

# Entrepreneur Selection Methodology for Entrepreneurship Promotion Programmes

The Journal of Entrepreneurship  
23(2) 201–230

© 2014 Entrepreneurship

Development Institute of India

SAGE Publications

Los Angeles, London,

New Delhi, Singapore,

Washington DC

DOI: 10.1177/0971355714535306

<http://joe.sagepub.com>



**Susana C. Santos**  
**António Caetano**

## Abstract

Incubators or policymakers need to decide which applicants to invest their budget and resources in. In the interest of avoiding misdirected budgets, they will naturally seek to invest in those applicants with the greatest potential for succeeding. This article describes a method designed to help in making sound investment decisions by selecting those entrepreneurs most likely to succeed. The methodology involves two steps: the first focuses on the assessment of individual characteristics, and the second focuses on the evaluation of the business opportunity. We applied this methodology on an entrepreneurship promotion programme following a longitudinal design. By the end of the programme, the 15 selected participants were successful in the implementation of their start-ups. This would indicate, therefore, that using this entrepreneur selection method can help in the investment decision making process because it enables entrepreneurship agents to more effectively evaluate individuals and their opportunities.

---

**Susana C. Santos** is Researcher at Instituto Universitário de Lisboa (ISCTE–IUL), Business Research Unit (BRU–IUL), Lisboa, Portugal.

E-mail: [Susana.Santos@iscte.pt](mailto:Susana.Santos@iscte.pt)

**António Caetano** is Full Professor at Instituto Universitário de Lisboa (ISCTE–IUL), Business Research Unit (BRU–IUL), Lisboa, Portugal.

E-mail: [antonio.caetano@iscte.pt](mailto:antonio.caetano@iscte.pt)

## Keywords

methodology, selection of entrepreneurs, individual characteristics, business opportunities, investment decisions

In deciding which individual to hire for a specific job or position, the personnel selection process is an invaluable help to choosing the person with the most adequate profile and potential to contribute to the success of the organisation (e.g., Schmidt & Chan, 1998; Schmidt & Hunter, 1998). It is, therefore, quite surprising that in the field of entrepreneurship research, personnel selection theories, methods and procedures seem to be absent. There is a call for evidence-based management (Rousseau, 2006) and evidence-based entrepreneurship (Baron, 2012; Frese, Rousseau & Wiklund, 2014), but it seems that the evidences from personnel selection have been kept apart from entrepreneurship practices. Markman and Baron (2003) stressed that ‘additional research is needed to empirically assess concerns regarding the utility of selection procedures (...)’ (p. 295) in entrepreneurship. In this study, we aim to make a contribution towards bridging the gap in the knowledge between the field of personnel selection and the field of entrepreneurship. We describe here the development and application of a personnel selection methodology for entrepreneurial activities in their pre-emergence stage. The entrepreneur selection method includes the assessment of the individual characteristics and the assessment of the business opportunity characteristics.

This study contributes to the theoretical development and technical application, one that integrates the construct of personnel selection methods to the entrepreneurship field. We also contribute to the practice of entrepreneurship because we propose a methodology to select the individuals and business opportunities with a higher potential to be successfully implemented. This methodology can be used in programmes which support entrepreneurship initiatives, and might also be a tool for business angels, risk capital venture investors, or incubation processes. Whatever is included in investment of resources in an individual and a business opportunity, it is a *sine qua non* condition to have evaluation criteria to assess the probability of success. This means, one has to have criteria to select entrepreneurs.

How do venture capitalists and business angels select the potential entrepreneurs' remains a largely unexplored topic (see exceptions, Cardon, Sudek & Mittens, 2009; Chen, Yao & Kotha, 2009). Although there are some studies on the selection process of franchisees (e.g., Clarkin & Swavely, 2006; Jambulingham & Nevin, 1999; Kaufmann & Rangan, 1990), the selection process of entrepreneurs has been largely out of scrutiny. Consequently, there is a theoretical and empirical gap concerning the criteria and methodologies for the selection of potential entrepreneurs. This study is an attempt to shed some light on the criteria for entrepreneur selection. More specifically, we present and test a methodology for the selection of potential entrepreneurs on a programme for entrepreneurship promotion. Through three research steps in a longitudinal design we aim to test the predictive capacity of the entrepreneur selection methodology.

