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Exploring intergenerational influence on entrepreneurial intention: the mediating role of perceived desirability and perceived feasibility

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Abstract: Children of self-employed parents are twice as likely as other children to become self-employed themselves, as family background exerts a significant influence on the values, attitudes, and behaviour one adopts. This study explores how entrepreneurial intentions are transmitted across generations within families. Using the data from 805 respondents and expanding upon Shapero and Sokol's model of intention in entrepreneurial events (SEE), we analyse the role of an entrepreneurial family background as an intergenerational influence on entrepreneurial intention and the underlying mediating effect of perceived desirability and perceived feasibility in starting a business.

Keywords: entrepreneurial intention; perceived desirability; perceived feasibility; intergenerational.

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1 Introduction

A family business is “governed and/or managed with the intention to shape and pursue the vision of the business held by a dominant coalition controlled by members of the same family or a small number of families in a manner that is potentially sustainable across generations of the family or families” [Chua et al., (1999), p.25]. This definition suggests that familial exposure to self-employment can affect young people’s occupational choices such that they perceive self-employment as desirable and feasible (Krueger et al., 2000; Sorensen, 2007). Research has shown that parents’ entrepreneurial background can initiate entrepreneurial intentions in their children (Altinay et al., 2012; Carr and Sequeira, 2007; Laspita et al., 2012; Matthews and Moser, 1996; Scherer et al., 1989). In fact, having a parent who is an entrepreneur increases the probability that a person will become an entrepreneur by a factor of 1.3 to 3.0 (Dunn and Holtz-Eakin, 2000; Arum and Mueller, 2004; Sorensen, 2007; Colombier and Masclet, 2008; Andersson and Hammarstedt, 2010, 2011).

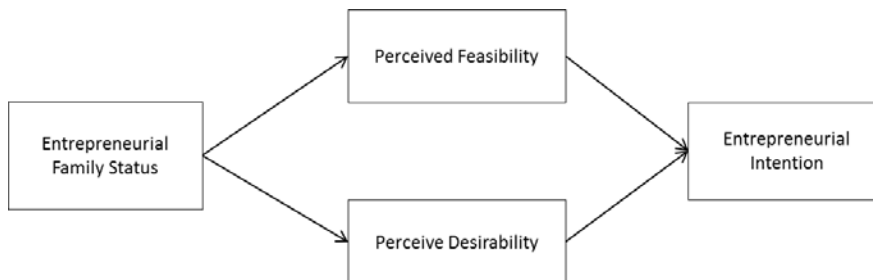
Research has focused on multiple individual-level factors to explain phenomena related to entrepreneurial intentions. In explaining the differences between entrepreneurs and non-entrepreneurs, the literature has focused on heritable traits like achievement orientation (Collins et al., 2004), risk tolerance (Stewart and Roth, 2004; Cesarini et al., 2009a), desire for independence (Douglas and Shepherd, 2002), extraversion (Bouchard and Loehlin, 2001), willingness to try new products and services and to create new firms or new material by destroying the existing economic order (Schumpeter, 1934), overconfidence (Cesarini et al., 2009b), ability to identify new opportunities (Thompson 1999), and creativity (Lee and Wong, 2004). The entrepreneurship literature also asserts a number of contextual factors that influence the entrepreneurial choice, including capital constraints (Blanchflower and Oswald, 1998), peer effects (Nanda and Sørensen, 2010), and regional influences (Reynolds et al., 1994). However, researchers have rarely focused on family background and its influence on the development of entrepreneurial intentions (Laspita et al., 2012; Getz and Petersen, 2005).

People whose parent or close family member is self-employed are more likely than others to pursue an entrepreneurial career (Matthews and Moser, 1996; Drennan et al., 2005). A family business background may present lower barriers to entrepreneurial entry,

since those with such backgrounds may be able to capitalise on their social ties and social capital (Greve and Saleff, 2003). Family capital, which refers to the family members' total resources, has three components: human, social, and financial (Danes et al., 2009). Family social capital, described as non-financial resources and support family members offer to the entrepreneur, affects the decision to start a business positively (Cheng et al., 2009). We take the family embeddedness perspective, which describes the impact and the importance of parents on their children's entrepreneurial careers (Aldrich and Clif, 2003) to argue that the breadth and quality of family business experience matter (Krueger, 1993). Parents are always role models for their children, and parents who are active in a family business influence their children's future entrepreneurial intentions by modelling attitudes and beliefs like self-efficacy (Shapero and Sokol, 1982; Krueger et al., 2000). However, there is still room to clarify the role that family businesses play in encouraging future entrepreneurial inclinations, as little is known about the process behind the inter-generational transmission of entrepreneurial intentions (Laspita et al., 2012).

Previous research is inconclusive on the origins of the intergenerational transfer of entrepreneurship (Lindquist et al., 2012). We address this gap in the literature by exploring the inter-generational transmission of entrepreneurial intentions using Shapero and Sokol's (1982) model of intention in entrepreneurial events (SEE). We analyse the role of an entrepreneurial family background as an intergenerational influence on entrepreneurial intention and the underlying mediating effect of the perceived desirability and perceived feasibility of starting a business. We hypothesise that individuals with prior family business experience may develop positive perceptions toward entrepreneurial feasibility and desirability, which can result in entrepreneurial action. Our goal is to make a theoretical and empirical contribution to Shapero and Sokol's (1982) model. Figure 1 depicts our proposed theoretical extension of the SEE in relation to entrepreneurial family background and entrepreneurial intention.

Figure 1 Proposed model for entrepreneurial family background and entrepreneurial intention



The paper is organised as follows. First, we lay out the theoretical foundations of the study and derive the hypotheses for the mediating role of perceived desirability and perceived feasibility in the relationship between an entrepreneurial family background and entrepreneurial intentions. Next, we describe our methodology and present the results. Finally, we discuss our findings, state the implications of our study, and identify directions for future research.

2 Theoretical background

2.1 *Entrepreneurial intentions*

Entrepreneurial intention is central to the process of venture creation. Entrepreneurial intentions, defined as “one’s judgements about the likelihood of owning one’s own business” [Crant, (1996), p.43], identify the critical link between ideas and action (Bird 1988; Krueger and Carsrud, 1993). According to Ajzen (1991), intention captures the degree to which people are motivated and willing to execute a behaviour. Intention has also been defined as a state of mind that directs a person’s attention (and, therefore, experiences and actions) toward a specific object (goal) or path in order to achieve something (e.g., becoming an entrepreneur) (Bird, 1988). Research has proposed several conceptual models for understanding entrepreneurial intention (e.g., Davidsson, 1995; Krueger and Brazeal, 1994; Krueger and Carsrud, 1993; Robinson et al., 1991; Shapero and Sokol, 1982), but there is little difference in the approaches these models take (Krueger et al., 2000).

