Journal of Business Venturing xxx (2010) xxx–xxx

Contents lists available at ScienceDirect

Journal of Business Venturing

Should I stay or should I go? Career choice intentions of students with family business background

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ARTICLE INFO

Article history:
Received 10 September 2008
Received in revised form 13 April 2010
Accepted 13 April 2010
Available online xxxx

Keywords:
Career choice intentions
Theory of planned behavior
Motives
Theory of mixed control

ABSTRACT

Personal and motivational patterns of intentional founders have been researched in great depth; however, antecedents to career choices of intentional successors have been conspicuously missing in entrepreneurship research. By drawing on theory of planned behavior, we investigate how intentional founders, successors, and employees differ in terms of locus of control and entrepreneurial self-efficacy as well as independence and innovation motives. We find that transitive likelihood of career intent depends on degree of entrepreneurial self-efficacy and the independence motive. Unexpectedly, we see that high levels of internal locus of control lead to a preference of employment, which challenges traditional entrepreneurship research and suggests that the feasibility of an entrepreneurial career path does not automatically make it desirable. Our findings suggest that students with family business background are pessimistic about being in control in an entrepreneurial career, but optimistic about their efficacy to pursue an entrepreneurial career.

1. Executive summary

While a long history of entrepreneurship literature investigates career choice intentions and motives of founder entrepreneurs (e.g., Carroll and Mosakowski, 1987; Kolvereid, 1996a; Baron, 1998; Krueger et al., 2000; Simon et al., 2000; Carter et al., 2003; Lee et al., in press), we lack an understanding of the antecedents to career choice intentions of successors. In particular, little is known about how intentional successors differ from both intentional founders and employees, as most entrepreneurial career choice studies focus on comparing intentional founders with employees (e.g., in terms of perceived behavioral control and attitudes). Regarding career choices of intentional successors, Birley (2002) notes that there are "no instruments in the literature that deal directly with this particular topic, simply a number of assertions about, for example, the early involvement of children in the business as a way of training for succession or the timing of retirement of the previous generation" (p.8).

We attempt to fill this void in the literature by investigating the determinants of career choice intentions of students with family business backgrounds. Drawing on theory of planned behavior and its application to the entrepreneurship context (e.g., Fishbein and Ajzen, 1975; Ajzen, 1991; Kolvereid, 1996b; Krueger et al., 2000), we examine how levels of perceived behavioral control (captured by general locus of control and domain-specific entrepreneurial self-efficacy) and attitudes (influenced by the independence and innovation motives) impact the likelihood of three career choice intentions: founding one's own firm (founding intention), assuming a leadership role in the parental firm (succession intention), or being an employee outside the family firm (employee intention). Using multinomial logistic regression, we find that intentional founders and successors do not differ significantly in terms of locus of control. Unexpectedly, we see that high levels of internal locus of control lead to a preference of employment, which challenges traditional entrepreneurship research (e.g., Mueller and Thomas, 2001; Shook et al., 2003). We also find that transitive preferences of career intent depend on levels of entrepreneurial self-efficacy, indicating a pecking order of

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doi:10.1016/j.jbusvent.2010.04.001

career preferences (employee intention<succession intention<founding intention), with succession preferred only at medium levels. Turning to motivational aspects, our findings reveal that transitive preferences depend on the level of the independence motive (employee intention<succession intention<founding intention), with succession chosen only at medium levels. Finally, when students attribute a higher importance to innovation, we find that they are more likely to prefer the founding intention to the succession intention.

Our study makes several important contributions. First, we add to the burgeoning theory of entrepreneurial career by shedding light on the scarcely researched career path of succession (Scherer et al., 1989; Birley, 2002; Schjoedt and Shaver, 2007; Sinclair, 2008). To our knowledge, we are the first to directly investigate the antecedents to the succession career intent and to compare intentional successors explicitly with intentional founders and employees, as recently suggested by Krueger (2009).

Second, our findings extend the studies of Davidsson (1995) and Carsrud, Brännback, Kickul, and Krueger (2007), who argue that the family firm context, as a vicarious entrepreneurial experience, should spur founding career intentions among offspring, and of Scherer et al. (1989), who claim that role model performance may bias career choices. We find that intentional successors with high levels of internal locus of control tend to prefer employment to succession or founding, thereby avoiding the constraints related to entrepreneurial careers (Stavrou, 1999; Douglas and Shepherd, 2000). This speaks to Brockhaus and Horwitz (1986) as to why many offspring opt against self-employment. Presumably, students raised in a family business environment vicariously experience the constraints and personal sacrifices imposed on their parents and are affected by the parents' absence due to business matters (Stavrou, 1999; Douglas and Shepherd, 2000; Douglas and Shepherd, 2002). For these self-directed potential successors, because an entrepreneurial career path is feasible does not automatically mean that it is desirable. This suggests that students with family business background seem to be pessimistic about being in control, but optimistic about their capabilities and resources to pursue an entrepreneurial career.

Third, our study adds to theory of planned behavior and the recent development of a theory of mixed control (Monsen and Urbig, 2009; Urbig and Monsen, 2009). While we do not find evidence for an interaction effect between locus of control and self-efficacy as suggested by Monsen and Urbig (2009), we find evidence that the family firm context as an external source of behavioral control positively contributes to the inclination to start an entrepreneurial career through heightened perceptions of entrepreneurial efficacy, as suggested by previous research (Janney and Dess, 2006). In contrast, the same external context lessens the willingness to start an entrepreneurial career in case of strong perceptions of internal locus of control. As such, students with family business background are optimistic about having the necessary skills and resources for an entrepreneurial career but pessimistic about being in control when pursuing such a career. This finding augments the relevance of the source dependence argument in a theory of mixed control (Monsen and Urbig, 2009; Urbig and Monsen, 2009).

Finally, our theoretical considerations and empirical findings contribute to the ongoing discussion of the content and form of academic entrepreneurship programs, which have been found to impact the intention to opt for an entrepreneurial career path (e.g., Souitaris et al., 2007; Tegtmeier, 2007). If entrepreneurship programs are intended to motivate students to choose careers in their family firms, educators may use our findings to differentiate between founder and successor entrepreneurs, and make parents aware of their impact on children's entrepreneurial career choice intentions.

2. Introduction

In the entrepreneurship literature, there is a long history of investigating career choice intentions of students intending to found a firm after completion of studies. Generally, these intentional founders are compared with intentional employees, i.e. those who strive for an organizational employment after their studies. This research has contributed to the emergence of a theory of entrepreneurial career specifying various personal characteristics, cognitions, emotions, and social conditions that lead an individual to choose a career as a founder versus an employee (Hayward et al., 2006; Schjoedt and Shaver, 2007; Sinclair, 2008). For example, intentional founders strive for independence and seek high levels of innovation and self-fulfillment (e.g., Fischer et al., 1993; Kolvereid, 1996a,b; Stewart et al., 1999; Krueger et al., 2000; Carter et al., 2003). In the context of family firms, however, offspring not only have the option to found their own company or find employment, but also to become a successor. Surprisingly, the career option of succession is conspicuously absent in the literature on career choice intentions. Despite a few noteworthy studies (e.g., Chrisman et al., 1998; Stavrou, 1999; Sharma and Rao, 2000; Birley, 2002; Sharma and Irving, 2005), little is known about the underlying attitudes and motivations of intentional successors and how they differ from intentional founders or employees.