## **The Entrepreneur Selection Research Field**

Research on the individual characteristics of entrepreneurs (e.g., Schwenk & Shrader, 1993) assumed that personal competencies do indeed play an important role in the entrepreneurial process, as new ventures are also to a great extent a product of individual action (e.g., Baum, Frese, Baron & Katz, 2007; McMullen & Shepherd, 2006). In addition, research about knowledge, skills and abilities showed that the stronger the competencies, the greater the success of the enterprise (Baum, Locke & Smith, 2001; Bird, 1988; Markman & Baron, 2003). Furthermore, competencies, in contrast to personality traits (Brandstätter, 2011), are individual differences dimensions that are open to training, education and change.

Markman and Baron (2003) defined the person-entrepreneurship fit as the match between entrepreneurs' individual characteristics and the requirements of the activity of being an entrepreneur. The authors argued that there is a relation between person-entrepreneurship fit and success: the greater the person-entrepreneurship fit, higher the probability of entrepreneurial success. To our best knowledge, Markman and Baron's (2003) paper is unique to call for the need to develop selection procedures based on personal characteristics.

The personnel selection processes emerge from empirical evidence on the relationship among skills, abilities, knowledge and job performance. Although the research on personnel selection is significantly developed (e.g., Cortina, Goldstein, Payne, Davison & Gilliland, 2000; Judge, Higgins & Cable, 2000; Salgado & Moscoso, 2002) and their practical implications for the organisational context are quite evident (Guest & Zijlstra, 2012), there is a clear absence of the knowledge transfer to entrepreneurship research. Given that the predictive capacity of personnel selection on individual performance is highly recognised (e.g., Schmidt & Chan, 1998) it is surprising how entrepreneurship research and practice did not apply the knowledge to entrepreneur selection.

In this study we attempt to make the convergence of two well developed literatures: the personnel selection literature and the entrepreneurship literature. The evidences from personnel selection are broad and well tested (Hunter & Schmidt, 1996) showing that we can select the individuals who are more able and fit in a certain position or task. Entrepreneurship literature is broadly defined around the individual-opportunity nexus (Shane, 2003), defining the process as an interaction between the individual attributes and the entrepreneurial opportunities. There is a clear theoretical gap concerning the confluence of these two fields and there is a need to develop a scientific measure that can help in the promotion of entrepreneurial performance. Gathering the main, shared and corroborated evidences from both personnel selection and individual-opportunity entrepreneurship characteristics fields, we are able to start working on the entrepreneur selection research field.

We first propose an entrepreneur selection method.

## **The Entrepreneur Selection Method**

The entrepreneur selection method attempts to design a methodology for the selection of potential entrepreneurs. We include in this methodology the suggestions of both personnel selection and individual-opportunity entrepreneurship characteristics. The entrepreneur selection method includes two steps.

In Step one, it is important to assess four critical dimensions of *individual characteristics*: cognitive competencies, psychosocial competencies and management competencies. In step two, there is a first

assessment of *opportunity characteristics*, which includes evaluating the potential for the business idea to become a real, profitable opportunity. It also includes business opportunity prototype and decision to launch a venture prototype. Table 1 details the steps and the variables included in the entrepreneur selection method.

The entrepreneur selection method we described earlier is based on a multi-source approach. The assessment instruments include cognitive ability tests, personality tests, semi-structured interview and surveys. The entrepreneur selection method aims to select the dyad (individual and opportunity) with greater potential to be entrepreneurial. We tested the entrepreneur selection method on an entrepreneurship promotion programme following a longitudinal design with three research steps.

## The Entrepreneurship Promotion Programme

The entrepreneurship promotion programme was developed by a local government agency and was integrated in their policies for youth and social development. This programme aimed to select the best entrepreneurial projects and then to support them with pecuniary prizes and incubation resources and facilities.