Our understanding of entrepreneurial intention as it relates to the current study is guided by two models: Ajzen’s (1991) theory of planned behaviour (TPB) and Shapero and Sokol’s (1982) model of intention in entrepreneurial events (SEE). Although the models differ in their underlying concepts, they provide comparable interpretations of entrepreneurial intention (Krueger et al., 2000; Engle et al., 2010; Moriano et al., 2011). Krueger et al. (2000) demonstrate that the attitudes and subjective norms in the TPB model are conceptually related to SEE’s perceived desirability (perceptions of the personal appeal of starting a business), while perceived behavioural control in TPB corresponds with SEE’s perceived feasibility (the degree to which one feels capable of performing a behaviour). Perceived desirability and perceived feasibility are fundamental elements of entrepreneurial intention (Douglas and Shepherd, 2002). Shapero and Sokol (1982) propose that the entrepreneurial event (defined as initiating entrepreneurial behaviour) requires a salient, personally credible opportunity, which depends on the individual’s perception of the desirability and feasibility of starting a new business. Shapero and Sokol define perceived desirability as the personal and social attractiveness of an action (starting a business), and perceived feasibility as the personal and social degree to which an individual feels capable of performing the action (starting a business). SEE proposes that individuals experience positive or negative displacement events that lead to a change in their behaviour. A positive event trigger for pursuing entrepreneurship could be the provision of necessary start-up capital, whereas a negative event trigger could be the loss of a job (Krueger et al., 2000). The entrepreneurship literature agrees that perceived desirability and perceived feasibility are fundamental elements in explaining the formation of entrepreneurial intention (Douglas and Shepherd, 2002; Fitzsimmons and Douglas, 2011; Krueger et al., 2000), so the present study uses these two constructs to explain the intergenerational transmission of entrepreneurial intentions (Carsrud et al., 2011; Laspita et al., 2012).

2.2 *Entrepreneurial family background*

The sociological and psychological theories related to the socialisation of children highlight that the socialisation that occurs within families helps children to embrace the social roles and behaviour that they need if they are to partake in society (Brim, 1968).

This socialisation, as an ongoing process of reflection and action, ultimately defines the perceptions that individuals develop regarding their social interactions, life choices, life styles, and work roles. The symbolic interactionism literature defines an entrepreneurial family background as an intergenerational influence agent that acts as a socialisation source and a mechanism for understanding future entrepreneurial intentions (Mead, 1934; Menaghan and Parcel, 1995; Moore et al., 2002; Parcel and Menaghan, 1994). Family business research contends that family influences are decisive factors in young people's occupational intentions (Jodl et al., 2001) and demonstrates that entrepreneurs have often been exposed early to entrepreneurship, experience in the family business, and a family history in which their mother and/or father was self-employed (Dyer, 1992; Dyer and Handler, 1994; Fairlie and Robb, 2005; Menaghan and Parcel, 1995). In a study of British undergraduate students, Brown (1990) finds that the fathers of 38% of the students who were very interested in starting their own businesses had their own businesses, which was higher than the level of entrepreneurial fathers in the general population of students. Similar findings on self-employment choice include evidence from the UK (Hakim, 1988; Taylor, 1996) and the US (Crant, 1996; Schiller and Crewson, 1997). Sorensen (2007) also finds that the children of entrepreneurs choose the same industry as that in which their parents work more often than do the children of non-entrepreneurs. Lindquist et al. (2012) find that having an entrepreneur for a parent increases the probability of becoming an entrepreneur by 60%; and Andersson and Hammarstedt (2010, 2011) reach conclusions that are along the same lines.

Therefore, it is likely that entrepreneurial ambitions are increased by the presence of an entrepreneurial family member who serves as a role model (Altinay and Altinay, 2006; Liao and Welsch, 2001; Pruett et al., 2009; Samuelsson, 2001). On the other hand, the performance of a start-up is not guaranteed by the presence of self-employed parents. Fairlie and Robb (2007) find that having self-employed parents increases profits and sales and lowers closure rates but only when the entrepreneur has work experience in the parents' business. There is no evidence that the children of self-employed parents perform better as entrepreneurs (Sorensen, 2007; Roberts, 1991).

According to the parental model, a child's unique biology and experience can lead to preferences for activities that develop into well-defined interests, the pursuit of which leads to the development of specialised competencies (Holland, 1985). Some researchers have even suggested that entrepreneurial intention can be an inherited genetic disposition through the transmission of certain genes from entrepreneurial parents to their offspring (Nicolaou and Shane, 2010). These genes, they argue, can affect brain mechanisms and develop entrepreneurial traits in the children's personalities, such as the need for achievement, a locus of control, a propensity for risk-taking, and innovativeness (Altinay et al., 2012). These traits can lead an individual to be disposed towards entrepreneurship as a career option (Rauch and Frese, 2007).

Furthermore, entrepreneurial family members might provide encouragement by reinforcing entrepreneurship-related interests, preferences, and competencies. They can provide opportunities for business ownership and pass on the business-related knowledge, skills, support, and resources required to pursue these opportunities (Nicolaou et al., 2008). Klyver (2007) finds that family members are most heavily involved in the early stages of the entrepreneurial lifecycle, when the decision to start a business is yet to be made. Research has also shown that students whose parents owned a small business demonstrated the highest preference for self-employment and the lowest

preference for employment in large corporations (Scott and Twomey, 1988). Therefore, we propose the following:

H1 Entrepreneurial family background is positively related to entrepreneurial intention.

2.3 The mediating role of perceived desirability

Research has shown that entrepreneurial intentions are partially the result of positive attitudes toward self-employment (Souitaris et al., 2007), as those with positive attitudes toward entrepreneurship are more likely to become entrepreneurs than are those who view entrepreneurship as undesirable. Many such attitudes are likely to have been inherited (Eaves et al., 1989, 1999; Olson et al., 2001), as individuals who come from entrepreneurial families are more likely than others to be aware of the financial rewards and the autonomy that comes with family business ownership (Fairlie and Robb, 2005). This awareness can lead to the formation of the entrepreneurial values and positive attitudes that make entrepreneurship a desirable career option (Kuratko and Hodgetts, 1995; Mauer et al., 2009). Parker's (2009) view is that entrepreneurial parents may transmit the taste for entrepreneurship through role modelling, which may be as subtle as increasing the child's awareness of entrepreneurship as a career option (Carroll and Mosakowski, 1987) or shaping the child's values, such as a taste for autonomy.

The theory of career choice suggests that individuals' interpretation of their experiences and their perception of the attitudes and expectations of socialisers like parents, friends, and teachers influences their career choices (Dick and Rallis, 1991). Entrepreneurial parents can play a critical role in their children's socialisation and education process through conscious and unconscious transferring of entrepreneurial values, knowledge, skills, and aptitudes (Spera and Matto, 2007). The child-rearing practices and values of self-employed parents may affect their offspring's values by shaping their basic orientation toward "what makes up 'earning a good living'" [Hout, (1984), p.1384], which can lead to a preference for self-employment (Western and Wright, 1994; Aldrich et al., 1998). Past research supports this contention. For example, Halaby's (2003) longitudinal study reveals that adult children of entrepreneurs are more likely to prefer careers with high levels of autonomy and self-direction.