Investigating the motives that drive students with a family business background to become a successor versus to become a founder or an organizational employee is highly pertinent, given the worldwide social and economic relevance of family firms (Astrachan and Shanker, 1996; Astrachan and Shanker, 2003). For these firms' transgenerational sustainability, family succession is a critical prerequisite (Sharma, 2004). Despite that, little is known about this topic, and even less about the motives of potential successors (e.g., Le Breton-Miller et al., 2004; Chrisman et al., 2005; Sharma and Irving, 2005). Closing this gap in the literature makes important theoretical contributions to the family business and entrepreneurship literatures. Discovering the determinants of an individual's intention to pursue a succession career path will contribute valuably to family business and, more specifically, succession literature. Investigating how students with family business backgrounds form career choice intentions provides further insight into how a family business background primes goal intentions of offspring (Bagozzi, 2000; Sheeran et al., 2005), an insufficiently understood mechanism in entrepreneurship literature. Although having self-employed parents as role models and a family business background may impact the likelihood of pursuing an entrepreneurial career (Scherer et al., 1989; Boyd and Vozikis, 1994; Davidsson, 1995), it is unclear whether these external factors inspire potential successors to start their own firm (as

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suggested by entrepreneurship literature), succeed in the family firm, or seek outside employment. Exploring the impact of external factors such as a family firm background on career intent is timely given assertions about source dependence of perceptions of efficacy and control in a recently proposed theory of mixed control (Monsen and Urbig, 2009; Urbig and Monsen, 2009). Consequently, investigating the motivations that drive students with a family business background to become successors versus founders or organizational employees holds wide practical and theoretical relevance.

Drawing on theory of planned behavior and its application to the entrepreneurship context (Fishbein and Ajzen, 1975; Ajzen, 1991; Kolvereid, 1996b; Krueger et al., 2000) and basing our study on data gathered from 5363 students with a family business background, we examine how perceived behavioral control (captured by locus of control and entrepreneurial self-efficacy) and attitudes (influenced by the independence and innovation motives) impact the likelihood of these three career choice intentions. We argue that the strength of perceived behavioral control and attitudes will discriminate between preferred career choices and suggest transitive likelihoods of career preferences.

We begin by providing the theoretical foundations of our considerations. Next, we develop a series of hypotheses regarding how perceived behavioral control and motives impact career choice intentions of students with family business backgrounds. We then describe our sample and our methodological approach and present the results of our analysis. After we outline our findings and contributions, mention limitations, and point to possible avenues for future research, we offer our conclusion.

3. Theoretical foundations

3.1. Theory of planned behavior in the context of entrepreneurship

To examine the antecedents of career choice intentions, we draw on theory of planned behavior (Fishbein and Ajzen, 1975; Ajzen and Fishbein, 1980; Ajzen, 1991). Fishbein and Ajzen (1975) claim that "since much of human behavior appears to be under volitional control … the best single predictor of an individual's behavior will be a measure of his intention to perform that behavior" (p. 369). Intention is a state of mind directing a person's attention and experience toward a specific object or method of behaving; in the words of Ajzen, "an indication of how hard people are willing to try, of how much of an effort they are planning to exert in order to perform the behavior. As a general rule, the stronger the intention to engage in a behavior, the more likely should be its performance" (p.181).

According to Ajzen (1991), intentions are formed as a result of three factors: attitude toward performing the behavior, subjective norms, and perceived behavioral control. The first construct, attitude toward performing the behavior, taps perceptions of the personal desirability of performing the behavior. Such salient desirability beliefs link behavior to a certain outcome or to some other attribute, such as the cost or benefit incurred by the behavior. Hence, attitude toward the behavior is determined by underlying beliefs about the likely outcomes of that behavior and reflects the positive or negative evaluation of these outcomes (Armitage and Conner, 2001). The second major construct, subjective norms, is nurtured by normative beliefs, such as family expectations, when considering performing a certain act. This concept was introduced into theory of planned behavior to accommodate the nonvolitional elements inherent, at least potentially, in all behaviors (Ajzen, 2002). Finally, perceived behavioral control refers to "people's perception of the ease or difficulty of performing the behavior of interest" (Ajzen, 1991, p.183). It comprises Bandura's (1994) concept of self-efficacy and the concept of locus of control (Brockhaus, 1980; Ajzen, 2002), the perceived ability to execute a target behavior.

Based on assertions that intentions are the single best predictors of actual behavior (Bagozzi et al., 1989), a significant number of scholars have used theory of planned behavior to predict entrepreneurial behavior, since entrepreneurship is regarded as a type of behavior for which intention models are ideally suited (Bird, 1988; Krueger and Carsrud, 1993; Kolvereid, 1996a). Krueger et al. (2000) argue that it seems evident that much of what we consider entrepreneurial activity is intentionally planned behavior. The act of starting a firm can hardly be seen as a reflex. Even when a single event (e.g., downsizing) may spur an individual to perform an entrepreneurial act, there is often evidence of a previous interest in founding one's own company. Davidsson (1995) suggests that no distal variable can accurately predict narrowly defined entrepreneurial behavior. Intentions are seen as particularly apt predictors of actual entrepreneurial behavior, since the creation of firms may be difficult to observe due to its relative rareness, the often incremental nature of founding activities, and the time lag before the new firm becomes an identifiable public entity.

3.2. The family business context and career intentions

Growing up in a family where parents are the managers and owners of a company represents a particular context in which career intentions are formed. Children raised in the family firm context where the firm is controlled and operated by the family with a transgenerational perspective (Chua et al., 1999), are often closely exposed to the challenges and opportunities related to an entrepreneurial career. These family-related early life experiences play a major role in molding an individual's beliefs, attitudes, personality, and intentions (Bronfenbrenner, 1986). It has been put forth that if parents serve as positive role models, offspring from business families should be more motivated to start their own firm (i.e., to be intentional founders) than children without this background (Kolvereid, 1996b). This may be related to family support in terms of resources needed to launch a firm, learning effects, or strengthened perceptions about mastery of the challenges related to an entrepreneurial career and, hence, heightened perceived behavioral control (Carsrud et al., 2007). Family members and in particular parents may be seen as powerful others (Bandura, 1997), given their overlapping role as altruistic parents and owner-managers of the largest part of

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the family's wealth and legacy. In line with Bandura (1997), the family may then influence perceptions of controllability and self-efficacy.

Besides a peculiar familial context, by opting for succession, offspring also face a particular organizational context in comparison to the founding or employment contexts. For example, family firms and their senior managers often exhibit strong legacy concerns, sometimes accompanied by the inclination to tolerate underperforming activities because of family tradition. Offspring, then, may face strong inertial forces inhibiting timely and creative adaptations of the business portfolio (Sharma and Manikutty, 2005). To perpetuate continued family control, family firms tend to be more concerned about wealth preservation than wealth generation, thereby limiting the feasibility of bold entrepreneurial strategies (Zellweger and Sieger, forthcoming).

Moreover, governance structures are often personalized and focused on paternalistic family members (Carney, 2005). Rationally calculated decision criteria may be ignored, since control rights permit the family to intervene in the affairs of the firm by substituting other, "particularistic" criteria of their choosing. Families may employ decision criteria based upon altruism or nepotism, which may undermine the adoption of more objective and rationally calculated decision criteria that normally occur in the nonfamily context. Also, an owner-centric corporate culture, often impacted by the beliefs and fundamental motives of the founder, may limit a successor's room for discretion and may predetermine processes, behaviors, and decision-making routines. Regarding continued founder influence, Baron, Hannan and Burton (1999) state: "Once formulated and articulated, a founder's organizational blueprint likely 'locks in' the adoption of particular structures, as well as certain premises that guide decision-making" (p. 532). These lock-in effects may persist in family firms, given continued family control.