The entrepreneurship promotion programme targeted local residents, aged between 18 and 40, who were finding it hard to access the labour market and who were willing to launch their own business. The individuals applied for the programme with an entrepreneurial idea. The programme took place over seven months and included three main stages: Stage 1—*Assessment and selection of the would-be entrepreneurs and projects*, Stage 2—*Training* and Stage 3—*Implementation*.

The *assessment and selection of the would-be entrepreneurs and projects* stage was accomplished in the first two months. During this period, the programme used the selection method described earlier. By the end of this stage, and based on the results of all the measures included in the selection methodology, the individuals who scored highest during entrepreneur selection progressed to the second stage. This selection was made by two independent experts who analysed the results from the entrepreneur selection method and the entrepreneurial project. In accordance with the rules of the programme, a maximum of 35 participants could be selected to go through to the second stage.

**Table 1.** Entrepreneur Selection Method: Detailed Steps and Variables

Step 1: Individual Characteristics	Justification
Cognitive competencies	Cognitive competencies as the general mental ability are the strongest predictor
General intelligence	performance (e.g., Hunter & Schmidt, 1996; Ones, Viswesvaran & Dilchert, 2005).
Practical intelligence	Practical intelligence is particularly relevant to entrepreneurs (Baum, Bird &
Logical reasoning	Singh, 2011), as practical intelligence is an experience based accumulation of skills, dispositions, tacit knowledge and the ability to apply the same to solve every day problems (Sternberg, Wagner & Okagaki, 1993)
Psychosocial competencies	Psychosocial competencies include a set of aspects that are relevant for the critical
Resilience	for the development of an entrepreneurial activity. Since an entrepreneur acts within
Self-efficacy	a social context and therefore has to interact with different players, another dimension
Social support	of an entrepreneur's characteristics that would denote an individual's ability to interact
Persuasion capacity	effectively with others involves social competence. An entrepreneur's effectiveness in interacting with others, that is, his/her social competence, may also affect their entrepreneurial success (Baron & Markman, 2003).
Management competencies	Management competencies refer to a set of basic and specific competencies in
Resources mobilisation capacity	business management (Baum, Locke & Smith, 2001), and mostly they refer to the
Vision	individual's ability to manage the entrepreneur him/herself, business strategy, business resources and human resources

---

## Step 2: Opportunity Characteristics

Business idea potential	Business idea potential includes the evaluation of three characteristics: project relevance, economic viability and resources acquisition
Project relevance	
Economic viability	
Resources acquisition	
Business opportunity prototype	Business opportunity prototype was described by Baron and Ensley (2006) as including five features (i) solving a customer's problems, (ii) ability to generate positive cash-flow, (iii) manageable risk, (iv) superiority of product/service and (v) potential to change the industry. In the entrepreneurs selection method we included the assessment of the potential to change the industry, positive net cash flow and manageable risk, as they refer to the utility dimension of the business opportunity prototype and is the most heuristic dimension of business opportunities, as it does not require to make comparisons to other products in the market
Change industry	
Positive net cash flow	
Manageable risk	
Decision to launch a venture prototype	Baron and Ensley (2006) also identified five features of decision to launch a venture prototype: (i) a favourable financial model, (ii) positive assessment or advice from others (friends, financial advisors and industry experts), (iii) the idea's novelty, (iv) a large untapped market and (v) intuition or gut feeling. We included the assessment of the overall financial model, intuition, unique product and big potential market
Overall financial model	
Intuition	
Unique product	
Big potential market	

---

**Source:** Authors' own work.

The *training* stage lasted a further two months and the selected entrepreneurs attended 36 hours of training lectures from university professors of entrepreneurship. After their training, the entrepreneurs prepared business plans which were assessed by a panel of experts. Based on the opportunity evaluation process, those individuals with the highest scores were selected to go on to the next stage.

During the *implementation* stage, which occurred over the next three months, experts provided technical support, mentoring and coaching. At the end of this stage, the best entrepreneurial projects were given prizes by a different panel of judges during a public awards ceremony.

Following the three stages of the entrepreneurship promotion programme, we were able to develop a longitudinal study with three research steps.