Therefore, we expect that family background, childhood experiences, and exposure to others in business influence the development of positive attitudes toward entrepreneurship and argue that perceived desirability of business ownership mediates the relationship between entrepreneurial family background and entrepreneurial intentions. This argument reflects our next hypothesis:

H2 Perceived desirability of business ownership mediates the relationship between entrepreneurial family background and entrepreneurial intention.

2.4 The mediating role of perceived feasibility

Evidence from the social psychology literature suggests that self-efficacy is central to most human functioning and is based more on what people believe than on what is objectively true (Bandura, 1997). Research has consistently emphasised the importance of perceived self-efficacy as a key factor in determining human agency (Bandura, 1989) and has shown that those with strong perceptions of their ability to perform a task are more likely to pursue and persist in that task (Bandura, 1992). Therefore, increased levels

of self-confidence regarding the accomplishment of entrepreneurial tasks can be seen as increased volitional control.

In the field of entrepreneurship, perceived feasibility and its key indicator, entrepreneurial self-efficacy, have been demonstrated to be sound predictors of entrepreneurial intention (Chen et al., 1998; Krueger et al., 2000). Boyd and Vozikis (1994, p.66) characterise entrepreneurial self-efficacy as “an important explanatory variable in determining both the strength of entrepreneurial intentions and the likelihood that those intentions will result in entrepreneurial actions.” Similarly, Krueger and Brazeal (1994) suggest that entrepreneurial self-efficacy is one of the key prerequisites for entrepreneurship.

Individuals with entrepreneurial family backgrounds tend to gain knowledge about how to run a business by observing and working with their entrepreneurial parents. Like most children, they see their parents as role models and so may come to see self-employment “as a realistic alternative to a conventional employment” [Carroll and Mosakowski, (1987), p.576]. In this process, they are likely to take on their parents’ work ethic as the norm for their own behaviour (Aldrich et al., 1998; Carr and Sequeira, 2007; Lentz and Laband, 1990; Menaghan and Parcel, 1995). This entrepreneurial education and related experience develop their entrepreneurial self-efficacy and can increase the possibility that they will consider entrepreneurship a feasible career option (Krueger et al., 2000).

Entrepreneurial parents can also provide financial and non-financial resources for their children (Aldrich et al., 1998; Dunn and Holtz-Eakin, 2000). Financially well-off entrepreneurial parents can transfer their wealth and financial capital or help them gain access to loans. In addition, they can provide access to their social capital, including suppliers, customers, business partners, and their brand name (Laspita et al., 2012). Thus, the entrepreneurial parents’ financial and non-financial resources can help their children to explore new market opportunities (Sorensen, 2007) and to perceive entrepreneurship as a feasible career option, stimulating entrepreneurial intention. Therefore, we propose the following:

H3 Perceived feasibility of business ownership mediates the relationship between entrepreneurial family background and entrepreneurial intention.

3 Method

3.1 Context of the research

During the last decade, Pakistan has been trying to stimulate economic growth through implementation of educational policies. The Higher Education Commission (HEC) of Pakistan recently developed the National Business Education Accreditation Council (NBEAC) to promote business education by focusing on entrepreneurial education and entrepreneurial culture in Pakistani universities. Students often choose entrepreneurship as an elective subject during the final semester of their undergraduate programmes, but the NBEAC encourages institutions of higher education to offer entrepreneurship as a major field of study. Pakistan’s increasing focus on entrepreneurship education provides a favourable environment for entrepreneurial research, which can measure the new educational initiatives’ effect on university students’ entrepreneurial intentions.

3.2 *Setting and participants*

To ensure the variability and representativeness of respondents, we selected universities in the largest province of Pakistan, Punjab, and targeted Punjab's educational hubs of Lahore, Faisalabad, and Sahiwal. First, we reviewed universities' websites and course outlines and determined whether they were registered with the HEC with approved and relevant programmes of study. From this review, we selected five universities that provide accredited entrepreneurship programmes. Then, we contacted undergraduate students who had studied or were studying entrepreneurship at these selected universities and collected data from those who agreed to participate in our study during a period of eight weeks. The students provided written informed consent to participate before they were allowed to answer the questionnaire. We also obtained ethical approval from each university's ethics committee. Before completing the questionnaire, all respondents read a brief explanation of the purpose of the study and were informed of their rights as participants in accordance with the American Psychological Association's ethical principles for treatment of participants.

Of the 1,000 questionnaires distributed, 850 were returned, of which 45 were subsequently discarded because of incomplete information. The 805 fully completed questionnaires (response rate of 80.5%) were from 547 males (68%) and 258 females (32%). The average age of the respondents was 21 years ($S.D. = 0.54$).

3.3 *Design and measure*

The questionnaire was developed and pre-tested on a small sample of students for validation purposes. The study's constructs were entrepreneurial intention, perceived feasibility, perceived desirability, and entrepreneurial family background.

3.3.1 *Entrepreneurial intention*

Entrepreneurial intention was measured through seven statements that assessed whether participants intended to start a new business. The first statement, 'Have you ever seriously considered becoming an entrepreneur?' was adapted from Veciana et al. (2005) and was measured on a dichotomous scale (1 = Yes, 0 = No). The other six statements were measured on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) and were adapted from Liñán and Chen (2009).

3.3.2 *Entrepreneurial family background*

Following Altinay et al. (2012), entrepreneurial family background was measured as a nominal variable (1 = Yes, 0 = No) based on whether anyone in the family had entrepreneurship experience.

3.3.3 *Perceived desirability*

Perceived desirability was assessed by means of six factors identified by Carter et al. (2003): self-realisation (four items), financial success (four items), role (three items), innovation (two items), recognition (two items), and independence (two items).

3.3.4 *Perceived feasibility*

Following Krueger and Brazeal (1994) and Krueger et al. (2000), we operationalised perceived feasibility as an overall measure of self-efficacy across a range of entrepreneurial competencies. We used the entrepreneurial self-efficacy scale developed by Chen et al. (1998), who find significant and consistent support for this measure as a determinant of the intention to be an entrepreneur. The questionnaire asked respondents to indicate their abilities in performing each of 26 roles and tasks related to five main areas of entrepreneurship: marketing, innovation, management, risk taking, and financial control. The responses were based on a five-point Likert scale ranging from 'completely unsure' (1) to 'completely sure' (5). Following Chen et al. (1998), we calculated the total entrepreneurial self-efficacy score by taking the average of responses to the 26 items.

3.4 *Statistical analysis*

Prior to estimating the measurement model, we conducted exploratory (EFA) and confirmatory factor analyses (CFA) to assess the convergent and discriminant validity, reliability, and unidimensionality of the factor structures. We used structural equation modelling (AMOS version 18.0) for the CFA and the Sobel test statistic to test the mediation.

To test the hypothesised mediation effects, we followed the four-step hierarchical multiple regression approach from Baron and Kenny (1986), and we used the Sobel test to test the mediation effect of each model (Sobel, 1982). We conducted the regression analyses as follows. First, we regressed the control variables of gender, age, and education on entrepreneurial intention (Model 1). Then we added the main effect of entrepreneurial family background (Model 2), followed by each of the two mediators (Models 3 and 4). Finally, we calculated final model that regressed entrepreneurial family background and all of the mediating effects variables on entrepreneurial intention (Model 5).