In sum, students with family business background stem from a particular familial context that may mold their future career intentions. When joining the family firm offspring have to deal with an organizational context that is often characterized by legacy concerns, person-dependent governance structures and owner centric organizational cultures. Consequently, we expect that the succession intention, hence the intention to assume a leadership role in the parents' firm, will seem attractive only to a specific type of individual with specific levels of perceived behavioral control and attitudes, as we will explore in the next section of our paper.

3.3. Perceived behavioral control and career intent

Recent entrepreneurship research suggests that perceived behavioral control is among the most pertinent antecedents to entrepreneurial career intent (Krueger et al., 2000; Shook et al., 2003). Krueger (1993) finds that perceived feasibility perceptions, a surrogate for perceived behavioral control, explain most of the variance in entrepreneurial intent. An intriguing question, for both theory of planned behavior in a broader sense and its application to the entrepreneurship and family business context, is the potentially differing impact of locus of control and self-efficacy as distinct aspects of perceived behavioral control (Armitage and Conner, 1999; Ajzen, 2002). The case has been made that measures of perceived behavioral control need to incorporate both locus of control, which is assumed to deal with external factors that may facilitate or impede performance of a behavior, and self-efficacy, which reflects internal factors (Ajzen, 2002).

Self-efficacy can be affected by performance (Chen et al., 1998) and locus of control by life experiences (Dyal, 1984). While both concepts are cognitive and control-based, two important distinctions can be made. First, internal versus external locus of control (I-E) is a generalized construct covering a variety of situations, whereas self-efficacy is mostly considered to be domain- or task-specific, reflecting the individual's conviction that he or she can perform in a certain domain (such as founding an own firm) or a specific task (such as marketing a new product) at a specific level of expertise (Gist, 1987). Bandura (1977) claims that individuals may show strong internal locus of control in general, but believe they have low skill levels in certain areas, which would lead to low efficacy perceptions on relevant tasks. A second difference is that locus of control as measured by Rotter's I-E scale (Rotter, 1966) includes outcome expectancies in addition to behavior expectancies, while self-efficacy concerns only behavioral control.

Rotter (1966) suggests that an individual perceives the outcome of an event as being either within or beyond his or her personal control and understanding. An "internal" believes that one has influence over outcomes through ability, effort, or skills. "Externals" believe that forces outside the control of the individual determine outcomes (Rotter, 1966; Shook et al., 2003). An individual with internal locus of control should be particularly inclined to overcome obstacles. A rich stream of founding entrepreneurship research suggests that individuals with high levels of general internal locus of control are more inclined to choose a founder career path than individuals with general external locus of control (e.g., Brockhaus, 1980; Shapero, 1982; Mueller and Thomas, 2001).

In line with these considerations, we expect that students with a family business background who display high levels of general internal locus of control will be inclined to prefer the founding to the succession intention. A successor's influence over outcomes is likely to be more limited. A member of the younger generation joining the family firm might experience a lack of acceptance and legitimacy among long-time employees but also among family members (e.g., Barach et al., 1988; Sharma et al., 2001). As a consequence, implementing plans and projects and achieving desired outcomes is hampered. Successors in family firms often must subordinate themselves to existing decision-making and control structures, making it difficult to implement ideas and control the organization's fate (Swagger, 1991). Thus, the successor's personal control over outcomes is limited by several external factors that may even reach beyond the domain of the firm. Consequently, students with high general internal locus of control are expected to prefer the founding to the succession option. When becoming an employee, the opportunity to control outcomes is restricted due to the lack of influence through ownership, leaving the employee's career exposed to many external factors beyond his or her control.

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We then propose a pecking order of career choice intentions that depend on degree of general internal locus of control. High levels of internal locus of control are expected to spur the founding intention, medium levels the succession intention, and low levels the intention for employment. More formally stated:

Hypothesis 1. All else being equal, the more pronounced the perceived general internal locus of control of students with family business backgrounds, the more likely their career choice intentions are transitive. Specifically, the founding intention is preferred to the succession intention, and the succession intention is preferred to the employee intention.

The self-efficacy dimension, in turn, dictates the ease or difficulty of performing the actual behavior (Bandura, 1994; Ajzen, 2002). Self-efficacy refers to "the conviction that one can successfully execute the behavior required to produce (certain outcomes)" (Bandura, 1998, p.624). According to entrepreneurship literature, vicarious experiences within family firms and parents as role models may be major sources of entrepreneurial self-efficacy (Davidsson, 1995) and determine the strength of an individual's belief that he or she is capable of successfully performing the roles and tasks of an entrepreneur (Chen et al., 1998). Boyd and Vozikis (1994) suggest that proficient role models, such as parents running their own firm, convey effective strategies for managing challenging situations, and that entrepreneurial self-efficacy is affected by a social comparison process that ultimately nurtures the intention to start a firm. That is, children from business families judge their own capabilities to found a firm through observational learning and by comparing themselves to their parents.

Bandura (1997) suggests that high levels of self-efficacy reinforce persistent efforts to achieve goals, even under stressful situations, and promote quick recovery from failure, and that these benefits are likely to be particularly advantageous in the context of new venture creation (Hmieleski and Baron, 2008). Founders, who need particularly pronounced perceptions of strong skills, will power, and a commitment to motives, maintain a sense of task focus, persist in the face of failure, and attribute failure to lack of personal effort (Norman and Hoyle, 2004). This suggestion is in line with recent assertions that founders may be more inclined to display overconfidence biases (Forbes, 2005). A high level of entrepreneurial self-efficacy helps them establish a new company, create products, facilities, and networks from scratch, and overcome the liability of newness (Stinchcombe, 1965; Markman and Baron, 2003). Thus, with high levels of self-efficacy in the entrepreneurship domain, we expect the founding intention to be the preferred career path.

In contrast to the founding context, the succession career path may seem attractive at moderate levels of self-efficacy specific to the entrepreneurship domain, since uncertainty related to the often long-term established family firm is lower. In fact, family firms ripe for succession have already overcome liability of newness and often operate on a more solid resource base (Habbershon et al., 2003). An intentional successor will be able to draw upon the implicit and explicit knowledge of a proven management team (Sirmon and Hitt, 2003) and obtain support from the financial and human capital of the family (Steier, 2007). Also, the extensive network of the family in the focal industry and the local community (Pearson et al., 2008) provides additional confidence that the intentional successor will successfully execute the entrepreneurial role inside the family firm. Consequently, while founders need particularly pronounced perceptions of strong skills, will power, and commitment, moderate levels of entrepreneurial self-efficacy will let the succession option emerge as the most attractive career, given the relative stability of the organizational context and the established resource base provided by the family and the firm.

In sum, we propose a hierarchy of career preferences depending on levels of domain-specific entrepreneurial self-efficacy: high levels of self-efficacy will spur the founding intention, medium levels the succession intention, and low levels the employment intention. More formally:

Hypothesis 2. All else being equal, the more pronounced the perceived domain-specific entrepreneurial self-efficacy of students with family business backgrounds, the more likely their career choice intentions are transitive. Specifically, the founding intention is preferred to the succession intention, and the succession intention is preferred to the employee intention.

