, Alpha = 0.89). The results (not reported here because of space constraints and available from the authors upon request) showed that the regression weights from the common latent factor to all items of our three latent constructs were below 0.23, providing reasonable assurance that our data did not suffer from common method variance.

## 5.2. Variables

### 5.2.1. Dependent variable

Start-up activities are events, behaviors, and accomplishments of individuals that lead to the emergence of new businesses (Carter et al., 2004; Gartner et al., 2004). They were measured by nine self-reported dichotomous variables indicating whether the young nascent entrepreneur had engaged in a particular activity prior to or at the time of the survey. The choices included: 1 – “thought of first business ideas”, 2 – “formulated business plan”, 3 – “identified market opportunity”, 4 – “looked for potential partners”, 5 – “purchased equipment”, 6 – “worked on product development”, 7 – “discussed with potential customers”, 8 – “asked financial institutions for funding”, 9 – “decided on date of founding”. Next, we summed up the responses to obtain a measure of the scope of start-up activities, ranging between 0 and 9. This set of activities is a subset of the activities tracked by PSED I (which tracks 27 start-up activities and emergence markers) and PSED II (which tracks 39 start-up activities and emergence markers). Seven of the nine GUESSS start-up items had higher than 65% prevalence in the PSED I study. The eighth activity, “asked financial institutions for funding” (PSED I prevalence 23.9% in the first wave and 40.70% across the four waves of the study) was included on theoretical grounds, based on the critical importance of start-up financing for the success of entrepreneurial initiatives. The ninth activity, “decided on the date of founding” is an original GUESSS item. Bearing in mind that the GUESSS study is cross-national by design, the general wording of the question makes it a reasonable generic proxy for an emergence marker.<sup>3</sup>

The GUESSS dataset also contains information on two additional highly prevalent start-up activities, i.e. “taken classes on starting a business”, and “invested own money in start-up” (which in turn presupposes “saving money to invest”), which we include as controls in the regression specification. In fact, the only highly prevalent PSED I activity the GUESSS does not track is “purchased materials, supplies, inventory, and components”. Among the “intentional founders” in our sample, 30.02% had undertaken at least one start-up activity, and 17.90% had undertaken at least two. Barely 0.15% (19 students) had pursued all nine activities tracked by the survey.

### 5.2.2. Independent variables

In order to capture the different aspects of family support, we constructed two measures, based on the “Family Support” section of the questionnaire. In this section, students were asked to indicate to what extent a set of statements concerning family support for their entrepreneurial activity applied to them, using a seven-point Likert-type scale ranging from 1 = “not at all” to 7 = “very much”, with four as the neutral point.

*Financial capital* was measured using three questions: “My parents/family provide me with debt capital; My parents/family provide me with equity capital; The capital provided by my parents/family has favorable and flexible conditions”. *Social capital* was measured using two questions: My parents/family provide me with contacts to people that might help me with pursuing an entrepreneurial career; My parents/family introduce me to business networks, providing contacts to potential business partners and/or customers”. The scales demonstrated good reliability, with coefficient Alphas equaling 0.79 for the financial capital scale and 0.91 for the social capital scale.

### 5.2.3. Moderating variable

*Family cohesiveness* refers to the degree of connectedness and emotional bonding within the family (Lansberg and Astrachan, 1994; Laspita et al., 2012; Olson and Gorall, 2003). Students were asked to indicate their level of agreement with the following statements: 1) “Family togetherness is important”; 2) “Family members feel very close”; 3) “When family gets together, everyone

<sup>3</sup> The PSED studies include a large number of emergence markers that are specific to the US regulatory context, for example “paid initial federal social security (FICA) payment”, “paid initial state unemployment insurance payment”, or “know that Dun and Bradstreet established listing”.

is present”; 4) “Family members ask each other for help”. Each statement was evaluated by a 7-point Likert-type scale (“completely disagree” to “completely agree” with a defined neutral point). The reliability of the scale was acceptable (Cronbach's Alpha = 0.84).

As reported above, to construct the three multi-item scales, we ran confirmatory factor analysis (CFA) with a latent common factor and a marker, utilizing the structural equation modeling procedure in AMOS. The model offered an acceptable goodness-of-fit (GFI = 0.909, AGFI = 0.870, and RMSEA = 0.083), with individual item loadings on the corresponding constructs of interest to the study of 0.66 and above. We retained the respective factor scores for the subsequent statistical analysis.

#### 5.2.4. Control variables

We controlled for students' *age* (calculated based on the self-reported year of birth), *biological sex* (dummy variable, coded as '0' for male and '1' for female students), *bachelor* (dummy variable, coded as '1' for bachelor students and '0', otherwise), *field of study* (four categories, denoting Business and Economics, Natural Sciences, Social Sciences, and other), *family background* (dummy variable, coded as '1' if the parents were self-employed at the moment of survey or had ever been self-employed, and '0', otherwise), taking *entrepreneurship courses* (dummy variable, coded as '1' if the student attended at least one entrepreneurship course and '0', otherwise), *previous experience* (dummy variable, coded as '1' if the student reported professional experience relevant to the company to be founded, and '0', otherwise), level of *commitment* (self-reported percent of student's average weekly working time he/she planned to invest in his/her company), number of *partners* participating in the new venture (self-reported count), *financial barriers* (perceived barriers to the access to debt and equity capital; 7-point Likert-type scale), the share of *own funds* for starting a venture (percentage), *country of origin* (19 categories), university (294 categories), and the *industrial sector* of the nascent venture (15 categories).

The descriptive statistics and zero-order correlations of all variables entered into the regression estimation are reported in Tables 1 and 2, respectively.

**Table 1**  
Descriptive statistics.

Variable	Mean	S.D.	Min	Max	Frequencies*	
					Categories	Percent
<i>Dependent variable</i>						
Scope of start-up activities	2.20	1.73	0	9		
<i>Controls</i>						
Age	23.95	3.59	18	34		
Gender	0.40	0.49	0	1	Female	39.79
Bachelor	0.80	0.39	0	1		
Field of study					Business & economics	42.00
					Natural sciences	28.91
					Social sciences	6.79
					Others	22.29
Family background	0.54	0.50	0	1	Yes	54.38
Entrepreneurship courses	0.74	0.44	0	1	Yes	73.93
Previous experience	0.48	0.50	0	1	Yes	48.31
Level of commitment	53.41	28.07	0	100		
Number of partners	1.06	0.97	0	4		
Financial barriers	4.79	1.85	1	7		
Own funds' share	40.16	31.23	1	100		
Industry**					Agriculture/forestry/fishing	2.58
					Construction/manufacturing/transport	9.47
					Hotel and restaurant industry	8.89
					Education	3.98
					Wholesale and retail trade/FIRE	16.93
					Communications/IT	12.03
					Consulting/personnel mngt/HR	12.05
					Architecture and engineering	6.20
					Advertising/marketing/design	8.73
					Health services	6.35
					Others	12.80
<i>Family support</i>						
Financial capital	2.20	1.25	1	7		
Social capital	3.38	1.87	1	7		
Family cohesiveness	3.30	0.76	1	7		

Notes: N = 12,399; \* Categorical variables only \*\* Some industry categories combined to save space, detailed industry break down available from the authors upon request.