### *Research Step 1—The Selection Criteria to the Training Stage*

The aim of the first stage of the programme was to select those individuals with the greatest chance of successfully completing the training programme, and implementing the entrepreneurial project.

#### *Participants and Measures of the Entrepreneur Selection Method*

A total of 74 participants were involved in the assessment and selection step. There were 40 women and 34 men, aged 18 to 38 years ( $M = 26.16$ ,  $SD = 3.58$ ). More than half of the participants had university degrees (54.1 per cent), and all the others had completed high school.

In the step 1 (individual characteristics), cognitive competencies were measured through three tests validated to the national population. The results of all tests were standardised on a 5-points scale in accordance with the national norms. General intelligence was assessed with a well-known domino test with 44 items. Practical intelligence was assessed with a test through seven exercises which consists in displaying different objects in boxes in accordance with given descriptions. Logical reasoning was assessed with a test with 40 logic sequence items, and the task involved discovering the next element of the sequence, following the presented logic. The internal consistency of the three measures of cognitive competencies was adequate ( $\alpha = 0.74$ ).



Personality characteristics included warmth, emotional stability and self-confidence and were measured using Cattell's Personality Inventory. Data were normalised in accordance with the national population norms.

The psychosocial competencies variables included a total of 13 items which assessed resilience, self-efficacy, social support and persuasion capacity. The items were adapted from the entrepreneurial potential assessment inventory (EPAI; Santos, Caetano & Curren, 2014). All items were rated on a five point Likert scale ranging from 1 (totally disagreement) to 5 (totally agreement).

Social support was measured using four items ( $\alpha = 0.85$ ), persuasion capacity using three items ( $\alpha = 0.66$ ), resilience using four items ( $\alpha = 0.72$ ) and self-efficacy using two items ( $r = 0.58, p < 0.01$ ).

Management competencies were also assessed using the items adapted from the entrepreneurial potential assessment inventory (EPAI; Santos et al., 2014). Resources mobilisation capacity was assessed using four items ( $\alpha = 0.79$ ), and vision was assessed using two items ( $r = 0.54, p < 0.01$ ).

Opportunity characteristics (Step 2) included the assessment of business idea potential, business opportunity prototype and decision to launch a venture prototype. Participants were required to describe their business idea during an individual interview and to fill a form describing their business opportunity and decision to launch venture prototype.

Business idea potential was assessed by two independent experts based on a semi-structured interview and a written document where the individuals described their business idea. The experts were asked to rate the idea on the following dimensions: project relevance, economic viability and resources acquisition on a five-point scale (1 = completely inadequate, 5 = completely adequate). Project relevance was measured by three items referring to the relevance of the project to the community, economic viability of the project with three items and resources acquisition with three items. The inter-rater agreement showed an adequate value for all the dimensions (Cohen Kappa<sub>project relevance</sub> = 0.84, Cohen Kappa<sub>economic viability</sub> = 0.81 and Cohen Kappa<sub>resources acquisition</sub> = 0.79).

Business opportunity prototype was measured using ten items from Baron and Ensley (2006) to assess three dimensions: change industry, positive net cash flow and manageable risk. The participants were required to assess the importance level of each item for the identification

of the business opportunity. All items were rated on a scale ranging from 'minimum importance' (1) to 'maximum importance' (7). Change industry was measured with four items ( $\alpha = 0.85$ ), positive net cash flow with four items ( $\alpha = 0.61$ ) and manageable risk with three items ( $\alpha = 0.89$ ).

Decision to launch a venture prototype was measured by the prototypical features of the overall financial model, intuition, unique product and big potential market using the items from Baron and Ensley (2006). All the items were rated in a scale ranging from 'minimum importance' (1) to 'maximum importance' (7). Overall financial model was measured with five items ( $\alpha = 0.85$ ). Intuition was measured with four items ( $\alpha = 0.71$ ), unique product with three items ( $\alpha = 0.64$ ) and big potential market with three items ( $\alpha = 0.72$ ).

Table 2 presents the correlation matrix of all the variables involved on the entrepreneur selection methodology.