3.4. Personal motives and career intent

Beyond the pivotal role of perceived behavioral control, a rich stream of literature explores the impact of individual motives as cues for the perceived desirability of a certain career intent (Herron and Sapienza, 1992; Kolvereid, 1996a; Kuratko et al., 1997; Carter et al., 2003). Regarding career choice motives, theory of planned behavior assumes that if the outcome of a behavior (e.g., founding a firm) is believed to satisfy a specific individual motive (e.g., independence), performing the behavior will be evaluated more positively with increasing levels of the corresponding motive. This results in a more favorable attitude toward that behavior, which, in turn, leads to a stronger intention to actually perform it.

Despite the failure of personality- and trait-based studies to establish a link between entrepreneurs and venture creation (Gartner, 1989b), the individual remains a cogent unit of analysis in entrepreneurship research (Schjoedt and Shaver, 2007). Carter et al. (2003) provide a parsimonious synthesis for the motives that entrepreneurs offer for forming a business. In addition to need for approval, financial success, and desire to follow role models, independence and innovation are proposed as two highly discriminating career choice motives. The independence motive describes an individual's desire for freedom, control, and flexibility (Schein, 1978; Smith and Miner, 1983) and the innovation motive describes an individual's intention to accomplish something new (Carter et al., 2003). Founders will likely display greater levels of independence and innovation motives than employees.

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In contrast to these findings on motives of founding entrepreneurs and employees, there is little research investigating the motives and intentions of successors in family firms (Birley, 2002). Exceptions are Stavrou (1999) and Ward (1987), who both find that among the most frequent reasons cited why offspring intend to join the family firm is the will to control the firm's operations and to be one's own boss. This emphasizes the fact that the intention to succeed is also related to the independence motive.

Within a family firm, however, there is the necessity of coping with existing structures, aggravated by the idiosyncrasies and personalism of family firms' business models (Carney, 2005), which often depend on an individual entrepreneur. Furthermore, a founder- or owner-centric organizational culture that manifests itself through limited delegation of authority and a continued paternalistic or maternalistic management style may also be constraining factors (cp. Nordqvist et al., 2008). Frequently, a change in the business structure, strategy, or culture is delayed until the parent/leader either dies or is unable to manage the business effectively (Matthews et al., 1999). Given such a rigid organizational context, the successor's ability to decide independently, maintain personal freedom, and realize his or her dreams are restricted. The third career option, being an employee is assumed to offer the lowest degree of independence, given that employees in a hierarchical structure lack stock ownership and voting rights.

In light of the three career choices explored here, we expect that founding a firm best satisfies the independence motive. Starting a firm enables students with family business backgrounds to be independent, enjoy a great deal of personal freedom, and realize their own dreams. Accordingly, we argue that students with family business backgrounds consider that becoming a founder entrepreneur will satisfy the independence motive to a greater extent than becoming a successor entrepreneur, and that this motive is satisfied least when becoming an employee. In line with theory of planned behavior, the strength of the independence motive affects attitudes toward the three different career options and, ultimately, career choice intentions. Thus, we formally claim:

Hypothesis 3. All else being equal, the more pronounced the independence motive of students with family business backgrounds, the more likely their career choice intentions are transitive. Specifically, the founding intention is preferred to the succession intention, and the succession intention is preferred to the employee intention.

Carter et al.'s (2003) study on career motives of founder entrepreneurs suggests that the innovation motive is a further critical driver of career intent. To establish an organization, founder entrepreneurs need to explore new ways to seize entrepreneurial opportunities. Attributes such as broadmindedness and originality are important when starting a new venture (Bird, 1988). When launching a new firm, individuals need to build infrastructure and develop new products and services simultaneously (Markman and Baron, 2003). Hmieleski and Corbett (2006) report that a proclivity for improvisation and innovation is strongly linked with the intention to be entrepreneurial. Founder entrepreneurs tend to develop and execute novel solutions to problems and opportunities encountered extemporaneously, in strong contrast to a strategically planned utility maximization model of entrepreneurial action (Baker et al., 2003).

In opposition to these considerations regarding founder entrepreneurs, we expect that in the context of an established firm, successors face the challenge of improving and exploiting existing processes or goods, a differentiation from the more explorative and creative activities of most founders. It has been argued that innovativeness decreases with continuous aging of family firms (McCann et al., 2001); that is, the face of innovation changes, which may require lower levels of product innovation and creativity, but a greater proclivity to improve existing solutions and structures (Zellweger and Sieger, forthcoming). Further constraints may be related to the continuous presence of family members of earlier generations, who may protect antiquated activities, products, processes, and structures that they have innovated. Ties to outdated structures inhibiting innovativeness may be nurtured by emotional attachment based on family tradition, emotional bonds among family members, and nostalgia (Sharma and Manikutty, 2005; Gomez-Mejia et al., 2007; Zellweger and Astrachan, 2008). Such emotional bonds may restrict resource shedding, an activity crucial for the rejuvenation and continued innovativeness of family firms (Sirmon and Hitt, 2003). Regarding the employee option, we assume this career path offers the least means and possibilities to be innovative.

We expect, therefore, that students with family business backgrounds consider that becoming a founder entrepreneur will satisfy the innovation motive to a greater extent than becoming a successor entrepreneur, whereas this motive is satisfied least when becoming an employee. According to theory of planned behavior, this will ultimately affect the formation of career choice intentions. More formally stated:

Hypothesis 4. All else being equal, the more pronounced the innovation motive of students with family business backgrounds, the more likely their career choice intentions are transitive. Specifically, the founding intention is preferred to the succession intention, and the succession intention is preferred to the employee intention.

4. Methods

We rely on a dataset originating from the International Survey on Collegiate Entrepreneurship (ISCE) conducted in 2006[1]. A core team consisting of senior faculty members of two major German and Swiss universities developed the questionnaire and distributed it to eight representatives in Austria, Belgium, Finland, Germany, Hungary, New Zealand, Norway, and Switzerland, who in turn e-mailed the questionnaire to students at 87 universities in these eight countries. By using an identification-based

[1] The ISCE project has been rebranded to GUESSS (Global University Entrepreneurial Spirit Students' Survey) in 2008.

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survey, we prevented multiple responses. Without using reminder emails or incentives, the response rate of 6.98% compares favorably with other e-mail student surveys (Porter and Whitcomb, 2003). The data set is comprised of the responses of students who have not started professional careers yet, which enables us to take a prospective view, thereby avoiding survivor bias from which retrospective studies suffer. Our data set thus differs significantly from the PSED and SARIE data sets (cp. Carter et al., 2003; Sinclair, 2008). Table 1 describes our sample, return rates, and demographics of respondents in more detail (see also Halter et al., 2005; Chlosta and Jaskiewicz, 2009).

For our analysis, we included only questionnaires in which all items necessary for our purposes received responses. Of the 36,451 students responding, 9904 have a family business background. Of these, 609 intend to follow in their parents' footsteps, 1808 intend to create their own firms, and 2946 plan to become employees. The remaining students did not indicate defined career intentions. Thus, we analyzed the responses of 5363 students.

4.1. Dependent variable

Our dependent variable is categorical, with three different values that represent options within five years of completion of studies: if the student intends to be 1) an employee, 2) a successor, or 3) a founder entrepreneur. This time lag is predicated on the observation that typical entrepreneurs work elsewhere before starting their own business (Brockhaus and Horwitz (1986)). Furthermore, as mentioned, such a prospective research approach overcomes retrospection biases, such as intentional and unintentional inaccuracies resulting from interviewing entrepreneurs about their motives after they are in business (Gartner, 1989a; Shaver and Scott, 1991; Davidsson, 2004).