**Table 2**  
Correlations.

N	Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Scope of start-up activities	1.00													
2	Age	0.12*	1.00												
3	Gender	−0.15*	−0.08*	1.00											
4	Bachelor	−0.03*	−0.29*	0.03*	1.00										
5	Family background	0.08*	−0.008	−0.006	0.05*	1.00									
6	Entrepreneurship courses	0.11*	0.003	−0.008	−0.02	0.03*	1.00								
7	Previous experience	0.19*	0.27*	−0.06*	−0.06*	0.06*	0.03*	1.00							
8	Level of commitment	0.05*	0.014	0.014	0.02	0.02*	0.02*	0.06*	1.00						
9	Number of partners	0.11*	−0.07*	−0.07*	−0.005	−0.02*	0.04*	−0.04*	0.003	1.00					
10	Financial barriers	−0.08*	−0.03*	0.05*	0.04*	−0.06*	−0.002	−0.04*	0.02*	0.05*	1.000				
11	Own funds' share	0.09*	0.09*	−0.06*	−0.008	0.02*	−0.02*	0.08*	−0.05*	−0.14*	−0.24*	1.00			
12	Financial capital	−0.05*	−0.15*	−0.03*	0.02*	0.13*	0.04*	−0.05*	0.0007	0.01	−0.05*	−0.1*	1.00		
13	Social capital	−0.004	−0.19*	0.02	0.09*	0.21*	0.06*	−0.03*	0.03*	0.02*	−0.06*	−0.08*	0.69*	1.00	
14	Family cohesiveness	−0.02*	−0.04*	0.11*	0.04*	0.04*	0.05*	−0.03*	0.05*	0.03*	0.03*	−0.04*	0.18*	0.27*	1.00

Notes: \*significant at  $p < 0.05$  or better.**Table 3**  
Hierarchical Poisson regression estimates: Effects on the scope of start-up activities.

Variable	Model I	Model II	Model III	Model IV	Model V
Age	0.017*** (0.002)	0.017*** (0.002)	0.017*** (0.002)	0.017*** (0.002)	0.017*** (0.002)
Sex	−0.189*** (0.014)	−0.193*** (0.014)	−0.191*** (0.014)	−0.192*** (0.014)	−0.193*** (0.014)
Bachelor	−0.020 (0.019)	−0.024 (0.019)	−0.024 (0.019)	−0.025 (0.019)	−0.025 (0.019)
Field of study: Nat sciences	−0.034* (0.019)	−0.035* (0.019)	−0.035* (0.019)	−0.035* (0.019)	−0.036* (0.019)
Field of study: Soc sciences	−0.055* (0.029)	−0.055* (0.029)	−0.055* (0.029)	−0.056* (0.029)	−0.056* (0.029)
Field of study: Others	−0.042** (0.018)	−0.042** (0.018)	−0.043** (0.018)	−0.043** (0.018)	−0.043** (0.018)
Family background	0.088*** (0.013)	0.086*** (0.013)	0.086*** (0.013)	0.086*** (0.013)	0.086*** (0.013)
Entrepreneurship courses	0.131*** (0.016)	0.132*** (0.016)	0.133*** (0.016)	0.133*** (0.016)	0.132*** (0.016)
Previous experience	0.243*** (0.013)	0.240*** (0.013)	0.240*** (0.013)	0.239*** (0.013)	0.239*** (0.013)
Level of commitment	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)
Number of partners	0.095*** (0.006)	0.094*** (0.006)	0.094*** (0.006)	0.094*** (0.006)	0.094*** (0.006)
Financial barriers	−0.021*** (0.003)	−0.021*** (0.003)	−0.021*** (0.003)	−0.021*** (0.003)	−0.021*** (0.003)
Own funds	0.002*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)
<i>Family support</i>					
Financial capital		−0.044*** (0.007)	−0.044*** (0.007)	−0.045*** (0.007)	−0.044*** (0.007)
Social capital		0.023*** (0.005)	0.024*** (0.005)	0.024*** (0.005)	0.023*** (0.005)
<i>Family cohesiveness</i>			−0.014 (0.009)	−0.012 (0.009)	−0.009 (0.009)
Cohesiveness × financial capital				0.008 (0.007)	
Cohesiveness × social capital					0.011** (0.004)
<i>Regression function</i>					
Pseudo R2	0.0576	0.0585	0.0586	0.0586	0.0587
Delta Pseudo R2		cf. Model I 1.56%	cf. Model I 1.73%	cf. Model 1 1.73%	cf. Model 1 1.9%

Notes: N = 12,399; dummies for 294 universities, 19 countries, and 15 industries included in all specifications. Poisson regression coefficients are reported (standard errors in parentheses). Prob>chi2 = 0.000 for all models, all models are statistically significant; \*\*\* $p < 0.001$ ; \*\* $p < 0.01$ ; \* $p < 0.05$ .



### 5.3. Statistical procedure

Our dependent variable is a count (the number of start-up activities), therefore we specified a hierarchical Poisson regression; utilizing the STATA procedure (we also ran our estimation using the negative binomial procedure, with substantively the same results). Prior to specifying the regression, we tested for multicollinearity. At 2.1, the highest variance inflation factor (VIF) among the independent variables was well below than the conservative cut-off value of 5.0 (Studenmund, 1992), assuring us that multicollinearity was not a concern.

In the first step of the hierarchical analysis we included only the control variables (Model I); in the second step we added *financial and social capital* as independent variables (Model II); in the third step we added *family cohesiveness* (Model III), and in the fourth step we added the two interaction terms of different forms of family capital with *family cohesiveness* (Model IV–V). The results are reported in Table 3.

## 6. Results

The result patterns for the control variables (Model I) largely confirmed our expectations. Age was positively associated with the scope of start-up activities ( $b = 0.017, p < 0.001$ ). The coefficient for sex was  $-0.189 (p < 0.001)$ , indicating a lower scope of start-up activities for female young nascent entrepreneurs. Students with a specialization in 'Business and Economics' (the reference category) were involved in a higher scope of start-up activities compared to 'Natural sciences', 'Social sciences', or 'Other' categories. Students coming from families with an entrepreneurial background engaged in a larger scope of start-up activities ( $b = 0.088, p < 0.001$ ).

Students who had taken entrepreneurship classes had undertaken a higher number of start-up activities ( $b = 0.131, p < 0.001$ ). The coefficient for 'previous experience' was  $0.243 (p < 0.001)$ , indicating a greater scope of start-up activities for those students who had already had work experience related to the company to be founded. The level of commitment was also positively associated with the scope of start-up activities ( $b = 0.001, p < 0.001$ ), as was the number of start-up partners ( $b = 0.095, p < 0.001$ ). The perceived degree of financial barriers diminished the scope of start-up activities ( $b = -0.021, p < 0.001$ ) while a bigger share of own funds was associated with a larger scope of start-up activities ( $b = 0.002, p < 0.001$ ). There were also significant country-of-origin, university, and industry effects. All of these were stable across subsequent model specifications (Models II–V).