### Results

The goal of the assessment and selection stage was to select the participants with greater potential to become entrepreneurs. The research purpose was to understand whether the entrepreneur selection method could differentiate among individuals with low and high potential. Of the 74 participants who were involved in the first stage, 34 were selected to the training stage according to the results in the entrepreneur selection method.

Table 3 presents the means and standard deviations of all the measures included in the entrepreneur selection method for the individuals who were selected to the training stage and those who were not selected to the training stage. Groups were tested for differences using t-tests.

Data analysis evidenced that there are statistically significant differences among the following dimensions: general intelligence ( $t(72) = -2.68$ ,  $p < 0.01$ ), logical reasoning ( $t(71) = -3.28$ ,  $p < 0.01$ ), persuasion capacity ( $t(68) = -5.91$ ,  $p < 0.01$ ), resources mobilisation capacity ( $t(66) = -5.16$ ,  $p < 0.01$ ), vision ( $t(71) = -6.03$ ,  $p < 0.01$ ), project relevance ( $t(72) = -6.36$ ,  $p < 0.01$ ), economic viability ( $t(72) = -7.11$ ,  $p < 0.01$ ) and resources acquisition ( $t(72) = -6.69$ ,  $p < 0.01$ ). As these variables differentiate significantly the participants they were established as selection criteria for the training stage.

Thus, the individuals who were selected to the second stage were characterised by a higher score on general intelligence, logical reasoning,

**Table 2.** Correlation Matrix of all the Variables Involved on the Entrepreneur Selection Methodology

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
1. Practical intel.																						
2. Logical reasoning	0.35**																					
3. General intel	0.43**	0.68**																				
4. Warmth	-0.01	0.01	0.01																			
5. Emotional stability	0.18	0.28*	0.17	0.26*																		
6. Self-confidence	0.22	0.26*	0.28*	0.24*	0.43**																	
7. Resilience	-0.11	0.13	-0.05	0.06	0.03	0.01																
8. Self-efficacy	-0.02	-0.17	-0.10	-0.01	0.01	-0.07	0.12															
9. Persuasion	0.24*	0.30**	0.20	0.06	0.05	0.04	0.31**	-0.02														
10. Social support	-0.04	-0.08	-0.13	0.26*	0.22	0.15	0.15	0.22	0.12													
11. Resources mobilisation cap.	-0.01	0.29*	0.10	0.07	0.05	0.06	0.22	-0.03	0.65**	0.26**												
12. Vision	0.09	0.01	0.02	0.04	-0.10	-0.26*	0.05	0.01	0.40**	-0.08	0.32**											
13. Project relevance	0.14	0.42**	0.38**	-0.07	0.03	0.10	0.12	-0.24	0.56**	-0.15	0.40**	0.33**										
14. Economic viability	0.13	0.48**	0.41**	-0.04	0.02	0.10	0.18	-0.24*	0.54**	-0.16	0.40**	0.37**	0.93**									
15. Resources acquisition	0.19	0.41**	0.34**	0.02	0.03	0.07	0.14	-0.28*	0.53**	-0.24*	0.36**	0.38**	0.90**	0.91**								
16. Change industry	-0.17	-0.02	-0.04	0.04	-0.04	-0.03	0.06	0.02	0.13	-0.07	0.12	0.12	0.12	0.16	0.11							
17. Positive net cash flow	-0.32**	-0.04	-0.24*	0.18	0.11	-0.11	0.36**	-0.04	0.12	0.10	0.21	-0.01	0.07	0.11	0.08	0.33**						
18. Manageable risk	-0.24*	-0.20	-0.21	0.24*	-0.11	-0.04	0.10	-0.07	-0.16	0.06	-0.03	-0.03	-0.13	-0.10	-0.06	0.47**	0.54**					
19. Financial model	-0.38**	-0.39**	-0.22	0.13	-0.11	-0.17	0.11	-0.03	-0.11	0.02	-0.04	0.01	-0.12	-0.13	-0.13	0.59**	0.63**	0.63**				
20. Intuition	-0.18	0.09	0.08	0.10	0.16	0.01	0.18	0.08	-0.16	0.06	0.10	0.01	-0.03	0.02	-0.02	0.04	0.35**	0.31**	0.29*			
21. Unique	-0.16	-0.25*	-0.15	-0.09	-0.14	-0.16	0.13	0.04	-0.14	-0.16	0.05	-0.01	-0.09	0.01	-0.05	0.18	0.35**	0.24*	0.36**	0.43**		
22. Big potential model	-0.31**	-0.34**	-0.36**	0.08	0.08	0.09	0.41**	-0.04	-0.12	0.03	-0.40	0.02	-0.13	-0.10	-0.06	0.37**	0.49**	0.47**	0.52**	0.30**	0.35*	