4.2. Independent variables

In line with prior studies (e.g., Mueller and Thomas, 2001), we adapted items from Rotter's (1966) I-E scale for *general locus of control* (see Appendix A for items). We used a general locus of control measure since locus of control is considered to be a central characteristic of individuals (Seeman, 1959) that pervades and influences behavior across contexts (i.e., private and business) (Rotter, 1990). Moreover, even if not all of Rotter's measures are equally plausible predictors of entrepreneurial behavior (Shaver and Scott, 1991), empirical studies using multidimensional measures of locus of control that better address the entrepreneurship context support the findings of a general locus of control (e.g., Levin and Leginsky, 1990; Bonnett and Furnham, 1991). The general locus of control measure exhibits a Cronbach's alpha of 0.70. Our *domain-specific entrepreneurial self-efficacy* measure was inspired by De Noble, Jung, and Ehrlich (1999) (see Appendix A for items). We chose a domain-specific measure for two main reasons. First, Bandura (1997) regards self-efficacy as a contextual phenomenon. Accordingly, a general self-efficacy scale may not be able to predict domain-specific behaviors (Pajares, 1996; Eden and Granat-Flomin, 2000). When conceptualized in a too general way, self-efficacy may be rendered indistinguishable from universal disposition constructs such as self-esteem or locus of control (Chen et al., 1998). To achieve explanatory and predictive power, Bandura (1997) suggests to tailor the self-efficacy measure to a specific domain, such as entrepreneurial behavior. Second, using a domain-specific measure overcomes the limitations of a task-specific measure, which may be too narrow or raise the question why the particular tasks and not others are included in the construct. This argument is particularly relevant for the entrepreneurship context in light of the dissimilarities of the related tasks. As such, our domain-specific self-efficacy measure is distinct from Lee et al. (in press) who use a task specific measure (IT-related skills) and from Chen, Gully and Eden (2001) who use a general self-efficacy measure. Cronbach's alpha for this variable reaches 0.69.

To test whether the distinction between locus of control and self-efficacy is warranted, we conducted a confirmatory factor analysis comparing a two-factor structure that includes locus of control and self-efficacy with a one-factor structure that combines these factors. The two-factor structure fits the data significantly better, which supports the distinction ($\chi^2(43) = 1021.429$, RMSEA = .065, CFI = .900, GFI = .966 compared to $\chi^2(44) = 3174.455$, $df = 44$, RMSEA = .115, CFI = .681, GFI = .919, difference in $\chi^2 = 2153.026$, $df = 1$, $p < 0.001$).

For the *independence motive*, we relied on a measure used by Kuratko, Hornsby, and Naffziger (1997). For the *innovation motive*, we used a measure developed by Carter, Gartner, Shaver, and Gatewood (2003). Respondents were asked how important the different motives were to them when evaluating future career options. We used a Likert index of six items ranging from "very unimportant" to "very important" and created multi-item motive variables (see items in the Appendix A). The Cronbach alpha for

Table 1
Sample characteristics.

Country	Universities	Average student age	Average study year	Female students (%)
CH	26	24.8	3.1	37.2
GER	9	24	3.23	51.3
AUT	23	25.3	3.64	52.3
BEL	5	23	2.75	48.1
FIN	8	25.5	2.48	51.7
NOR	6	24.4	3.06	40.0
HUN	8	23.3	3.19	48.4
NZL	2	22.8	2.91	53.2
Total	87	24.1	3.05	47.8

Please cite this article as: Zellweger, T., et al., Should I stay or should I go? Career choice intentions of students with family business background, J. Bus. Venturing (2010), doi:10.1016/j.jbusvent.2010.04.001

Table 2
Summary of convergent and divergent validities of measures.

Measure	Converges on	Diverges from
Career choice intention (general)	Kolvereid (1996b) (for founding versus employment intention) Birley (2002) (for succession intention)	Kolvereid (1996b) and Birley (2002) in the sense that we do not use a binary variable as above authors do, but a categorical variable with three outcomes (founder, successor, employee)
Locus of control	Rotter (1966); Mueller and Thomas (2001)	Bonnett and Furnham (1991)
Entrepreneurial self-efficacy (domain specific)	De Noble, Jung &Ehrlich (1999); Chen, Greene and Crick (1998) (these are summed task-specific measures)	Lee, Wong, Foo and Leung (in press), using a task specific measure; Chen, Gully and Eden (2001) using a general measure
Independence motive	Kuratko, Hornsby and Naffziger (1997)	–
Innovation motive	Carter, Gartner, Shaver and Gatewood (2003)	–

the independence measure is 0.71 and 0.70 for the innovation measure. The alpha measures for the independent variables are all above the recommended value of 0.60 for exploratory research (Nunnally and Bernstein, 1994). Table 2 summarizes the convergent and divergent validities of our dependent and independent variables.

4.3. Control variables

One of our control variables is student age. Research presents mixed findings on the relation between age and successor inclination. While Birley (1991) finds that the younger the person, the more likely his or her intention to join the family firm, Stavrou (1999) finds the opposite. Similarly, the number of years of study might impact the propensity to launch a new firm. We also look at gender (1: female; 0: male), which has been reported to impact the founding propensity (Kolvereid, 1996b; Carter et al., 2003). We include four dummies for the field of study, namely business administration, economics and law, natural sciences and engineering, and other social sciences. In addition, the wide geographic reach of our study requires that we address the issue of possible culture-related differences and differing levels of entrepreneurial activities among countries (Hofstede, 2001; Reynolds et al., 2005). We include eight country dummies, assigning the value of 1 for the student's home country and 0 otherwise. We expect that students from transition countries (e.g., Hungary with its relative youth of private entrepreneurial activity and hence the absence of the succession option) or from countries with very high founding activity (e.g., New Zealand; Bosma et al., 2008) will prefer the founding career path.

We also examined family business exposure quality by investigating the feelings the students attribute to their family business, assuming that those with positive emotions will display a higher propensity to follow in their parents' footsteps (Birley, 2002). We used the statement, "The feelings that I connect with our family business are mainly positive or negative" and included this measure as a partial control for subjective norms, the third antecedent to intentions according to theory of planned behavior. We expect that the more positive the perceived vicarious experience in the family business, the stronger the subjective norms favor the succession intention (Ajzen, 2002). This control variable takes the value of 1 for positive exposure and 0 for negative exposure.

To explore the possibility of nonresponse bias, we compared the data from early and late respondents using ANOVA, [2] a test based on the assumption that late respondents are more similar to nonrespondents than are early respondents (c.f., Oppenheim, 1966; Chrisman et al., 2004). No statistically significant differences were found. We also conducted an ANOVA between the respondents who answered all relevant questions and those who did not. Again, no significant differences emerged, which mitigates nonresponse concerns.

We next applied Harman's one-factor test (1967) as suggested by Podsakoff and Organ (1986). Following the recommendation of Podsakoff et al. (2003), we entered all our variables into a factor analysis, extracting a 10-factor solution. These factors account for 68.9% of the variance in total. The first factor explains 9.6% of the variance, providing initial evidence that common method bias is not a problem because no single factor accounts for the majority of the variance. Potential concerns for common method bias are further mitigated due to the prospective design of our study, in comparison to retrospective studies that are more likely to experience consistency effects (Podsakoff et al., 2003). As a third precaution against common method bias and to assess the validity and distinctiveness of our measures of locus of control, entrepreneurial self-efficacy, and the independence and innovation motives, we conducted a confirmatory factor analysis (Podsakoff et al., 2003). Specifically, we compared the fit of a four-factor structure to that of a one-factor structure. Our four-factor structure fits the data very well ($\chi^2(129) = 1785.913$, RMSEA = .049, CFI = .911, GFI = .964). The results of the one-factor structure ($\chi^2(135) = 5597.916$, RMSEA = .087, CFI = .706, GFI = .922) are significantly worse than for the four-factor structure (difference in $\chi^2 = 3812.003$, $df = 6$, $p < 0.001$). This indicates that the measures we used are not only theoretically but also empirically distinguishable, and that common method bias is not a concern (Podsakoff et al., 2003) [3].