The next step of analysis tested the main effects of family financial and social capital (Model II). Financial capital had a statistically significant but negative relationship with the scope of start-up activities. The higher the family support in the form of financial capital ( $b = -0.044, p < 0.001$ ), the lower the scope of start-up activities. For the average respondent in our sample, a one-unit increase in family financial support decreased the scope of start-up activities by 9.6%. Thus, H1a was rejected. Social capital had a statistically significant and positive relationship with the scope of start-up activities of young nascent entrepreneurs: i.e., the higher the family support in the form of social capital ( $b = 0.023, p < 0.001$ ), the greater the scope of start-up activities undertaken by young entrepreneurs. For the average respondent in our sample, a one-unit increase in family social capital increased the scope of start-up activities by 5.1%. These findings provided support for Hypothesis H1b. The main effects of family financial and social capital are plotted in Figs. 1 and 2 below. In Model III, "family cohesiveness" was negatively associated with the scope of start-up activities but the effect was insignificant ( $b = -0.014, p > 0.1$ ). The results were stable across other model specifications. Compared to Model I (the baseline model with only control variables), the explained variance increased from 5.76% to 5.86% when we added the main independent variables (Models II–IV), indicating an improved fit of the model.

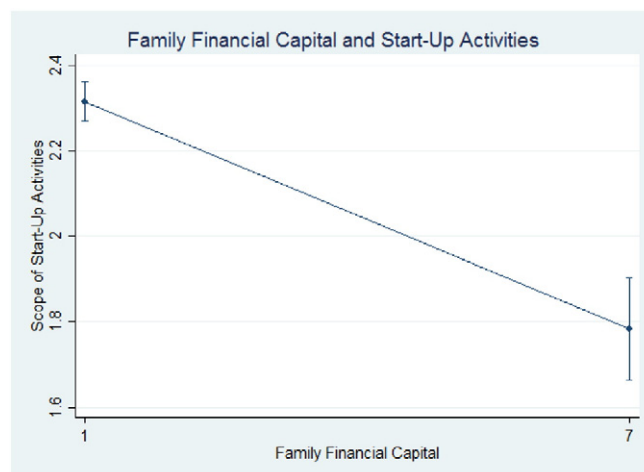


Fig. 1. Effect of family financial support on the scope of start-up activities.

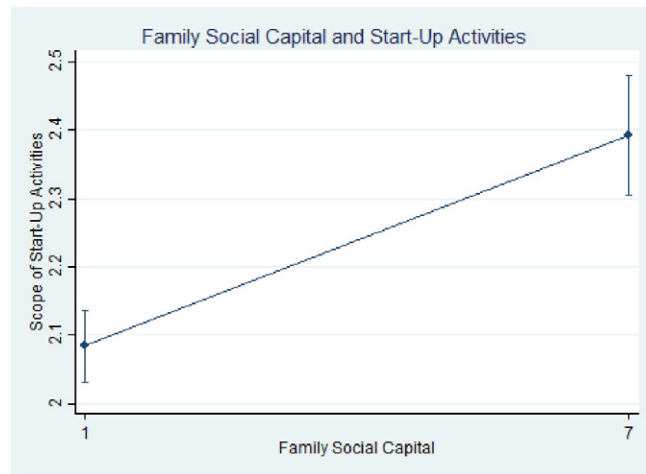


Fig. 2. Effect of family social support on the scope of start-up activities.

Although the effect of family capital appears to be small, our results are consistent with prior studies on the role of family in students' entrepreneurship (Chlosta et al., 2012; Laspita et al., 2012; Wang and Wong, 2004).

Models IV–V sequentially included the interaction terms. The interaction between family financial capital and family cohesiveness was not significant. Thus, hypothesis H2a was not supported. The interaction between family social capital and family cohesiveness ( $b = 0.011$ ,  $p < 0.05$ ) was positive and statistically significant, rendering support to our hypotheses H2b. Compared to Model I, the inclusion of the interaction term between financial capital and family cohesiveness led to no increase in  $R^2$  (5.86%) while the inclusion of the interaction term between social capital and family cohesiveness resulted in the  $R^2$  increase from 5.86 to 5.87%. Fig. 3 illustrates the interaction between family social capital and family cohesiveness. We plotted the relationship between family social capital and the scope of start-up activities at two levels of family cohesiveness, namely when family cohesiveness is one standard deviation below the mean, and when it is one standard deviation above the mean.

## 7. Robustness tests

### 7.1. Alternative regression specifications

As previously discussed, the GUESSS survey encompasses different countries and different universities within these countries. Thus, the structure of these data is multilevel because the respondents are nested within universities, which in turn are nested within different countries. The observations, therefore, are not independent from each other because potential similarities may occur among students in a particular country or university. To address this challenge, we implemented a multilevel mixed-effect (hierarchical) modeling approach (Laspita et al., 2012) as a robustness test. Mixed model estimation allows to account for the nested data structure and to take into account the cross-level interactions within the Poisson distribution. We separated



Fig. 3. Interaction effects: Family social support and family cohesiveness.

the variance at each level: individual (level 1,  $n_i = 12,399$ ), university (level 2,  $n_u = 294$ ) and country (level 3,  $n_c = 19$ ). The results are reported in Table 4.

As a starting point for the analysis, we ran a random effects ANOVA to determine what portion of the variance in individual start-up activities is due to cross-country (Model I) and cross-university (Model II) difference as compared to individual differences. Model III combined the three levels: individual, country, and university. In Models IV–VIII we replicated the procedure previously implemented in the hierarchical Poisson regression models. The likelihood (LR) ratio test statistics in all models confirmed that the null hypothesis that there is no cross-country and cross-university variation in the scope of start-up activities could be rejected. The main and interaction effects in the multi-level regression were consistent with the Poisson regression, indicating that the results are robust to alternative regression specifications. In order to estimate how well the models fit the data, the AIC (Akaike Information Criterion) and BIC (Bayes Information Criterion) are usually used, and smaller values are better. As the statistical results reported in Table 5 show, the models with our main independent variables (Models V–VI) show an improvement over the models with control variables only (Models I–IV), and the addition of interaction terms (Models VII–VIII) leads to improvement over the models with main effects only.

## 7.2. Alternative structure of the dependent variable

We next reran our estimations using several alternative structures of the dependent variable. First, we specified a series of logit regressions, to test whether family resources and cohesiveness may have different effect on specific start-up activities. The results from the individual-item logits are reported in Table 5. Family social capital was significantly and positively associated with six start-up activities (largely in line with our expectations); positively, but insignificantly associated with “asked financial institutions for funding”, and “decided on the date of founding”; and negatively, but insignificantly associated with “thought of first business ideas”. Family financial capital was significantly and negatively associated with seven individual start-up activities (consistent with the results for the overall scope of start-up activities); negatively, but insignificantly associated with “purchased equipment”; and positively, but insignificantly associated with “asked financial institutions for funding”. The last result suggests that family financial resources may be used by young nascent entrepreneurs as collateral, rather than as a substitute for resources provided by institutional finance.

We next factor-analyzed the start-up activity items to see if any underlying structure would emerge. The start-up activities split into two factors, Factor 1 (“formulated business plan”, “purchased equipment”, “worked on product development”, “discussed with potential customers”, “asked financial institutions for funding”, and “decided on the date of founding”) and Factor 2 (“thought of first business ideas”, “identified market opportunity”, and “looked for potential partners”). We reran the regression specifications using the two factors as dependent variables, with substantively the same results, i.e. significant negative effect of family financial capital, significant positive effect of family social capital, and significant positive effect of the interaction term between family social capital and family cohesiveness.