4 **Results**

4.1 *Assessment of measures and common method bias*

We estimated a single measurement model to assess the validity of the measures. The chi-square statistic for the model is significant ($\chi^2/df = 1.733$) as expected because of the large sample. The other fit indices indicate a good fit [comparative fit index (CFI) = .93; Tucker-Lewis index (TLI) = 0.92; root mean square error of approximation (RMSEA) = .059]. All items load significantly on their respective constructs with factor loadings ranging from 0.50 to 0.84, which meets the threshold of 0.50 set by Hair et al. (2006) and demonstrates convergent validity at the item level. At the construct level, the

reliability coefficients (Cronbach's alpha) and composite reliability for all constructs are well above the threshold level of 0.70 (Nunnally and Bernstein, 1994), and the average variance extracted (AVE) exceeds 0.50 (Fornell and Larcker, 1981), both of which provide evidence for convergent validity at the construct level. The AVE for each construct is greater than the squared correlation between the construct and any other construct in the model, providing evidence of convergent validity at the construct level (Fornell and Larcker, 1981). Table 1 presents the correlation matrix and summary statistics.

Table 1 Descriptive statistics, correlation matrix, and square root of AVE ($n = 805$)

<i>Variable</i>	<i>Mean</i>	<i>SD</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
1 Entrepreneurial intentions	3.50	1.04	<i>.93</i>			
2 Perceived desirability	3.67	0.63	.569**	<i>.81</i>		
3 Perceived feasibility	3.62	0.63	.425**	-.017**	<i>.89</i>	
4 Entrepreneurial family background	0.73	0.43	.101**	.25**	.14**	<i>.75</i>
<i>Cronbach's alpha (α)</i>			.80	.75	.92	-
<i>Average variance extracted (AVE)</i>			.93	.81	.89	-
<i>Composite reliability (CR)</i>			.90	.78	.90	-

Notes: *Significant at $p \leq .01$

Diagonal values represented in italics are square root of AVE; off-diagonal values are correlations between constructs.

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We used Harmon's one-factor test to assess the possibility that common method bias affects our empirical results and research conclusions (Podsakoff and Organ, 1986). The results of the combined factor analysis indicate four factors with eigenvalues greater than one. In addition, the variables load on their respective constructs consistently, suggesting that common method bias is not a primary concern.

4.2 Mediation analysis

Table 2 presents the hierarchical multiple regression results. In support of H1, entrepreneurial family background is positively associated with entrepreneurial intention (Model 2: $\beta = 0.150$; $p < 0.001$). To test the mediation effects proposed in H2 and H3, we conducted regression analysis using entrepreneurial family background as a predictor of the two mediating variables of perceived desirability and perceived feasibility. Next, we conducted regressions analyses for both the main effect and the mediating effects on entrepreneurial intention and found that, for each model, entrepreneurial family background significantly predicts the mediating variables, thus providing support for continuing with further mediation tests for each model. Subsequently, we examined the coefficient of the main effect (entrepreneurial family background) for Models 3 and 4 after loading the mediating effect of perceived desirability (Model 3) and perceived feasibility (Model 4).

Table 2 Mediation regression analysis of study variables on entrepreneurial intentions

	Model 1		Model 2		Model 3		Model 4		Model 5	
	β	SE	β	SE	β	SE	β	SE	β	SE
Gender (female)	-.135***	.075	-.133***	.076	-.100	.075	-.125***	.075	-.102	.075
Age	-.009***	.068	-.004**	.067	-.004	.067	.007**	.067	.000	.067
Education	.015**	.035	.017	.035	.021	.035	-.002	.035	.016	.035
Entrepreneurial family background	-	-	.150***	.078	.118**	.077	.117***	.077	.115***	.077
Perceived desirability	-	-	-	-	.560***	.070	-	-	.487***	.071
Perceived feasibility	-	-	-	-	-	-	.423***	.070	.114***	.070
<i>Sobel test for mediation</i>	-	-	-	-	2.70**	-	2.20**	-	-	-
R^2	.16*	-	.24**	-	.45**	-	.43***	-	.63.50***	-
Adjusted R^2	.17**	-	.25**	-	.47**	-	.44***	-	.64.56***	-
Change in R^2	-	-	.08**	-	.22***	-	.19**	-	-	-
Max variance inflation factor (VIF)	2.1	-	2.0	-	2.3	-	2.3	-	2.3	-

Notes: * $p < 0.05$; ** $p < 0.01$; and *** $p = 0.000$

The main effect in Model 3, which tests the mediating effect of perceived desirability, is significant, if smaller with the inclusion of perceived desirability. The Sobel test is strongly significant (Sobel test statistic = 2.70, $p < 0.001$), suggesting that an individual's perception of the desirability of starting a business partially mediates the main effects of entrepreneurial family background on entrepreneurial intention. Similarly, in Model 4 perceived feasibility partially mediates the relationships between entrepreneurial family background and entrepreneurial intention (Sobel test statistic = 2.20, $p < 0.001$). Finally in Model 5, which includes all main and mediation effects, entrepreneurial family background remains highly significant, suggesting that entrepreneurial family background is important in predicting entrepreneurial intention. For each mediating variable, the results support the hypothesis that perceived desirability and perceived feasibility of starting a new business are positively related to entrepreneurial intention. The next section discusses these results.

5 Discussion and implications

The entrepreneurship literature has grown considerably over the last decade. An expanded understanding of how entrepreneurial intention is transmitted may help to guide public policies and entrepreneurship education. Our results suggest that people can be steered in the direction of entrepreneurship by public policies or the education system and that familial factors play an important role in determining this occupational choice. Our findings also suggest that further exploration of the effects of entrepreneurial role models may be fruitful; Bosma et al. (2012) take a first step in this direction.

Although research has highlighted the important role of family businesses in job creation in supporting economic development and providing revenues to local governments (Laspita et al., 2012), entrepreneurial family can also act as an incubator for future business start-ups by serving as a training ground for its children (Carr and Sequeira, 2007). However, the specific role of an entrepreneurial family background in developing entrepreneurial intentions has been under-researched in the entrepreneurship literature (Getz and Petersen, 2005), and little is known about the mechanism that underlies the transmission of entrepreneurial intentions from entrepreneurial parents to their children (Laspita et al., 2012). The present study investigates the intergenerational transmission of entrepreneurial intention using the congruence between the parents' entrepreneurial occupation and their children's preference for creating and intention to create entrepreneurial ventures. Drawing on data from 805 individuals, our results suggest a significant direct and indirect transmission of entrepreneurial intentions from parents to their children, which is partially mediated by the children's perceptions of the desirability and feasibility of starting a business.

Our finding that an entrepreneurial family background has a positive effect on children's entrepreneurial intentions is consistent with previous research (e.g., Carr and Sequeira, 2007; Laspita et al., 2012; Matthews and Moser, 1996; Wang and Wong, 2004). While there is considerable evidence about this relationship in the literature, our study develops a holistic framework by demonstrating that perceived desirability and perceived feasibility partially mediates the relationship. Our findings provide additional insight into the intergenerational transmission of entrepreneurial intention by families.