[2] In each country, we formed two groups of respondents (early and late) and then conducted the ANOVA for these two groups for each country. No significant differences between early and late respondents were detected in any country.

[3] In addition, the four-factor structure was compared to a two-factor structure, with the latter consisting of perceived behavioral control (locus of control plus self-efficacy) and motives (independence and innovation). The two-factor structure yielded less favorable results ($\chi^2(131) = 5008.790$, RMSEA = .083, CFI = .737, GFI = .925), whereas the difference is significant (difference in $\chi^2 = 3222.877$, $df = 2$, $p < 0.001$).

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5. Results

Means, standard deviations, and Pearson correlations are provided in Table 3. Since all our correlations are below the 0.60 cut-off, there is no indication that our data suffer from shared variance. To substantiate this claim, we calculated the Variance Inflation Factor (VIF), which reaches 2.15. This value is below the critical cut-off of 10 (Hair et al., 2006), suggesting that multicollinearity is not a concern. As our dependent variable is categorical and consists of three dimensions, we conducted a multinomial logistic regression, a suitable method for this kind of research question and data (e.g., Gregory et al., 2005; Li et al., 2008). Here, the effects of the independent variables on each of the outcomes are compared to a base category. We use succession intention as the comparison baseline, as it always represents the middle position in our hypotheses assuming transitivity.

Table 4 reports the results of multinomial regression analysis. Models 1a and 1b include our control variables only; the independent variables are added in Models 2a and 2b.

Our control models reveal that results differ by country. As expected, Hungarian students are more likely to choose to be founders than to choose the other career paths. In Germany, the employment option is preferred to the succession option. New Zealand stands out with a strong preference for a career path other than succession, which agrees with GEM data indicating a high founding proclivity there (Bosma et al., 2008). We found that age has no impact on the likelihood of career choice intentions. Also, the number of years of study and the major fields of study do not play significant roles. Gender, however, has a significant effect in our control models: women display a higher likelihood to opt for employment and a lower inclination to be intentional founders. Furthermore, we find that positive exposure toward the family business increases the likelihood of preferring the succession intention to both alternatives.

Models 2a and 2b test our hypotheses. They reach a Nagelkerke R^2 of 0.256. Our predictions (Hypothesis 1) for locus of control are rejected because students with higher levels of internal locus of control are more likely to opt for employment ($\beta = 0.198$, $p < .05$), whereas we find no difference between intentional founders and successors. Hypothesis 2 finds full support. Students with high levels of entrepreneurial self-efficacy are less likely to become employees than to become successors ($\beta = -0.154$, $p < .01$). Our expectation that intentional founders demonstrate higher entrepreneurial self-efficacy than successors is supported as well ($\beta = 0.108$, $p < .05$). Hypothesis 3, regarding transitive career choice preferences with increasing levels of the independence motive, also finds full support (founding intention > succession intention > employee intention) ($\beta = -0.898$, $p < .001$; $\beta = 0.173$, $p < .05$). Hypothesis 4, dealing with the innovation motive, finds partial support. Comparing the founding intention with the succession intention shows a significant preference for founding ($\beta = 0.327$, $p < .001$). However, when comparing the employee intention with the succession intention, there is no significant coefficient for innovation. To validate our model further, we split our data into two random subsamples. The independent results from these subsamples do not differ significantly from the results presented here.

5.1. Post-hoc test for interaction between locus of control and entrepreneurial self-efficacy

Our opposing findings for the locus of control and entrepreneurial self-efficacy constructs deserve further investigation. Theory suggests that the more internal the attribution of causality and the more controllable the situation, the stronger the impact of self-efficacy on initiating and persisting in entrepreneurial activity (Krueger, 2003). In this vein, control beliefs are expected to moderate the extent to which efficacy beliefs influence judgments of outcome probabilities and corresponding risk perceptions (Gist, 1987; Bandura, 1997). Hence, in the context of our study it could be argued that students who exhibit high levels of entrepreneurial self-efficacy will exhibit an even stronger inclination to start an own firm in presence of a strong belief that the outcome of their behavior is contingent on their own behavior (high internal locus of control).

Following this line of thinking about a multiplicative interaction between locus of control and entrepreneurial self-efficacy (Monsen and Urbig, 2009), we conducted three binomial logit regressions. Next to the control variables we entered entrepreneurial self-efficacy, locus of control, just as the interaction term between self-efficacy and locus of control in the regression models. We then regressed these variables on three binary dependent variables, founding versus succession intention, founding versus employment intention and succession versus employment intention. However, none of the coefficients was significant in either regression, which corroborates our view to treat entrepreneurial self-efficacy and locus of control as independent additive effects.

6. Discussion

By explicitly comparing intentional founders, successors, and employees regarding their underlying motives and behavioral control perceptions, our study makes several important contributions.

First, our study contributes to theories of entrepreneurial career by investigating career choice intentions of students with family business backgrounds, specifically by exploring the succession career (Schjoedt and Shaver, 2007; Sinclair, 2008). By thus far ignoring succession, entrepreneurship research has widely failed to account for a third career path (after founding and employment). To our knowledge, we are the first to explicitly investigate this career path in detail and to compare it to the founding and employment intention. We show that students with family business backgrounds who intend succession differ in terms of perceived behavioral control and motives from intentional founders and employees. Although the personality- and trait-based streams of research have produced few noteworthy results (Gartner, 1989a), our study adds to recent calls not to abandon elements of the person (Schjoedt and Shaver, 2007; Hmieleski and Corbett, 2008; Hmieleski and Baron, 2009).

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Table 3
Means, standard deviations, and Pearson correlations.

	Mean	S.D.	Empl. = 1, Succ. = 2, Founder = 3	AUT	BEL	FIN	GER	HUN	NZ	NOR	CH
Empl. = 1, Succ. = 2, Founder. = 3	1.788	.917	1								
AUT	.201	.401	.010	1							
BEL	.043	.203	.042*	−.106**	1						
FIN	.038	.192	.006	−.100**	−.042	1					
GER	.073	.259	−.096**	−.140**	−.059**	−.056**	1				
HUN	.094	.292	.115**	−.161**	−.068**	−.064**	−.090**	1			
NZ	.284	.451	.010	−.316**	−.134**	−.126**	−.176**	−.203**	1		
NOR	.029	.167	.002	−.086**	−0.037*	−.034	−.048**	−.056**	−.109**	1	
CH	.238	.426	−.064**	−.280**	−.119**	−.112**	−.156**	−.180**	−.352**	−.096**	1
Student age	23.475	3.595	−.021	.155**	−.059**	.029	.020	−.057**	−.276**	.058**	.166**
Study year	3.115	1.797	−.035	.130**	−.057**	−.088**	.004	.020	−.072**	.001	.004
Gender, 1 = female	.446	.497	−.092**	.047*	−.004	.026	.021	−.005	.071**	−.009	−.135**
Economics & law	.133	.340	.000	−.079**	.079**	−.064**	−.069**	.082**	.058**	−.018	−.003
Business Admin.	.323	.468	.083**	.166**	−.001	.020	−.011	.039*	−.167**	−.079**	.022
Natural Science/engineering	.402	.490	−.050**	−.104**	−.059**	.054**	.037*	−.051**	.035	.106**	.035
Other social sciences	.125	.330	−.050**	.016	.012	−.043*	.038*	−.058**	.111**	−.055**	−.080**
Positive emotions toward f.b.	.862	.345	.090**	−.028	−.014	−.035	−.048**	−.030	.055**	−.002	.041*
Locus of control	4.429	.592	.100**	.137**	−.086**	−.034	.001	.005	−.042*	−.042*	−.015
Entrepreneurial self-efficacy	3.286	1.008	.156**	−.032	.013	−.016	−.003	−.017	.026	.016	.012
Independence motive	4.723	.713	.351**	.079**	−.029	−.051**	−.088**	.092**	.077**	−.086**	−.094**
Innovation motive	4.604	.969	.235**	.000	−.024	−.014	−.083**	.142**	.034	.017	−.072**

* $p<.01$.
** $p<.001$.