We then regrouped the start-up activities into alternative categories, namely the four properties of emerging organizations: intentionality, resources, boundaries, and exchange (Brush et al., 2008; Katz and Gartner, 1988),<sup>4</sup> and the PSED II domains of activities identified by Hechavarria (2011) based on earlier work by Reynolds (2007): business presence, product implementation, resources, business registration, business planning, intellectual property protection, financing, and sweat equity. Our survey data tracked only a subset of the activities included in the PSED studies, so we could check all four properties discussed by Katz and Gartner (1988), but only four of the eight factors explored by Hechavarria (2011).<sup>5</sup>

Finally, we constructed the dependent variable employing the weighing scheme developed by the GUESSS project leaders (Sieger et al., 2011). In this scheme, the scope of start-up activity is calculated based on the formula: Scope = 1\*(nothing done) + 3\*(thought of first business ideas) + 5\*(formulated business plan + identified market opportunity + looked for potential partners) + 7\*(purchased equipment + worked on product development + discussed with potential partners + asked financial institutions for funding) + 10\*(decided on date of founding), with substantively the same results. The robustness test results are reported in Table 6 below.

The results across the alternative regression estimations were substantively the same as the ones we reported. From this, we concluded that our results are robust to alternative underlying structures of the dependent variable. Across the alternative specifications, we can also see the contours of the larger picture. Instrumental social support expended by families is critical for the realization of new business initiatives, but may stifle their generation. In contrast, emotional social support in the form of family cohesiveness can germinate their offspring's new business ideas. This is because instrumental social support is negatively associated, while family cohesiveness is positively associated with “thinking about new business ideas”. Thus, the generation of ideas about a new entrepreneurial venture appears to be an area of tension between family instrumental and emotional support.

<sup>4</sup> “Intentionality” is “an agent's seeking information that can be applied toward achieving the goal of creating a new organization”; “resources” include the human and financial capital, property, and equipment; “boundary” is the “barrier condition between the organization and its environment”; and “exchange” refers to cycles of transactions that occur within the organization (Katz and Gartner, 1988: 431–432).

<sup>5</sup> The “business presence” domain includes activities such as “legal form registered”, “opened bank account for business”, “signed an equity agreement”, “hired accountant”, “liability insurance bought”, “hired lawyer”, “supplier credit established”, “joined trade association”. The “product implementation” domain includes activities such as “first income received”, “promotion for product or service initiated”, “began talking to customers”, “got internet or phone listing”, “model or prototype initiated”, “first use of physical space”, “purchased material, supply and/or inventory”, “purchased or leased capital assets”. The “business planning” domain includes activities such as “defining markets initiated”, “began collecting competitor information”, “business plan initiated”, “financial projections initiated”, “determined regulatory requirements”. The “financing” domain includes activities such as “asked for first funding” and “got first funding” (Hechavarria, 2011: 100–101).

**Table 4**

Multi-level mixed-effect Poisson regression estimates of the effects on the scope of start-up activities.

Variable	Model I	Model II	Model III	Model IV	Model V	Model VI	Model VII	Model VIII
Age				0.017*** (0.002)	0.016*** (0.002)	0.017*** (0.002)	0.016*** (0.002)	0.016*** (0.002)
Sex				−0.187*** (0.014)	−0.192*** (0.014)	−0.190*** (0.014)	−0.191*** (0.014)	−0.192*** (0.014)
Bachelor				−0.016 (0.018)	−0.020 (0.018)	−0.020 (0.018)	−0.020 (0.018)	−0.020 (0.018)
Field of study: Nat sciences				−0.038** (0.018)	−0.038** (0.018)	−0.038** (0.018)	−0.038** (0.018)	−0.039** (0.018)
Field of study: Soc sciences				−0.060** (0.029)	−0.060** (0.028)	−0.060** (0.028)	−0.061** (0.029)	−0.061** (0.028)
Field of study: Others				−0.038** (0.017)	−0.037** (0.017)	−0.038** (0.017)	−0.038** (0.017)	−0.038** (0.017)
Family background				0.090*** (0.013)	0.088*** (0.013)	0.088*** (0.013)	0.089*** (0.013)	0.089*** (0.013)
Entrepreneurship courses				0.141*** (0.015)	0.142*** (0.015)	0.143*** (0.015)	0.142*** (0.015)	0.142*** (0.015)
Previous experience				0.243*** (0.013)	0.240*** (0.013)	0.240*** (0.013)	0.240*** (0.013)	0.239*** (0.013)
Level of commitment				0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)
Number of partners				0.095*** (0.006)	0.094*** (0.006)	0.094*** (0.006)	0.094*** (0.006)	0.094*** (0.006)
Financial barriers				−0.021*** (0.003)	−0.021*** (0.003)	−0.021*** (0.003)	−0.021*** (0.003)	−0.021*** (0.003)
Own funds				0.002*** (0.000)	0.002*** (0.000)	0.002*** (0.000)	0.001*** (0.000)	0.001*** (0.000)
<i>Family support</i>								
Financial capital					−0.045*** (0.007)	−0.045*** (0.007)	−0.045*** (0.007)	−0.045*** (0.007)
Social capital					0.023*** (0.005)	0.024*** (0.005)	0.024*** (0.005)	0.023*** (0.005)
<i>Family cohesiveness</i>						−0.014 (0.008)	−0.011 (0.009)	−0.008 (0.009)
Cohesiveness × Financial capital							0.008 (0.007)	
Cohesiveness × Social capital								0.012*** (0.004)
Constant	0.804*** (0.035)	0.781*** (0.014)	0.805*** (0.034)	0.149** (0.075)	0.185** (0.078)	0.220*** (0.081)	0.215*** (0.081)	0.205** (0.081)
Log likelihood	−23,245.848	−23,208.188	−23,181.658	−22,279.422	−22,257.425	−22,256.165	−22,255.378	−22,252.264
df	2	2	3	30	32	33	34	34
<i>Random-effects parameters</i>								
Intercept	0.020 (0.008)		0.018 (0.008)	0.012 (0.005)	0.012 (0.005)	0.012 (0.005)	0.012 (0.005)	0.012 (0.005)
(Country)								
Intercept		0.035 (0.005)	0.018 (0.003)	0.009 (0.002)	0.008 (0.002)	0.008 (0.002)	0.008 (0.002)	0.008 (0.002)
(University)								
<i>Model fit statistics</i>								
AIC	46,495.7	46,420.38	46,369.32	44,618.84	44,578.85	44,578.33	44,578.76	44,572.53
BIC	46,510.55	46,435.23	46,391.59	44,841.61	44,816.46	44,823.37	44,831.22	44,824.99

Notes: N = 12,399; dummies for 294 universities, 19 countries, and 15 industries included in all specifications. Prob&gt;chi2 = 0.000 for all models. All models are statistically significant; \*\*\*p &lt; 0.001; \*\*p &lt; 0.01; \*p &lt; 0.05.

**Table 5**

Logit regression estimates of the effects on individual start-up activities.