Source: Authors' own work.

Notes: \*p ≤ 0.05.

\*\*p ≤ 0.01.

**Table 3.** Means and Standard Deviations: Selected versus Non-selected Individuals to the Training Stage

	Selected to the Training Stage		Not Selected to the Training Stage	
	M	SD	M	SD
General intelligence*	3.47 <sup>a</sup>	1.02	2.70 <sup>b</sup>	1.38
Practical intelligence	2.74	0.99	2.50	1.04
Logical reasoning*	3.68 <sup>a</sup>	0.77	2.93 <sup>b</sup>	1.07
Warmth	6.44	2.56	6.35	1.56
Emotional stability	7.15	2.34	6.93	2.76
Self-confidence	6.82	2.15	6.78	2.04
Social support	4.45	0.42	4.57	0.56
Persuasion capacity*	4.28 <sup>a</sup>	0.40	3.46 <sup>b</sup>	0.70
Resilience	4.15	0.37	4.07	0.49
Self-efficacy	4.37	0.37	4.35	0.70
Resources mobilisation capacity*	4.33 <sup>a</sup>	0.41	3.57 <sup>b</sup>	0.74
Vision*	3.99 <sup>a</sup>	0.66	2.95 <sup>b</sup>	0.79
Project relevance*	3.97 <sup>a</sup>	0.69	2.83 <sup>b</sup>	0.83
Economic viability*	3.99 <sup>a</sup>	0.74	2.62 <sup>b</sup>	0.89
Resources acquisition*	4.07 <sup>a</sup>	0.78	2.68 <sup>b</sup>	0.98
Change industry	5.44	0.85	5.19	1.02
Positive net cash flow	5.30	0.81	5.31	0.96
Manageable risk	5.11	1.46	5.63	1.40
Overall financial model	4.63	1.12	4.97	1.17
Intuition	5.39	1.05	5.31	1.17
Unique product	5.35	1.01	5.39	0.91
Big potential market	6.09	0.74	6.33	0.77

**Source:** Authors' own work.

**Notes:** \* $p < 0.05$ ; <sup>a</sup>selected; <sup>b</sup>not selected.

persuasion capacity, resources mobilisation capacity, vision, project relevance, economic viability and resources acquisition.

### *Logistic Regression*

Logistic regression is a log-linear model which uses maximum likelihood to estimate the regression's response function (Neter, Kutner, Nachtsheim & Wasserman, 1996). The dependent variable in logistic

regression is an *odd ratio* which indicates the changes on the estimated proportion of successful cases due to the changes on one unity of the independent variables. Therefore, logistic regression is useful for predicting a criterion variable (being selected to the training stage) on the basis of independent variables. The criterion variable takes the value 2 if the respondent group was selected to the training stage; otherwise it takes the value 1, representing a non-selected candidate to training stage (Hair, Anderson, Tatham & Black, 1998; Hitt, Bierman, Uhlenbruck & Shimizu, 2006; Gong, 2003).

We used logistic regression for our selection criteria validation analysis technique because it is appropriate for use with a criterion variable having two categories (selected versus non-selected). Moreover, logistic regression adds understanding about the data by providing a unique partitioning of the total variance explained by variables of interest and is one of the most powerful tools for extracting unique variance (Cohen & Cohen, 1983).