Second, our study speaks to entrepreneurship and family business research, which suggests that the family firm context as a vicarious entrepreneurial experience should bias career choices (Scherer et al., 1989; Kolvereid, 1996b). We extend Sharma and Irving's (2005) consideration of commitment as an antecedent to the focal behavior to pursue a career inside a family business. We

Table 4
Results of multinomial logistic regression analyses.[a]

Variables	Model 1a: employee intention	Model 1b: founding intention	Model 2a: employee intention	Model 2b: founding intention
Control				
Austria[b]	−0.317*	0.076	−0.177	−0.003
Belgium	−0.385	0.425	−0.392	0.435
Finland	−0.301	0.144	−0.356	0.156
Germany	0.576**	0.166	0.565**	0.187
Hungary	0.111	1.233***	0.298	1.045***
New Zealand	0.529***	1.011***	0.720***	0.924***
Norway	−0.220	0.227	−0.381	0.218
Student age	0.014	0.019	0.021	0.012
Study year	0.043	0.001	0.022	0.004
Gender (1 = female)	0.227*	−0.237*	0.140	−0.152
Economics and law	−0.320	−0.726	−0.082	−0.764
Business Administration	−0.621	−0.671	−0.453	−0.685
Natural science/engineering	−0.041	−0.514	0.047	−0.552
Other social sciences	0.341	−0.106	0.502	−0.225
Positive emotions toward f.b.	−1.417***	−0.886***	−1.257***	−0.970***
Independent				
Internal locus of control			0.198*	0.014
Self-efficacy			−0.154**	0.108*
Independence motive			−0.898***	0.173*
Innovation motive			0.039	0.327***
Intercept	2.466***	1.676**	5.697***	−0.872
Log-likelihood	5734.73***		8797.66***	
Likelihood-ratio chi-square	438.71***		1310.72***	
Nagelkerke *R*-square	0.093		0.256	

* $p<.05$.
** $p<.01$.
*** $p<.001$.
[a] The comparison baseline is "succession intention".
[b] The reference country is Switzerland.

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Student age	Study year	Gender, 1 = female	Econ. & law	Bus. Admin.	Natural Sc./ Engin.	Other social sc.	Positive emotions toward f.b.	Locus of control	Entrepreneurial self-efficacy	Indep. motive	Innov. motive
1											
.418**	1										
−.091**	.012	1									
−.084**	−.017	.041**	1								
.072**	.009	.030	−.271**	1							
−.024	−.009	−.197**	−.321**	−.566**	1						
.017	.015	.197**	−.148**	−.261**	−.309**	1					
−.053**	−.030	−.036*	.011	.011	.001	−.025	1				
.063**	.022	−.042*	.009	.077**	−.031	−.067**	.052**	1			
.034	−.005	−.190**	.038*	.032	−.011	−.061**	.093**	.135**	1		
−.016	−.044*	−.041*	.051**	.061**	−.085**	−.003	.119**	.350**	.124**	1	
.028	.014	−.087**	−.034	−.051**	.027	.074**	.031	.201**	.079**	.418**	1

add here that locus of control, entrepreneurial self-efficacy, and the independence and innovation motives should be contemplated as predictors of succession career intent.

Whereas our findings regarding entrepreneurial self-efficacy and the independence motive are in line with our assumptions, our results on locus of control challenge a traditional perspective of intentional entrepreneurs. This speaks to Brockhaus and Horwitz (1986) on the reasons why many offspring opt against self-employment. Presumably, students raised in a family business environment vicariously experience the constraints and personal sacrifices imposed on their parents and are affected by the parents' absence due to business matters (Stavrou, 1999; Douglas and Shepherd, 2000; Douglas and Shepherd, 2002). Offspring from business families who exhibit high levels of self-directedness may thus want to avoid the responsibilities and pressures related to entrepreneurial careers. As a result, these students realize that being able to control one's own fate by following an entrepreneurial career may largely be an illusion. For these self-directed intentional successors, because an entrepreneurial career path is feasible does not automatically mean that it is desirable.

Also, being closely exposed to the role of an entrepreneur may reduce overconfidence and potential hubris about one's level of self-determination when pursuing an entrepreneurial career (Hayward et al., 2006). Studies on overconfidence bias show that entrepreneurs overweight the utility of private information relative to the value of public information (Bernardo and Welch, 2001). In consequence, an overconfidence propensity causes entrepreneurs to underestimate venture failure rates and, potentially, the burden and emotional costs related to entrepreneurial activity (Kahneman and Lovallo, 1993; Zellweger and Astrachan, 2008). Here, the family business experience may provide an unbiased inside perspective that unveils otherwise private information about the downside of entrepreneurial activity and discredits the seemingly self-directed life of an entrepreneur. This finding challenges the prominent assertion that entrepreneurial role models (i.e., parents) should generally motivate offspring to follow entrepreneurial careers (e.g., Dyer and Handler, 1994; Kolvereid, 1996b). Rather, students with family business background seem to be pessimistic about being in control, but optimistic about their capabilities and resources to pursue an entrepreneurial career.

Third, and building on above reasoning, our study furthers theory of planned behavior and the development of a theory of mixed control (Monsen and Urbig, 2009; Urbig and Monsen, 2009). While we do not find evidence for the proposed interaction between locus of control and self-efficacy, our considerations support the relevance of self- and other-induced beliefs regarding one's own perceptions of efficacy and control. It seems reasonable to assume that the family and more specifically parents of students with family business background represent powerful others that impact perceptions of control and efficacy (Janney and Dess, 2006). Often, children of business families rely on their parents networks and financial capital to start an own firm (Steier, 2007). Accordingly, the family business context and hence the external source of entrepreneurial efficacy adds to the perceived self-efficacy to take risks and pursue an entrepreneurial career. Building on Monsen and Urbig (2009) we thus propose that the inclination to start an own firm for students with family business background is $\pi = (e_s + e_f)$, with e_s and e_f representing self- and family-induced efficacy beliefs. In stark contrast to above motivation, the same external context may reduce the inclination to start an own firm through lessening perceptions of internal locus of control when pursuing such a career ($\pi = (c_s - c_f)$, with c_s and c_f representing self- and family-induced control beliefs). Accordingly, the same external source can have opposite effects on

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perceptions of efficacy and control. We therefore suggest to rethink the conceptual argument that the influence of powerful others on perceptions of control should lead to greater optimism through social action on the sources of external control (Bandura, 1997). In fact, our findings on locus of control point in the opposite direction. In combination with our finding that locus of control and entrepreneurial self-efficacy are distinct constructs (Rhodes and Courneya, 2003; Norman and Hoyle, 2004), with independent and additive effects on entrepreneurial career intent, we hence model the inclination of students with family business background to start an own firm as $\pi = (e_s + e_f) + (c_s - c_f)$. This finding also speaks to Goodie and Young (2007) by suggesting that the altering relevance of efficacy and control beliefs for choices under uncertainty may depend on the impact of external sources.