Variable	Model I Thought of first business ideas	Model II Formulated business plan	Model III Identified market opportunity	Model IV Looked for potential partners	Model V Purchased equipment	Model VI Worked on product development	Model VII Discussed with potential customers	Model VIII Asked financial institutions for funding	Model VIII Decided on date of founding
Age	−0.015** (0.007)	0.047*** (0.007)	0.041*** (0.007)	0.015** (0.007)	0.058*** (0.012)	0.037*** (0.009)	0.053*** (0.008)	0.081*** (0.016)	0.056*** (0.014)
Sex	−0.234*** (0.046)	−0.286*** (0.051)	−0.496*** (0.044)	−0.440*** (0.046)	−0.530*** (0.091)	−0.479*** (0.070)	−0.231*** (0.057)	−0.306*** (0.114)	−0.304*** (0.100)
Bachelor	−0.198*** (0.067)	−0.106 (0.073)	−0.041 (0.062)	−0.069 (0.064)	0.246* (0.128)	−0.025 (0.091)	−0.040 (0.081)	0.285* (0.147)	−0.043 (0.131)
Field of study: Natural sciences	−0.131** (0.067)	−0.049 (0.071)	−0.250*** (0.062)	−0.136** (0.065)	0.229* (0.118)	0.253*** (0.091)	0.084 (0.079)	−0.337** (0.155)	−0.109 (0.133)
Field of study: Social sciences	−0.094 (0.095)	−0.094 (0.108)	−0.421*** (0.093)	−0.127 (0.096)	0.421** (0.176)	−0.051 (0.145)	0.103 (0.118)	0.084 (0.212)	−0.030 (0.204)
Field of study: Others	−0.079 (0.060)	−0.088 (0.065)	−0.190*** (0.057)	−0.054 (0.059)	0.270** (0.112)	0.100 (0.088)	−0.192*** (0.074)	−0.149 (0.146)	−0.174 (0.127)
Family background	−0.080* (0.044)	0.143*** (0.048)	0.281*** (0.042)	0.146*** (0.043)	0.352*** (0.083)	0.282*** (0.063)	0.199*** (0.054)	0.300*** (0.108)	0.259*** (0.093)
Entrepreneurship courses	0.069 (0.050)	0.391*** (0.059)	0.389*** (0.049)	0.164*** (0.050)	0.105 (0.096)	0.338*** (0.076)	0.273*** (0.065)	0.332** (0.132)	0.181 (0.115)
Previous experience	0.172*** (0.044)	0.428*** (0.048)	0.412*** (0.042)	0.512*** (0.043)	0.680*** (0.084)	0.549*** (0.064)	0.655*** (0.054)	0.527*** (0.108)	0.720*** (0.096)
Level of commitment	0.003*** (0.001)	0.003*** (0.001)	0.002*** (0.001)	0.003*** (0.001)	−0.001 (0.001)	−0.001 (0.001)	0.001 (0.001)	0.006*** (0.002)	0.006*** (0.002)
Number of partners	0.035 (0.022)	0.142*** (0.024)	0.116*** (0.021)	0.564*** (0.022)	0.069* (0.040)	0.169*** (0.030)	0.120*** (0.027)	0.139*** (0.050)	0.051 (0.045)
Financial barriers	0.020* (0.012)	−0.046*** (0.013)	−0.038*** (0.011)	−0.056*** (0.012)	−0.056*** (0.020)	−0.050*** (0.016)	−0.050*** (0.014)	−0.046 (0.028)	−0.135*** (0.023)
Own funds	0.000 (0.001)	0.002*** (0.001)	0.002*** (0.001)	0.001** (0.001)	0.013*** (0.001)	0.006*** (0.001)	0.004*** (0.001)	−0.010*** (0.002)	0.010*** (0.001)
<i>Family support</i>									
Financial capital	−0.078*** (0.024)	−0.054** (0.026)	−0.095*** (0.022)	−0.086*** (0.023)	−0.048 (0.043)	−0.123*** (0.033)	−0.122*** (0.029)	0.061 (0.054)	−0.110** (0.050)
Social capital	−0.011 (0.017)	0.056*** (0.018)	0.031** (0.015)	0.030* (0.016)	0.052* (0.030)	0.070*** (0.023)	0.129*** (0.020)	0.048 (0.039)	0.050 (0.034)
<i>Family cohesiveness</i>	0.064** (0.030)	−0.029 (0.033)	−0.037 (0.028)	−0.005 (0.029)	−0.079 (0.054)	−0.113*** (0.042)	−0.060* (0.036)	−0.018 (0.071)	0.088 (0.065)
Cohesiveness × Financial capital	−0.028 (0.032)	0.035 (0.035)	−0.020 (0.030)	−0.026 (0.031)	−0.051 (0.058)	−0.058 (0.044)	−0.043 (0.039)	0.013 (0.071)	0.099 (0.070)
Cohesiveness × Social capital	0.021 (0.021)	0.007 (0.023)	0.021 (0.020)	0.037* (0.021)	0.058 (0.038)	0.054* (0.029)	0.061** (0.025)	−0.015 (0.049)	−0.023 (0.044)
<i>Regression function</i>									
Constant	1.736*** (0.454)	−2.876*** (0.481)	−1.275*** (0.408)	−1.734*** (0.425)	−6.316*** (1.132)	−3.772*** (0.636)	−3.766*** (0.556)	−6.565*** (1.207)	−6.315*** (1.171)
Pseudo R2	0.0437	0.0918	0.0993	0.1018	0.1419	0.1130	0.0897	0.1258	0.1153
N	12,261	12,195	12,357	12,353	10,831	11,916	12,128	10,370	10,677

Notes: N = 12,399; dummies for 294 universities, 19 countries, and 15 industries included in all specifications. Prob&gt;chi2 = 0.000 for all models. All models are statistically significant; \*\*\*p &lt; 0.001; \*\*p &lt; 0.01; \*p &lt; 0.05.



Alternatively, we can also observe in what areas of nascent entrepreneurial activity family instrumental and emotional support work well in tandem. Family cohesiveness propels family social support for product implementation, the subscription of new partners and customers, the mobilization of resources, and, ultimately, entering market exchange. Interestingly, the only activity that does not appear to be significantly influenced by any type of family social support is “asking financial institutions for funding”. Finally, we can observe the tensions between different types of family instrumental social support, in that instrumental financial support generally restricts, whereas instrumental social support generally promotes the scope of nascent entrepreneurial activity among young aspiring entrepreneurs. Succinctly put, tightly knit families help their offspring come up with new business ideas and facilitate the translation of these ideas into entrepreneurial initiatives. Family money constrains, while family connections facilitate, the realization of young nascent entrepreneurs’ new venture initiatives. Thus, family social support shapes the context for the micro-foundations of entrepreneurial action.

### 7.3. Temporal dynamics

Reporting bias in the start-up activities is a well-known problem in the PSED studies (Honig and Samuelsson, 2014) as is the definition of “success” in the start-up effort (Davidsson, 2006). Thus, incorporating the time dimension of the start-up process is critical for enhancing the face validity of the model. Using student email addresses as identifiers, we were able to construct a small panel dataset of 524 respondents, who were “intentional founders” in 2011, and took the survey again in 2013. At the time of the 2013 survey, thirty of those 524 respondents (5.73%) reported they were already running their own business, 103 (19.66%) reported they were trying to start their own business, with 391 respondents (74.6%) not working on creating a new venture. The 103 respondents who were still working on setting up their new venture had completed an average of 1.14 start-up activities as of 2011, and 2.45 start-up activities as of 2013, providing evidence that those “intentional founders” continued towards the realization of their entrepreneurial initiatives over time. Indeed, those respondents who founded a new venture as of 2013 were engaged in a significantly broader scope of start-up activities as of 2011 (mean = 2.8, s.d. = 0.297), compared to those who did not (mean = 1.92, s.d. = 0.057). In sum, with all the caveats of our restricted dataset, we have some initial evidence that a broader scope of start-up activities is more likely to result in a subsequent new venture formation.