Our findings have several implications that can inform both theory and practice. The first implication is related to cross-cultural research. In the context of our study setting,

Pakistan, which is characterised by a high level of in-group collectivism, the close familial relationship between parents and their children might lead to the initiation of entrepreneurial intentions. However, young people in collectivistic cultures who do not have entrepreneurial families and who work with entrepreneurs on a one-to-one basis in a friendly and familial environment may develop trusted relationships that could initiate entrepreneurial intentions (Laspita et al., 2012). Therefore, even absent on the prevalence of parental entrepreneurship in a country, policy makers and universities can motivate young people toward entrepreneurship by encouraging them to gain work experience in family-run businesses. Laspita et al. (2012) find that individuals who live in countries characterised by low levels of in-group collectivism but who have an entrepreneurial family background absorb less of the knowledge and values conducive to entrepreneurship from their parents than do those who live in countries with high levels of in-group collectivism. Future research can shed more light on how different types of knowledge, attitudes, and values that are conducive to entrepreneurship are transmitted in families across cultures.

The second implication of our research relates to for the theory of career choice and the emotional side of the transmission of intergenerational entrepreneurial intention. The research on occupational transmission suggests that parental values and beliefs may powerfully shape their children's socialisation and self-development (Dick and Rallis, 1991) as a result of the characteristics children with which are born and contextual input, such as the parental model (Holland, 1997; Oren et al., 2013). While our study cannot determine which source is more important, our findings – especially the importance of perceived desirability and feasibility in predicting entrepreneurial intention to follow in parents' footsteps – support the importance of the contextual input. Our findings also support the social selection literature with regard to socio-economic status, which states that the intergenerational transmission of occupational intention may result from practical reasons (Laband and Lentz, 1983). These initial results serve as an avenue for further exploration of the effect of exposure to family businesses and how the congruence or incongruence of parents' norms, values, and beliefs consciously or unconsciously shape their children's entrepreneurial intentions.

Third, our findings confirm Ajzen's (2002) arguments on the enduring effects of past behaviour on future intentions, but it also suggests the two intervening factors of perceived desirability and perceived feasibility. These findings have considerable relevance to real life. A practical implication for entrepreneurial parents who prefer that their children pursue entrepreneurship is the opportunity to understand how to motivate their children toward entrepreneurial careers. Specifically, the interaction of an entrepreneurial family background with perceived feasibility and perceived desirability of an entrepreneurial career suggests that serving as a role model alone might not be sufficient to motivate one's offspring to take the entrepreneurial path. For example, children of entrepreneurial parents who have internalised from their parents the values and beliefs that are suitable for venture creation may not have developed entrepreneurial self-efficacy, decreasing the possibility of entrepreneurship as a feasible career option (Krueger et al., 2000). In this case, additional motivational measures may be necessary to encourage the children to seek an entrepreneurial career path; these measures include offering them higher levels of autonomy (Shane et al., 2003) and creativity within the family business, training them in entrepreneurship and leadership (Krueger, 2000), and making the business as financially successful as possible (Dunn and Holtz-Eakin, 2000).

These steps may be crucial in ensuring the development of entrepreneurial intentions in the next generation.

Another practical implication of the family environment as an important impetus for the development of entrepreneurial intentions is the need to create substitutes for the informal transfer of human capital that the entrepreneurial family environment provides. This need can be met through the development of entrepreneurial apprenticeship programmes that focus on work experience in small business settings as a means to develop the general and specific human-capital skills necessary to become an entrepreneur (Fairlie and Robb, 2005).

5.1 *Limitations and future studies*

There are several potential limitations in the present study that inform possibilities for future research. First, our sample is drawn from a collectivistic society (i.e., Pakistan) based on Hofstede's cultural typology (Hofstede, 1980, 2003) that is also a developing Asian country. Consequently, our findings may not be generalisable to developed economies in individualistic cultures like those of the UK or Europe. Second, entrepreneurial family background is a binary categorical variable that may offer limited insights into the mechanism that underlie this variable's influence on entrepreneurial intention. We recommend that future studies investigate the entrepreneurial family background by employing metric measures. Future studies should also include other related variables, such as the quality of the parent-child relationship, parental support, family values, and attachment styles. To clarify how entrepreneurial intentions are transmitted over a lifetime, longitudinal studies are required, and future research could fill this gap. Third, the results maintain that there is a role for the local culture. We suggest uncovering possible future directions of improvement through comparative, cross-cultural studies that investigate to what extent the model fits in different cultural contexts. Finally, we acknowledge that measuring students' entrepreneurial intention is not equivalent to entrepreneurial action. Previous studies have used student samples to study the process of forming entrepreneurial intentions (e.g., Krueger et al., 2000), as students are approaching the point at which they will choose their careers (Levesque and Minniti, 2006). Nevertheless, there is a debate in literature about student samples' ability to represent the general population (Robinson et al., 1991). Future studies should use a sample of managers and existing entrepreneurs to validate our proposed model.

References

- Ajzen, I. (1991) 'The theory of planned behavior', *Organizational Behavior and Human Decision Processes*, Vol. 50, No. 2, pp.179–211.
- Ajzen, I. (2002) 'Residual effect of past on later behaviour: habituation and reasoned action perspectives', *Personality and Social Psychology Review*, Vol. 6, No. 2, pp.107–122.
- Aldrich, H.E. and Clif, J.E. (2003) 'The pervasive effects of family on entrepreneurship: toward a family embeddedness perspective', *Journal of Business Venturing*, Vol. 18, No. 5, pp.573–596.
- Aldrich, H.E., Renzulli, L. and Langton, N. (1998) 'Passing on privilege: resources provided by self-employed parents to their self-employed children', in Leicht, K. (Ed.): *Research in Social Stratification and Mobility*, pp.291–318, JAI Press, Greenwich, CT.