Last but not least, and as a side effect, our theoretical considerations and empirical findings contribute to the ongoing discussion of the content and form of academic entrepreneurship programs, which have been found to impact the intention to opt for an entrepreneurial career path (e.g., Souitaris et al., 2007; Tegtmeier, 2007). If these programs are intended to motivate students to choose careers in their family firms, educators may use our findings to differentiate between founder and successor entrepreneurs, and point to differences in terms of independence and innovation motives, just as perceptions of self-efficacy. In continuous education classes family firm owners, and in particular parents, should be sensitized to the negative impact they might have on their children's entrepreneurial career intention through perceptions of locus of control.

6.1. Limitations

Our findings may be limited by a relatively low response rate (7%). However, this rate compares favorably with other e-mail student surveys, especially when relying on only one e-mail and providing no incentives (cp. Porter and Whitcomb, 2003). We would be remiss in concluding that the individual's motives and behavioral control perceptions are the only factors that determine the likelihood of career choice intentions. Other elements may be individual and social factors (cp. Dyer and Handler, 1994), as well as economic prospects of the company and financial attractiveness of other career options (Stavrou and Swiercz, 1998; Birley, 2002). In addition, birth order and number of siblings may have an impact. However, we can expect that students indicating that they intend succession should be able to judge whether these reasons inhibit a potential career within the family firm. Also worth mentioning is the link between intention and actual behavior. Although intentions are believed to be the "best single predictors of an individual's behavior" (Fishbein and Ajzen, 1975, p.369), they are only predictors. Theories of effectuation and bricolage, for example, cast doubt on the intentional and volitional aspects of entrepreneurial intent (Sarasvathy, 2001; Baker and Nelson, 2005). We believe that the students in our sample are well aware of the role of founder, successor, or employee, given their ties to the family firm and the resulting insights into the different career paths. Thus, these predictions seem reliable. While applying theory of planned behavior, we do not have an explicit measure of normative beliefs that may spur subjective norms. We included the students' feelings attributed to the family firm as a related control variable. Thus, the contribution of our study is valid, particularly because subjective norms have not been found to directly impact the founding intention and may be confounded with the motive to act and with perceived behavioral control (Krueger et al., 2000). Moreover, it seems important to stress that we are using general locus of control and domain-specific self-efficacy measures. However, there may be advantages and disadvantages of using general versus task-specific measures (Zhao et al., 2005). While there are good reasons to use the above measures for the purpose of this study, as outlined in the method section, it is important to note that task- and general self-efficacy measures just as task- or domain-specific locus of control measures could be used to test for the robustness of our findings.

6.2. Avenues for future research

Our study may spur future research in several directions. Although Ajzen (2002) theorizes no distinction between the causal effects of entrepreneurial self-efficacy and locus of control, we question how different combinations of these two elements may affect entrepreneurial intentions. Successors might exhibit high levels of entrepreneurial self-efficacy given resource endowment and family support. However, locus of control could be low if these resources are controlled by a dominant family member. Even though we were unable to detect significant interaction effects between perceptions of control and efficacy, a direct instead of an imputed distinction between the sources of those perceptions (self versus other induced) may be helpful in further untangling the possible interaction of efficacy and control beliefs (Monsen and Urbig, 2009). To this end, Urbig and Monsen's (2009) scales for internal and social forms of control and efficacy beliefs could be utilized. It may be also promising to adapt the abstract locus of control measure to capture the confidence in overcoming career-related obstacles. In this vein, the concept of collective entrepreneurial self-efficacy of the family could be tapped, which has been argued to reinforce individual entrepreneurial self-efficacy (Carsrud et al., 2007). In this context, future studies could incorporate the concept of implementation intention (Gollwitzer and Brandstätter, 1997; Sheeran et al., 2005) as a self-regulatory strategy that alleviates obstacles related to goal pursuit and promotes goal-directed behavior. Also, future studies may advance the understanding of entrepreneurial intentionality by exploring the reciprocal causation between intent and desirability (Krueger, 2009).

Another promising avenue for research centers around the impact of family social norms that often supersede general social norms, which appear to drive respondents' intent to undertake entrepreneurial careers (Carsrud et al., 2007). These social norms may include a strong element of personal entrepreneurial self-efficacy or explicit or implicit cues that the offspring are exposed to significant entrepreneurial capabilities or resources. Also, a deeper look at the self-efficacy measure may be warranted. It is conceivable that individuals with high levels of entrepreneurial self-efficacy in the family firm context may not only be induced by higher availability and willingness to allocate personal resources in terms of time and effort, but will most likely be able to draw from the extended resource base of the family (e.g. in terms of financial, knowledge, social capital just as moral support; Steier,

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2007). It is possible that other-induced perceptions of entrepreneurial self-efficacy nurture overconfidence in one's own abilities, which in turn creates complacency, hubris, and inadequate personal effort to attain the goal (Vancouver et al., 2002).

Moreover, PSED data shows a sizable number of subjects who have neither launched nor quit, but are still trying to found firms. A similar effect may occur in the succession context: individuals may pronounce the intention to succeed, but may postpone actually joining the family firm, preferring to wait for the right personal or business circumstances. It seems plausible to introduce a phase of interest and observation into the successor career path, during childhood and beyond.

7. Conclusion

Our findings offer a nuanced perspective on career choice intentions of students with family business backgrounds. We not only provide a prospective and detailed analysis of their underlying motives and behavioral control perceptions, but also explicitly compare intentional founders, successors, and employees. We contribute to research in a number of ways and hope to inspire other researchers to conduct additional work in the fascinating field of entrepreneurial intentions.

Appendix A. Measures for independent variables

Locus of control (general)	*Please evaluate the following statements…*	$\alpha = 0.704$
	It mainly depends of me whether other people act in accordance with my wishes.	
	Whether I reach a goal or not mainly depends on me and my behavior.	
	When I make a plan I am sure that the planned will become reality.	
	I myself can determine very much of what's going on in my life.	
	If I get what I want it is the result of my endeavor and personal commitment.	
Entrepreneurial self-efficacy (domain-specific)	*Please evaluate the following statements…*	$\alpha = 0.688$
	I feel capable of starting my own firm.	
	I am confident that the launching of my own firm will be a success.	
	I have all the necessary knowledge to start my own firm.	
	I have the entrepreneurial skills to start my own firm.	
Independence motive	*What do you connect with your working life/career after your studies?*	$\alpha = 0.712$
	Please evaluate the aspects according to their importance.	
	How important is it to you to be your own boss?	
	How important is it to you to decide independently?	
	How important is it to you to have personal freedom?	
	How important is it to you to realize your own dream?	
	How important is it to you to be independent?	
Innovation motive	*What do you connect with your working life/career after your studies?*	$\alpha = 0.698$
	Please evaluate the aspects according to their importance.	
	How important is it to you to create something new?	
	How important is it to you to seize advantages from your creative potential?	

We used 6-item Likert scales with answers ranging from “strongly disagree” to “strongly agree” (for locus of control and self-efficacy); and from “very unimportant” to “very important” (for independence and innovation motives).

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