## 8. Discussion

Contrary to the popular myth of the lone entrepreneur, young people do not start businesses on their own (Inc. Magazine, 2014). Instead, they are embedded in a web of relationships, the earliest and most immediate being their family. Using insights from the social support perspective (Cohen and Wills, 1985; Gudmunson et al., 2009) we hypothesized that families provide young entrepreneurs with instrumental social support in the form of social and financial capital. In addition, we expected that the emotional social support provided by a cohesive family would facilitate the translation of family instrumental support into an expanded scope of start-up activities. The results from statistical testing revealed a more nuanced picture of the role of family social support in the start-up process, as we discuss below.

### 8.1. The beneficial role of family social capital

Anchored in the theory of social capital, and in line with a large body of entrepreneurship literature (Aldrich and Zimmer, 1986; Chang et al., 2009; Danes et al., 2009; Davidsson and Honig, 2003; Hoffman et al., 2006; see also Stam et al., 2014 for a recent meta-analysis of the role of entrepreneurial social capital on small firm performance), we find that family social capital, in the form of social contacts and introduction into social networks, has a consistently significant positive effect on the scope of start-up activities undertaken by young nascent entrepreneurs. Our finding extends prior research in this area by documenting that it is the family’s *external* ties (social contacts and networks), in particular, that are instrumental in the process of nascent entrepreneurs’ venture creation.

Entrepreneurship and family business researchers have traditionally focused on different aspects of social capital. Prior research in entrepreneurship has emphasized the role of the family as a locus of emotional social support in the form of “bonding social capital” or “internal “strong ties” (Davidsson and Honig, 2003; Kalnins and Chung, 2006; Renzulli and Aldrich, 2005; Sanders and Nee, 1996). In contrast, family business research has looked at the effect of instrumental social support, emphasizing the ability of families to pass on to the next generation their family-specific “bridging social capital”, or external social interactions (Salvato and Melin, 2008; Sirmon and Hitt, 2003).

Our study highlights that “strong ties” within a family are a source of external “bridging social capital”, in the form of passing valuable social contacts and/or entry into the family’s existing social networks. This finding reinforces the “closure” argument that argues that children of parents who are entrepreneurs take advantage of the resources and in our case the social resources, which they derive from their parent’s social position (Robinson, 1984; Sørensen, 2007; Western and Wright, 1994). It also challenges the widely accepted explanation in sociology, that distant or weak ties are more beneficial than strong, presumably family ties. Introductions made by family members are likely to be more profitable because of the family members’ willingness to look out for the best interests of, in this case, their children (Karra et al., 2006). In sum, parents help their children overcome the barriers to entry into self-employment by providing them access to valuable resources, one of which is access to their social networks.

We also find that emotional support in the form of family cohesiveness magnifies this effect. Thus, bridging social capital is instrumental in the young entrepreneur’s advancing through the start-up process. A fruitful extension of our study will be to

Table 6

Robustness tests: Alternative structures of the dependent variable.

Variable	Model I	Model II	Model III	Model IV	Model V	Model VI	Model VII	Model VIII	Model IX	Model X	Model XI
	Factor 1	Factor 2	Business presence	Product implementation	Business planning	Financing	Intentionality	Resources	Exchange	Boundaries	Weighted scope
<i>Controls</i>											
Age	0.029*** (0.003)	0.017*** (0.004)	0.006*** (0.002)	0.015*** (0.002)	0.014*** (0.003)	0.081*** (0.016)	0.014*** (0.003)	0.013*** (0.002)	0.053*** (0.008)	0.056*** (0.014)	0.238*** (0.028)
Gender	−0.168*** (0.021)	−0.298*** (0.024)	−0.100*** (0.011)	−0.099*** (0.014)	−0.199*** (0.018)	−0.306*** (0.114)	−0.199*** (0.018)	−0.168*** (0.015)	−0.231*** (0.057)	−0.304*** (0.100)	−2.183*** (0.190)
Bachelor	0.016 (0.030)	−0.058* (0.034)	−0.017 (0.015)	0.019 (0.019)	−0.053** (0.025)	0.285* (0.147)	−0.053** (0.025)	0.014 (0.022)	−0.040 (0.081)	−0.043 (0.131)	−0.075 (0.268)
Field of study: Natural sciences	0.030 (0.030)	−0.135*** (0.034)	−0.031** (0.015)	0.055*** (0.019)	−0.088*** (0.025)	−0.337** (0.155)	−0.088*** (0.025)	0.005 (0.022)	0.084 (0.079)	−0.109 (0.133)	−0.245 (0.271)
Field of study: Social sciences	0.005 (0.043)	−0.140*** (0.050)	−0.028 (0.022)	0.021 (0.028)	−0.125*** (0.036)	0.084 (0.212)	−0.125*** (0.036)	−0.009 (0.032)	0.103 (0.118)	−0.030 (0.204)	−0.548 (0.392)
Field of study: Others	−0.030 (0.027)	−0.089*** (0.031)	−0.019 (0.014)	−0.001 (0.018)	−0.071*** (0.023)	−0.149 (0.146)	−0.071*** (0.023)	0.007 (0.020)	−0.192*** (0.074)	−0.174 (0.127)	−0.494** (0.246)
Family background	0.115*** (0.020)	0.098*** (0.023)	0.041*** (0.010)	0.071*** (0.013)	0.067*** (0.017)	0.300*** (0.108)	0.067*** (0.017)	0.086*** (0.015)	0.199*** (0.054)	0.259*** (0.093)	1.184*** (0.181)
Entrepreneurship courses	0.143*** (0.023)	0.189*** (0.026)	0.037*** (0.012)	0.070*** (0.015)	0.154*** (0.019)	0.332** (0.132)	0.154*** (0.019)	0.077*** (0.017)	0.273*** (0.065)	0.181 (0.115)	1.457*** (0.207)
Previous experience	0.297*** (0.020)	0.312*** (0.023)	0.135*** (0.010)	0.177*** (0.013)	0.193*** (0.017)	0.527*** (0.108)	0.193*** (0.017)	0.212*** (0.015)	0.655*** (0.054)	0.720*** (0.096)	3.031*** (0.181)
Level of commitment	0.001*** (0.000)	0.002*** (0.000)	0.001*** (0.000)	−0.000 (0.000)	0.001*** (0.000)	0.006*** (0.002)	0.001*** (0.000)	0.001*** (0.000)	0.001 (0.001)	0.006*** (0.002)	0.013*** (0.003)
Number of partners	0.068*** (0.010)	0.168*** (0.011)	0.120*** (0.005)	0.037*** (0.006)	0.055*** (0.008)	0.139*** (0.050)	0.055*** (0.008)	0.143*** (0.007)	0.120*** (0.027)	0.051 (0.045)	1.151*** (0.091)
Country of origin	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
University	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Financial barriers	−0.033*** (0.005)	−0.022*** (0.006)	−0.019*** (0.003)	−0.016*** (0.003)	−0.012*** (0.004)	−0.046 (0.028)	−0.012*** (0.004)	−0.022*** (0.004)	−0.050*** (0.014)	−0.135*** (0.023)	−0.319*** (0.048)
Own funds' share	0.003*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.002*** (0.000)	0.001*** (0.000)	−0.010*** (0.002)	0.001*** (0.000)	0.001*** (0.000)	0.004*** (0.001)	0.010*** (0.001)	0.022*** (0.003)
<i>Family support</i>											
Financial capital	−0.044*** (0.011)	−0.068*** (0.012)	−0.022*** (0.005)	−0.032*** (0.007)	−0.044*** (0.009)	0.061 (0.054)	−0.044*** (0.009)	−0.030*** (0.008)	−0.122*** (0.029)	−0.110** (0.050)	−0.522*** (0.096)
Social capital	0.038*** (0.007)	0.019** (0.008)	0.008** (0.004)	0.025*** (0.005)	0.014** (0.006)	0.048 (0.039)	0.014** (0.006)	0.016*** (0.005)	0.129*** (0.020)	0.050 (0.034)	0.301*** (0.067)
<i>Family cohesiveness</i>											
Cohesiveness × Financial capital	−0.021 (0.013)	0.003 (0.015)	0.002 (0.007)	−0.020** (0.009)	0.000 (0.011)	−0.018 (0.071)	0.000 (0.011)	−0.015 (0.010)	−0.060* (0.036)	0.088 (0.065)	−0.136 (0.122)
Cohesiveness × Social capital	−0.004 (0.014)	−0.021 (0.016)	−0.002 (0.007)	−0.014 (0.009)	−0.004 (0.012)	0.013 (0.071)	−0.004 (0.012)	−0.012 (0.011)	−0.043 (0.039)	0.099 (0.070)	−0.085 (0.130)
	0.018* (0.010)	0.022** (0.011)	0.007 (0.005)	0.018*** (0.006)	0.011 (0.008)	−0.015 (0.049)	0.011 (0.008)	0.016** (0.007)	0.061** (0.025)	−0.023 (0.044)	0.186** (0.087)
<i>Regression function</i>											
Constant	−0.493** (0.196)	1.700*** (0.224)	0.059 (0.099)	−0.293** (0.127)	1.027*** (0.165)	−6.565*** (1.207)	1.027*** (0.165)	−0.097 (0.144)	−3.766*** (0.556)	−6.315*** (1.171)	1.230 (1.777)
Pseudo R2	0.13	0.14	0.13	0.12	0.13	0.13	0.13	0.14	0.09	0.12	0.16
N	12,399	12,399	12,399	12,399	12,399	10,370	12,399	12,399	12,128	10,677	12,399