- Altinay, L. and Altinay, E. (2006) 'Determinants of ethnic minority entrepreneurial growth in the catering sector', *The Service Industries Journal*, Vol. 26, No. 2, pp.203–221.
- Altinay, L., Madanoglu, M., Daniele, R. and Lashley, C. (2012) 'The influence of family tradition and psychological traits on entrepreneurial intention', *International Journal of Hospitality Management*, Vol. 31, No. 2, pp.489–499.
- Andersson, L. and Hammarstedt, M. (2010) 'Intergenerational transmissions in immigrant self-employment: evidence from three generations', *Small Business Economics*, Vol. 34, No. 3, pp.261–276.
- Andersson, L. and Hammarstedt, M. (2011) 'Transmission of self-employment across immigrant generations: the importance of ethnic background and gender', *Review of Economics of the Household*, Vol. 9, No. 4, pp.555–577.
- Arum, R. and Mueller, W. (Eds.) (2004) *The Reemergence of Self-employment: A Comparative Study of Self-employment Dynamics and Social Inequality*, Princeton University Press, Princeton, NJ.
- Bandura, A. (1989) 'Human agency in social-cognitive theory', *American Psychologist*, Vol. 44, No. 9, pp.1175–1184.
- Bandura, A. (1992) 'Exercise of personal agency through the self-efficacy mechanism', in Schwartz, R. (Ed.): *Self-efficacy: Thought Control of Action*, pp.3–38, Hemisphere, Washington, DC.
- Bandura, A. (1997) *Self-efficacy: the Exercise of Control*, Freeman, New York.
- Baron, R.M. and Kenny, D.A. (1986) 'The mediator-moderator variable distinction in social psychological research: conceptual, strategic, and statistical considerations', *Journal of Personality and Social Psychology*, Vol. 51, No. 6, pp.1173–1182.
- Bird, B. (1988) 'Implementing entrepreneurial ideas: the case of intention', *Academy of Management Review*, Vol. 13, No. 3, pp.442–453.
- Blanchflower, D.G. and Oswald, A.J. (1998) 'What makes an entrepreneur?', *Journal of Labor Economics*, Vol. 16, No. 1, pp.26–60.
- Bosma, N., Hessels, J., Schutjens, V., van Praag, M. and Verheul, I. (2012) 'Entrepreneurship and role models', *Journal of Economic Psychology*, Vol. 33, No. 2, pp.410–424.
- Bouchard Jr., T.J. and Loehlin, J.C. (2001) 'Genes, evolution and personality', *Behavior Genetics*, Vol. 31, No. 3, pp.243–273.
- Boyd, N.G. and Vozikis, G.S. (1994) 'The influence of self-efficacy on the development of entrepreneurial intentions and actions', *Entrepreneurship Theory and Practice*, Vol. 18, No. 4, pp.63–90.
- Brim, O.G. (1968) 'Adult socialisation', in Clausen, J. (Ed.): *Socialisation and Society*, pp.183–226, Little Brown, Boston.
- Brown, R. (1990) 'Encouraging enterprise: Britain's graduate enterprise program', *Journal of Small Business Management*, Vol. 28, No. 4, pp. 71–77.
- Carr, J.C. and Sequeira, J.M. (2007) 'Prior family business exposure as intergenerational influence and entrepreneurial intent: a theory of planned behavior approach', *Journal of Business Research*, Vol. 60, No. 10, pp.1090–1098.
- Carroll, G. and Mosakowski, E. (1987) 'The career dynamics of self-employment', *Administrative Science Quarterly*, Vol. 32, No. 4, pp.570–589.
- Carsrud, A.L., Brannback, M., Kickul, J., Krueger, N. and Elfving, J. (2011) *The Family Pipelines: Why Intentions Matter*, Florida International University, Miami.
- Carter, N.M., Gartner, W.B., Shaver, K.G. and Gatewood, E.J. (2003) 'The career reasons of nascent entrepreneurs', *Journal of Business Venturing*, Vol. 18, No. 1, pp.13–39.
- Cesarini, D., Dawes, C.T., Johannesson, M., Lichtenstein, P. and Wallace, B. (2009a) 'Genetic variation in preferences for giving and risk-taking', *Quarterly Journal of Economics*, Vol. 124, No. 2, pp.809–842.

- Cesarini, D., Johannesson, M., Lichtenstein, P. and Wallace, B. (2009b) 'Heritability of overconfidence', *Journal of the European Economic Association*, Vol. 7, Nos. 2/3, pp.617–627.
- Chen, C.C., Greene, P.G. and Crick, A. (1998) 'Does entrepreneurial self-efficacy distinguish entrepreneurs from managers?', *Journal of Business Venturing*, Vol. 13, No. 4, pp.295–316.
- Cheng, M.Y., Chan, W.S. and Mahmood, A. (2009) 'The effectiveness of entrepreneurship education in Malaysia', *Education + Training*, Vol. 51, No. 7, pp.555–566.
- Chua, J.H., Chrisman, J.J. and Sharma, P. (1999) 'Defining the family business by behavior', *Entrepreneurship Theory and Practice*, Vol. 29, No. 4, pp.19–39.
- Collins, C.J., Hanges, P.J. and Locke, E.E. (2004) 'The relationship of achievement motivation to entrepreneurial behavior: a meta-analysis', *Human Performance*, Vol. 17, No. 1, pp.95–117.
- Colombier, N. and Masclet, D. (2008) 'Intergenerational correlation in self-employment: some further evidence from French ECHP data', *Small Business Economics*, Vol. 30, No. 4, pp.423–437.
- Crant, M. (1996) 'The proactive personality scale as a predictor of entrepreneurial intentions', *Journal of Small Business Management*, Vol. 34, No. 3, pp.42–49.
- Danes, S.M., Stafford, K., Haynes, G. and Amarapurkar, S.S. (2009) 'Family capital of family firms: bridging human, social, and financial capital', *Family Business Review*, Vol. 22, No. 3, pp.199–216.
- Davidsson, P. (1995) 'Determinants of entrepreneurial intentions', *RENT IX Workshop*, Piacenza, Italy, pp.1–31.
- Dick, T.P. and Rallis, S.F. (1991) 'Factors and influences on high school students' career choices', *Journal for Research in Mathematics Education*, Vol. 22, No. 4, pp.281–292.
- Douglas, E.J. and Shepherd, D.A. (2002) 'Self-employment as a career choice: attitudes, entrepreneurial intentions, and utility maximisation', *Entrepreneurship Theory and Practice*, Vol. 26, No. 3, pp.81–90.
- Drennan, J., Kennedy, J. and Renfrow, P. (2005) 'Impact of childhood experiences on the development of entrepreneurial intentions', *International Journal of Entrepreneurship & Innovation*, Vol. 6, No. 4, pp.231–238.
- Dunn, T.A. and Holtz-Eakin, D.J. (2000) 'Financial capital, human capital, and the transition to self-employment: evidence from intergenerational links', *Journal of Labour Economics*, Vol. 18, No. 2, pp.282–305.
- Dyer, W.G. (1992) *The Entrepreneurial Experience: Confronting Career Dilemmas of the Start-up Executive*, Jossey-Bass Inc Pub, San Francisco, California, USA.
- Dyer, W.G. and Handler, W. (1994) 'Entrepreneurship and family business: exploring the connections', *Entrepreneurship Theory and Practice*, Vol. 19, No. 1, pp.71–83.
- Eaves, L., Heath, A., Martin, N., Maes, H., Neale, M., Kendler, K., Kirk, K. and Corey, L. (1999) 'Comparing the biological and cultural inheritance of personality and social attitudes in the Virginia 30,000 study of twins and their relatives', *Twin Research*, Vol. 2, No. 2, pp.62–80.
- Eaves, L.J., Eysenck, H.J. and Martin, N.G. (1989) *Genes, Culture, and Personality: An Empirical Approach*, Academic Press, New York.
- Engle, R., Dimitriadi, N., Gavidia, J., Schlaegel, C., Delanoe, S., Alvarado, I., He, X., Baume, S. and Wolff, B. (2010) 'Entrepreneurial intent: a 12-country evaluation of Ajzen's model of planned behavior', *International Journal of Entrepreneurial Behaviour and Research*, Vol. 16 No. 1, pp.35–57.
- Fairlie, R.W. and Robb, A.M. (2005) *Families, Human Capital, and Small Business: Evidence from the Characteristics of Business Owners Survey*, Center for Economic Studies, Bureau of the Census, Washington, DC.
- Fairlie, R.W. and Robb, A.M. (2007) 'Families, human capital, and small business: evidence from the characteristics of business owners survey', *Industrial and Labor Relations Review*, Vol. 60, No. 2, pp.225–245.