We performed logistic regression analysis on three models: Model 1—cognitive competencies and personality characteristics, Model 2—psychosocial competencies and management competencies and Model 3—business idea potential, business opportunity prototype and decision to launch a venture prototype. This aggregation option was due to the impossibility to compute logistic regression analysis with the seven dimensions, because of the sample size. Table 4 presents the results of logistic regression analysis. For all models developed, we present the effect size of the model (Nagelkerke  $R^2$  measure) the goodness of fit measure (Log likelihood) and the Chi-Square ( $\chi^2$ ) test.

Results for model 1, which assumed the cognitive competencies and the personality characteristics as predictors of being selected to training stage, showed a significant fit ( $\chi^2(6) = 12.25$ ,  $p < 0.05$ ), explaining 20.4 per cent of the variation of the selection to the training stage (Nagelkerke  $R^2 = 0.21$ ). The effect of logical reasoning was statistically significant (Wald test = 4.11,  $p < 0.05$ ) and logical reasoning, general intelligence and emotional stability odd ratios were greater than one, indicating positive effects on the selection to training stage. The strongest of these effects was logical reasoning. This result meant that participants with higher logical reasoning were more likely to be selected to the second stage than participants with lower levels of logical reasoning.

Model 2 evidenced a significant fit ( $\chi^2(6) = 40.68$ ,  $p < 0.01$ ) and explained 70.6 per cent of the variation on the selection to the training

**Table 4.** Results of Logistic Regression Analysis on Selection to the Training Stage

	Wald	Odds Ratio	p
Model 1: -2 Log likelihood = 89.853, Nagelkerke R <sup>2</sup> = 0.21, $\chi^2 = 12.25$ , df = 6, p = 0.05			
Cognitive competencies			
Practical intelligence	0.09	0.92	0.77
Logical reasoning	4.11	2.16	0.04
General intelligence	0.53	1.23	0.46
Personality characteristics			
Warmth	0.07	0.90	0.79
Emotional stability	0.02	1.05	0.89
Self-confidence	0.44	0.91	0.51
Model 2: -2 Log likelihood = 34.11, Nagelkerke R <sup>2</sup> = 0.71, $\chi^2 = 40.68$ , df = 6, p = 0.01			
Psychosocial competencies			
Resilience	0.24	0.57	0.62
Self-efficacy	0.01	1.06	0.93
Persuasion	2.57	6.25	0.11
Social support	4.32	0.12	0.04
Management competencies			
Resources mobilisation capacity	2.84	5.28	0.09
Vision	7.54	4.47	0.01

Model 3: -2 Log likelihood = 36.69, Nagelkerke  $R^2 = 0.71$ ,  $\chi^2 = 43.65$ ,  $df = 10$ ,  $p = 0.01$

Business potential assessment	Project relevance	0.01	0.87	0.93
	Economic viability	0.51	2.72	0.47
	Resources acquisition	3.91	8.28	0.04
Business opportunity prototype	Change industry	4.09	6.35	0.04
	Positive net cash flow	0.25	1.52	0.62
	Manageable risk	4.79	0.35	0.03
Decision to launch a venture prototype	Overall financial model	0.07	1.22	0.78
	Intuition	1.29	1.59	0.25
	Unique	1.16	1.99	0.28
	Big potential model	4.44	0.13	0.03

Source: Authors' own work.

stage (Nagelkerke  $R^2 = 0.71$ ). The effect of social support and vision were statistically significant (Wald test<sub>social support</sub> = 4.32,  $p < 0.01$ , Wald test<sub>vision</sub> = 7.54,  $p < 0.05$ ). Although the persuasion Wald test statistics was not significant, the persuasion odd ratio was the highest, indicating that participants with higher scores on persuasion were more likely to be selected to the second stage than the lower result ones.