Notes: dummies for 294 universities, 19 countries, and 15 industries included in all specifications. Prob&gt;chi2 = 0.000 for all models. All models are statistically significant; \*\*\*p &lt; 0.001; \*\*p &lt; 0.01; \*p &lt; 0.05.

examine whether the role of family as a source of bridging social capital is likely to change over time, the rationale being that as individuals mature and develop valuable social contacts of their own, they may be less likely to rely on family connections. Another fruitful extension of our work will be to explore in more depth the role of different cultural contexts (notably the role of in-group collectivism) for the translation of family social capital into a larger scope of start-up activity by the younger generation of entrepreneurs.

### 8.2. *The tenuous influence of family financial support*

We expected that, similar to the effect of family social capital, the family financial capital would likewise be positively associated with the scope of start-up activities undertaken by young nascent entrepreneurs. However, we found that family financial support was, in fact, consistently negatively associated with the scope of start-up activities. Below, we present our interpretation of these findings.

A number of alternative explanations emerge. First, family financial capital may serve as a substitute for alternative means of capitalizing the nascent venture. Recall that we measured the scope of start-up activity as a sum of different actions undertaken by nascent student entrepreneurs. These activities were: ‘thought of first business ideas’, ‘formulated business plan’, ‘identified market opportunity’, ‘looked for potential partners’, ‘purchased equipment’, ‘worked on product development’, ‘discussed with potential customers’, or ‘asked financial institutions for funding. Having instrumental family social support in the form of financial capital alleviates the need to generate sales revenue fast and hence reduces the pressure to identify and discuss business with potential customers. Further, having family money reduces the need to look for potential partners, or to look for outside sources of funding, which, in turn, lessens the urgency of producing a formal business plan that typically is required by strategic partners, lenders, or private equity providers. Thus, the higher the extent of family financial support, the fewer the activities associated with cash generation and/or mobilization.

Second, a higher level of family financial support may stunt the scope of start-up activity. The literature on slack resources in entrepreneurial firms (Bradley et al., 2011; Patzelt et al., 2008) offers an explanation. Most nascent firms battle the high odds of failure under conditions of extreme resource scarcity (Baker and Nelson, 2005). Financial slack, or excess financial resources, therefore, provides a much-needed cushion against environmental shocks, is liquid and easily convertible into other resources, creates an environment conducive to innovation, and allows the nascent entrepreneur to continue with the realization of the entrepreneurial initiative (Cooper et al., 1994). Not surprisingly, financial capital is the lifeblood of the new venture. At the same time, financial slack can foster complacency and actually stifle entrepreneurial behavior (Bradley et al., 2011; Stevenson and Jarillo, 1990). For example, Bradley et al. (2011), in their study of the dual effects of financial slack on small firm growth, documented that while financial slack had a significant and positive effect on sales growth, it had a significant negative impact on entrepreneurial characteristics such as strategic orientation, growth orientation, or entrepreneurial culture. Extending this line of reasoning to the context of nascent entrepreneurial activity, we can surmise that the safety cushion provided by family financial support may reduce entrepreneurial urgency and aspiration, resulting in a slower pace of organizing and fewer start-up activities.

The recent literature on the relationship between firm growth and performance (Davidsson et al., 2010; Gilbert et al., 2006; McKelvie and Wiklund, 2010; Shepherd and Wiklund, 2009) may provide another explanation for the negative association between family financial support and the number of startup activities. In this paper, we expected to find a linear relationship between family financial support and the scope of startup activities. However, if we start from the premise that a key source of learning is feedback from recent performance (Jovanovic, 1982), our findings suggest that startup may be a non-linear process where student entrepreneurs engage in a small set of startup activities, and then learn from those activities, before they pursue additional start-up activities. Therefore, while families provide some level of initial social support, the learning process in which student entrepreneurs engage is cyclical and may not be reflected in our cross-sectional data. From a theoretical perspective, this is similar to evolutionary theory, where observing changes in firms and industries require much longer observation periods (Delmar et al., 2013; Klepper, 1996). From a normative perspective, our finding may reflect recent advice, which argues that starting a new venture is an iterative process of starting, failing fast, learning, pivoting, and trying again (Blank, 2013). All these activities occur on a small scale, long before the fledgling firm requires significant financial investment.

Our findings also speak to the broader question of the effect of family wealth on nascent entrepreneurship. Empirical research has documented that household wealth has either no association with the likelihood of attempted entrepreneurial entry in the United States (Kim et al., 2006), or a weak effect (Aldrich et al., 1998; Dunn and Holtz-Eakin, 2000; Sørensen, 2007). Even in households that were constrained in their borrowing, those constraints were not empirically important in deterring start-up activities (Aldrich et al., 1998; Hurst and Lusardi, 2004). From this, we can conclude that parental wealth is not a necessary condition for self-employment.