- Fitzsimmons, J.R. and Douglas, E.J. (2011) 'Interaction between feasibility and desirability in the formation of entrepreneurial intentions', *Journal of Business Venturing*, Vol. 26, No. 4, pp.431–440.
- Fornell, C. and Larcker, D.F. (1981) 'Evaluating structural equation models with unobservable variables and measurement error', *Journal of Marketing Research*, Vol. 18, No. 2, pp.39–50.
- Getz, D. and Petersen, T. (2005) 'Growth and profit-oriented entrepreneurship among family business owners in the tourism and hospitality industry', *International Journal of Hospitality Management*, Vol. 24, No. 2, pp.219–242.
- Greve, A. and Saleff, J.W. (2003) 'Social networks and entrepreneurship', *Entrepreneurship Theory and Practice*, Vol. 28, No. 1, pp.1–22.
- Hair, J.F., Black, W.C., Babin, B.J., Anderson, R.E. and Tatham, R.L. (2006) *Multivariate Data Analysis*, 6th ed., Prentice-Hall, New Jersey.
- Hakim, C. (1988) 'Self-employment in Britain: recent trends and current issues', *Work Employment and Society*, Vol. 2, No. 4, pp.421–450.
- Halaby, C.N. (2003) 'Where job values come from: family and schooling background, cognitive ability, and gender', *American Sociological Review*, Vol. 68, No. 2, pp.251–278.
- Hofstede, G. (1980) *Culture's Consequences: International Differences in Work-related Values*, Sage Publications, Beverly Hills, CA.
- Hofstede, G. (2003) *Culture's Consequences: Comparing Values, Behaviors, Institutions and Organisations Across Nations*, 2nd ed., Sage Publications, Newbury Park, CA.
- Holland, J.L. (1985) *Making Vocational Choices: A Theory of Vocational Personalities and Work Environments*, Prentice Hall, Englewood Cliffs, NJ.
- Holland, J.L. (1997) *Making Vocational Choices: A Theory of Vocational Personalities and Work Environments*, 3rd ed., Psychological Assessment Resources, Odessa, FL.
- Hout, M. (1984) 'Status, autonomy and training in occupational mobility', *American Journal of Sociology*, Vol. 89, No. 6, pp.1379–1409.
- Jodl, K.M., Michael, A., Malanchuk, O., Eccles, J.S. and Sameroff, A. (2001) 'Parents' roles in shaping early adolescents' occupational aspirations', *Child Development*, Vol. 72, No. 4, pp.1247–1265.
- Klyver, K. (2007) 'Shifting family involvement during the entrepreneurial process', *International Journal of Entrepreneurial Behaviour and Research*, Vol. 13, No. 5, pp.258–277.
- Krueger Jr. N.F. and Carsrud, A.L. (1993) 'Entrepreneurial intentions: applying the theory of planned behaviour', *Entrepreneurship and Regional Development*, Vol. 5, No. 4, pp.315–330.
- Krueger, N. (1993) 'The impact of prior entrepreneurial exposure on perceptions of new venture feasibility and desirability', *Entrepreneurship Theory & Practice*, Vol. 18, No. 1, pp.5–21.
- Krueger, N.F. (2000) 'The cognitive infrastructure of opportunity emergence', *Entrepreneurship Theory and Practice*, Vol. 24, No. 3, pp.5–23.
- Krueger, N.F., Reilly, M.D., Carsrud, A.L. (2000) 'Competing models of entrepreneurial intentions', *Journal of Business Venturing*, Vol. 15, Nos. 5–6, pp.411–432.
- Kuratko, D.F. and Hodgetts, R.M. (1995) *Entrepreneurship: a Contemporary Approach*, 3rd ed., Dryden, New York.
- Laband, D.N. and Lentz, B.F. (1983) 'Like father, like son: toward an economic theory of occupational following', *Southern Economic Journal*, Vol. 50, No. 2, pp.474–493.
- Laspita, S., Breugst, N., Heblich, S. and Patzelt, H. (2012) 'Intergenerational transmission of entrepreneurial intentions', *Journal of Business Venturing*, Vol. 27, No. 4, pp.414–435.
- Lee, S.H. and Wong, P.K. (2004) 'An exploratory study of technopreneurial intentions: a career anchor perspective', *Journal of Business Venturing*, Vol. 19, No. 1, pp.7–28.
- Lentz, B.F. and Laband, D.N. (1990) 'Entrepreneurial success and occupational inheritance among proprietors', *Canadian Journal of Economics*, Vol. 23, No. 3, pp.563–579.

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- Levesque, M. and Minniti, M. (2006) 'The effect of aging on entrepreneurial behavior', *Journal of Business Venturing*, Vol. 21, No. 2, pp.177–194.
- Liao, J. and Welsch, H.P. (2001) 'Social capital and growth intention: the role of entrepreneurial networks in technology-based new ventures', in Bygrave, W.D., Autio, E., Brush, C.G., Davidsson, P., Greene, P.G., Reynold, P.D. and Sapienza, H.J. (Eds.): *Frontiers of Entrepreneurship Research*, pp.315–327, Babson College, Wellesley, MA.
- Liñán, F. and Chen, Y.W. (2009) 'Development and cross-cultural application of a specific instrument to measure entrepreneurial intentions', *Entrepreneurship Theory and Practice*, Vol. 33, No. 3, pp.593–617.
- Lindquist, M., Sol, J. and van Praag, M. (2012) *Why Do Entrepreneurial Parents Have Entrepreneurial Children?*, IZA Discussion Paper No. 6740 [online] <http://ssrn.com/abstract=2101543>.
- Matthews, C.H. and Moser, S.B. (1996) 'A longitudinal investigation of the impact of family background and gender on interest in small business ownership', *Journal of Small Business Management*, Vol. 34, No. 2, pp.29–43.
- Mauer, R., Neergaard, H. and Linstad, A.K. (2009) 'Self-efficacy: conditioning the entrepreneurial mindset', in Carsrud, A.L. and Brännback, M. (Eds.): *Understanding the Entrepreneurial Mind*, pp.233–257, Springer, Heidelberg.
- Mead, G.H. (1934) *Mind, Self and Society*, University of Chicago Press, Chicago.
- Menaghan, E.G. and Parcel, T.L. (1995) 'Social sources of change in children's home environment: the effects of parental occupational experience and family conditions', *Journal of Marriage and Family*, Vol. 57, No. 1, pp.69–84.
- Moore, E.S., Wilkie, W.L. and Lutz, R.J. (2002) 'Passing the torch: intergenerational influences as a source of brand equity', *Journal of Marketing*, Vol. 66, No. 2, pp.17–37.
- Moriano, J.A., Gorgievski, M., Laguna, M., Stephan, U. and Zarafshani, K. (2011) 'A cross-cultural approach to understanding entrepreneurial intention', *Journal of Career Development*, in press.
- Nanda, R. and Sørensen, J.B. (2010) 'Workplace peers and entrepreneurship', *Management Science*, Vol. 56, No. 7, pp.1116–1126.
- Nicolaou, N. and Shane, S. (2010) 'Entrepreneurship and occupational choice: genetic and environmental influences', *Journal of Economic Behavior and Organization*, Vol. 76, No. 1, pp.3–14.
- Nicolaou, N., Shane, S., Cherkas, L., Hunkin, J. and Spector, T.D. (2008) 'Is the tendency to engage in entrepreneurship genetic?', *Management Science*, Vol. 54, No. 1, pp.167–179.
- Nunnally, J.C. and Bernstein, I.H. (1994) *Psychometric Theory*, 3rd ed., McGraw-Hill, New York.
- Olson, J.M., Vernon, P.A., Harris, J.A. and Jang, K.L. (2001) 'The heritability of attitudes: a study of twins', *Journal of Personality and Social Psychology*, Vol. 80, No. 6, pp.845–860.
- Oren, L., Caduri, A. and Tziner, A. (2013) 'Intergenerational occupational transmission: do offspring walk in the footsteps of mom or dad, or both?', *Journal of Vocational Behavior*, Vol. 83, No. 3, pp.551–560.
- Parcel, T.L. and Menaghan, E.G. (1994) 'Early parental work, family social capital, and early childhood outcomes', *American Journal of Sociology*, Vol. 99, No. 4, pp.972–1009.
- Parker, S. (2009) *The Economics of Entrepreneurship*, Cambridge University Press, Cambridge, UK.
- Podsakoff, P.M. and Organ, D.W. (1986) 'Self-reports in organisational research: problems and prospects', *Journal of Management*, Vol. 12, No. 4, pp.531–544.
- Pruett, M., Shinnar, R., Toney, B., Llopis, F. and Fox, J. (2009) 'Explaining entrepreneurial intentions of university students: a cross-cultural stud', *International Journal of Entrepreneurial Behaviour and Research*, Vol. 15, No. 6, pp.571–594.

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- Rauch, A. and Frese, M. (2007) 'Let's put the person back into entrepreneurship research: a meta-analysis on the relationship between business owners' personality traits, business creation, and success', *European Journal of Work and Organisational Psychology*, Vol. 16, No. 4, pp.353–385.
- Reynolds, P.D., Storey, D.J. and Westhead, P. (1994) 'Cross-national comparisons of the variation in new firm formation rates', *Regional Studies*, Vol. 28, No. 4, pp.443–456.
- Roberts, E.B. (1991) *Entrepreneurs in High Technology*, Oxford University Press, New York.
- Robinson, P.B., Stimpson, D.V., Heufner, J.C. and Hunt, H.K. (1991) 'An attitude approach to the prediction of entrepreneurship', *Entrepreneurship Theory and Practice*, Vol. 15, No. 4, pp.13–32.
- Samuelsson, M. (2001) 'Modeling the nascent venture opportunity exploitation process across time', in Bygrave, W.D., Autio, E., Brush, C.G., Davidsson, P., Greene, P.G., Reynolds, P.D. and Sapienza, H.J. (Eds.): *Frontiers of Entrepreneurship Research*, pp.66–79, Babson College, Wellesley, MA.
- Scherer, R., Adams, J., Carley, S. and Wiebe, F. (1989) 'Role model performance effects on development of entrepreneurial career preference', *Entrepreneurship Theory and Practice*, Vol. 13, No. 3, pp.53–81.
- Schiller, B.R. and Crewson, P.E. (1997) 'Entrepreneurial origins: a longitudinal inquiry', *Economic Inquiry*, Vol. 35, No. 3, pp.523–531.
- Schumpeter, J.A. (1934) *The Theory of Economic Development*, Harvard University Press, Cambridge, MA.
- Scott, M. and Twomey, D. (1988) 'The long-term supply of entrepreneurs: students' career aspirations in relation to entrepreneurship', *Journal of Small Business Management*, Vol. 26, No. 4, pp.5–13.
- Shane, S., Locke, E. and Collins, C.J. (2003) 'Entrepreneurial motivation', *Human Resource Management Review*, Vol. 13, No. 2, pp.257–280.
- Shapiro, A. and Sokol, L. (1982) 'Social dimensions of entrepreneurship', in Kent, C., Sexton, D. and Vesper, K. (Eds.): *The Encyclopedia of Entrepreneurship*, pp.72–90, Prentice-Hall, Englewood Cliffs, NJ.
- Sobel, M.E. (1982) 'Asymptotic confidence intervals for indirect effects in structural equation models', in Leinhardt, S. (Ed.): *Sociological Methodology*, pp.290–312, American Sociological Association, Washington, DC.
- Sorensen, J.B. (2007) 'Closure and exposure: mechanisms in the intergenerational transmission of self-employment', in Ruef, M. and Lounsbury, M. (Eds.): *Research in the Sociology of Organisations*, Vol. 25, pp.83–124, Emerald Group Publishing Limited, Bradford.
- Souitaris, V., Zebinati, S. and Al-Laham, A. (2007) 'Do entrepreneurship programmes raise entrepreneurial intention of science and engineering students? The effect of learning, inspiration and resources', *Journal of Business Venturing*, Vol. 22, No. 4, pp.566–591.
- Spera, C. and Matto, H.C. (2007) 'A contextual-congruence model of socialisation', *Families in Society*, Vol. 88, No. 4, pp.551–560.
- Stewart, W.H. and Roth, P.L. (2004) 'Data quality affects meta-analytic conclusions: a response to Miner and Raju (2004) concerning entrepreneurial risk propensity', *Journal of Applied Psychology*, Vol. 89, No. 1, pp.14–21.
- Taylor, M.P. (1996) 'Earnings, independence or unemployment: why become self-employed?', *Oxford Bulletin of Economics and Statistics*, Vol. 58, No. 2, pp.253–266.
- Thompson, J. (1999) 'The world of the entrepreneur – a new perspective', *Journal of Workplace Learning: Employee Counselling Today*, Vol. 11, No. 6, pp.209–224.
- Veciana, J.M., Aponte, M. and Urbano, D. (2005) 'University students' attitudes towards entrepreneurship: a two countries comparison', *International Entrepreneurship and Management Journal*, Vol. 1, No. 2, pp.165–182.

- Wang, C.K. and Wong, P.K. (2004) 'Entrepreneurial interest of university students in Singapore', *Technovation*, Vol. 24, No. 2, pp.163–172.
- Western, M. and Wright, E.O. (1994) 'The permeability of class boundaries to intergenerational mobility among men in the United States, Canada, Norway and Sweden', *American Sociological Review*, Vol. 59, No. 6, pp.606–629.