A limitation of our study is that we capture the perceived extent of family support but have no data on the actual amounts of financial resources the family invested into their offspring's entrepreneurial initiatives or the timing during the start-up process of those family payments. Future research juxtaposing the perceived level of family financial support with the actual cash amounts coupled with the timing of the payments, may provide interesting insights on the mechanisms through which “love money” impacts youth nascent entrepreneurship.

### 8.3. *The dual effect of family cohesiveness*

We found that emotional social support in the form of family cohesiveness had a dual effect on the scope of start-up activities undertaken by young nascent entrepreneurs. On the one hand, and contrary to our predictions, family cohesiveness had a

consistently negative, albeit insignificant, direct effect on the scope of start-up activities. On the other hand, and in line with our predictions, family cohesiveness magnified the effect of family social capital; facilitating its transition into an enhanced scope of start-up activities, (the moderating effect on the relationship between family financial capital and start-up activities was not significant). We interpret this dual effect as follows.

With respect to the negative effect of family cohesiveness on the scope of nascent entrepreneurial activity, previous work by Aldrich and Cliff (2003), Dyer and Handler (1994), and others has examined how certain “family patterns” can have both positive and negative influence on entrepreneurial initiatives (Dyer et al., 2014). Indeed, some families may not be supportive of their family members' new venture formation efforts (Arregle et al., 2007), particularly in cultures that place high value on the stability and prestige associated with working for a high-status employer or the government (for a recent overview on the role of cultural values in entrepreneurship, see Krueger et al., 2013). This lack of support might slow down young nascent entrepreneurs as they try to avoid relational conflicts particularly in cohesive families with a high level of self-reinforcing, mutual moral obligations (Dyer and Handler, 1994; Kellermanns and Eddleston, 2004). Even if the family is generally supportive of the young entrepreneur's aspirations, paradoxically, tightly knit families may offer some disadvantages in the start-up process. Work by Renzulli, Aldrich, and coauthors (Renzulli et al., 2000; Renzulli and Aldrich, 2005) examined the role of the family, particularly with respect to the activation of ties for access to resources, and the likelihood of a new business start-up. These authors found that having a greater proportion of kin on someone's discussion (advice) network lowered the likelihood of starting a new business, because a high proportion of family members was indicative of inward-looking social (strong) ties and a high level of redundancy in information sources (Renzulli et al., 2000). Similarly, Kim et al. (2013) found that nascent entrepreneurs were more likely to quit the startup effort when they received informational social support from family members. Greater family cohesiveness may further reinforce the redundancy in information sources, thus hindering the scope of start-up activity.

Once the family has committed resources to the support the young individual's entrepreneurial initiative, though, cohesiveness helps. For example, the effect of family social capital in the form of social interactions and introductions into the family's external social networks would likely be strengthened by the opportunities to engage in interactions with family members. Our empirical results support Pearson et al. (2008) who argued that in families “time and stability together”, “interdependence”, “interaction”, and “closure” all strengthen family capital.

In sum, we found that the role of family cohesiveness in the entrepreneurial process is complex and multidirectional. For theory, this suggests that in a family-to-business context, instrumental social support alone is incomplete. Instead, at least with respect to family social capital, having both instrumental and emotional social support enhances the likelihood that a young entrepreneur will engage in many start-up activities. Prior research finds that nascent entrepreneurs that engage in more start-up activities are more likely to have an operating venture (Brush et al., 2008). We call on future research to investigate the dual effects of family cohesiveness, as well as its heterogeneity across cultures and institutional settings.

## 9. Implications and conclusions

### 9.1. Boundaries and limitations

Our study is not without limitations, which need to be borne in mind when interpreting its results. First, we did not differentiate between types of families. Some previous studies have indicated that entrepreneurs may come from dysfunctional families and they start new business in order to gain control of their world (Collins and Moore, 1964; Dyer and Handler, 1994; Kets de Vries, 1977, 1985). Future research might focus on the different types of families, such as cohabitation, domestic partners, divorcées, extended families, intergenerational families, and the implications of these different family types on the scope and outcomes of start-up activities (Aldrich and Cliff, 2003). Second, although the GUESSS project is a panel study at the country level, the specific data utilized in this study were cross-sectional, which does not allow us to identify causal relationships between family support and the scope of student entrepreneurs' start-up activities. We call on future panel research to elucidate the temporal dynamics of family support and young entrepreneur's start-up activity. Third, our sample is restricted to students. An interesting extension to this study would be to compare the start-up activities of university students with the start-up activities of recent university graduates. In addition, it should also be borne in mind that we have a sample of *educated* young men and women. Recent surveys of youth entrepreneurship report rising education levels (Schøtt et al., 2015). Still, generalizations to the general population of young nascent entrepreneurs should be made with caution.

Fourth, our dependent variable consists of only a subset of the start-up activities tracked by the panel studies of entrepreneurial dynamics, such as PSED I, PSED II, and their international equivalents. For example, a highly prevalent activity, such as “purchased materials, supplies, inventory, and components” was not included in the GUESSS survey. In addition, unlike PSED where there was a question about the status of the business (operating business, still an active start-up, an inactive start-up, or no longer being worked on by anyone) our dependent variable is the number of start-up activities. This omission somewhat limits the comparability of our findings. Future research could track students through the start-up process and then see how many of them actually started a new venture. Fifth, our measure of family social support is a two-item scale with the two items highly correlated. It may be possible that both items tap into the same dimension of family social support, while other dimensions remain outside of our measure. Sixth, about a third of our respondents reported that they are starting their venture together with another university student, so, however small, there exists the chance of treating the same venture as two separate data points. Seventh, we follow convention and assume a linear startup process where young entrepreneurs receive social support from their families and then

engage in startup activities. However, there is some recent evidence that suggests that starting a new venture may be a cyclical process, which is not reflected in our cross-sectional data.

Finally, our sampling procedure, as discussed in the Section 5, was not a truly randomized one. Although the large sample size minimizes the likelihood that the data collection procedures would compromise the generalizability of the findings to the population of interest in the study, future research, based on randomized sampling, can offer a robust and generalizable corroboration of our findings.

## 9.2. Implications

Limitations notwithstanding, our study demonstrates that family social capital provides critical advantages to potential youth entrepreneurs. Further, our study demonstrates that family cohesiveness influences entrepreneurial activity and self-employment to a significant degree (Dyer et al., 2014). These findings have important implications for public policy makers, and for aspiring young entrepreneurs.

Our findings suggest that for young entrepreneurs, instrumental social support in the form of social capital coupled with emotional social support significantly affects the number of start-up activities in which a nascent student entrepreneur engages. This suggests that the family environment has a considerable impact on the likelihood that a young entrepreneur will engage and progress in the process of starting a new venture. For public policy makers, programs and tax incentives for enhanced family support of youth entrepreneurs' start-up activities may be instrumental in directly and indirectly stimulating youth entrepreneurship.

To aspiring young entrepreneurs, our study gently reminds them that once again, family matters. Young entrepreneurs, therefore, should carefully calibrate the benefits and costs of soliciting family support in the process of their new venture creation. In particular, engaging family members in social interactions and making the most from established family-specific social connections, is likely to be instrumental in the start-up process. In conclusion, families have the potential to supply young nascent entrepreneurs with unique forms of social support that enables them to establish firms. However, we find that the effect of emotional social support is complex and multifaceted. Our study starts an interesting conversation on the role of family in young student entrepreneurship. It is our hope that other researchers will join in and enrich this conversation.

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