The third model included the opportunity characteristics: business idea potential, business opportunity prototype and decision to launch a venture prototype. The model evidenced significant fit ( $\chi^2(10) = 43.65$ ,  $p < 0.01$ ) and explained 71 per cent of the variation of the selection to the training stage (Nagelkerke  $R^2 = 0.71$ ). Resources acquisition, change industry, manageable risk and big potential model presented both a significant statistic (Wald test<sub>resources acquisition</sub> = 3.91,  $p < 0.05$ , Wald test<sub>change industry</sub> = 4.09,  $p < 0.05$ , Wald test<sub>manageable risk</sub> = 4.79,  $p < 0.05$ , Wald test<sub>big potential model</sub> = 4.44,  $p < 0.05$ ). The correspondent odd ratios were all greater than one, indicating positive effects on the selection to the training stage. This suggests that participants with greater scores on the resources acquisition, the change industry, the manageable risk and the big potential model were more likely to be selected to the training stage.

### Discussion

The entrepreneurship promotion programme involved 74 potential entrepreneurs. The stage 1—*assessment and selection*—aimed to select a maximum of 35 participants to the second stage, the training stage. The entrepreneur selection method suggested the selection of 34 participants. This entrepreneur selection method included psychological tests, surveys, an individual interview and the assessment of the business idea.

Logical reasoning, general intelligence, persuasion, resources mobilisation capacity, vision, project relevance, economic viability and resources acquisition were the selection criteria for the selection to the training stage. The individuals selected to the training stage were significantly higher on these dimensions.

Logistic regression corroborated the decision based on the entrepreneur selection method, and evidenced that the predictors included in the logistic regression equation explained the probability of being selected for the training stage.

More specifically, the logistic regression results showed that logical reasoning, social support, vision, resources acquisition, change industry,



manageable risk and big potential model have a statistically significant effect on the probability to be selected to the training stage.

### *Research Step 2—The Selection Criteria to the Implementation Stage*

The second step of the entrepreneurship promotion programme included a 36 hour training programme over a period of two months. Entrepreneurship training provides the knowledge, skills and motivation to encourage entrepreneurial success in a variety of settings.

#### *Participants and Measures*

The second stage involved the 34 participants who were selected from the stage 1. After the training programme, the participants were required to develop a business plan which was then evaluated by a three judge expert panel. These experts were an entrepreneurship university lecturer, a venture capitalist and a CEO from a sponsor firm. The panel assessed the potential of each business opportunity based on information obtained from an oral presentation and from the business plan document which encompassed the same dimensions as in stage 1: project relevance, economic viability and resource acquisition. Results showed an adequate value for the inter-judge agreement for the three dimensions (Cohen  $Kappa_{\text{project relevance}} = 0.73$ , Cohen's  $Kappa_{\text{economic viability}} = 0.71$  and Cohen  $Kappa_{\text{resources acquisition}} = 0.69$ ).

#### *Results*

There were significant differences among project relevance ( $t(31) = 6.75$ ,  $p < 0.01$ ), economic viability ( $t(31) = -11.38$ ,  $p < 0.01$ ) and resources acquisition ( $t(31) = -10.56$ ,  $p < 0.01$ ) at the end of the second stage, indicating the adequacy of selection criteria (Table 5). The individuals who were selected to the implementation stage were characterised by having higher scores on project relevance, economic viability and resources acquisition.

Regarding the entrepreneur selection method dimensions, collected at stage 1, there were statistically significance differences among the following variables: persuasion capacity ( $t(68) = -3.18$ ,  $p < 0.05$ ),

**Table 5.** Mean Differences and Standard Deviation of Business Idea Potential

	Selected to Implementation Stage		Not Selected to Implementation Stage	
	M	SD	M	SD
Project relevance**	4.29	0.60	2.67	0.75
Economic viability**	4.47	0.55	2.37	0.51
Resources acquisition**	4.36	0.43	2.37	0.61

**Source:** Authors' own work.

**Note:** \*\* $p \leq 0.01$ .

resources mobilisation capacity ( $t(66) = -2.91, p < 0.05$ ) and vision ( $t(71) = -4.35, p < 0.05$ ). Thus, it is suggested that these dimensions were also selection criteria for the implementation stage (Table 6). The participants who were selected to the implementation stage had higher scores on persuasion, resources mobilisation capacity and vision.

To validate our criteria selection for the implementation stage we performed logistic regression analysis. At this research stage, we used as predictor variables, the entrepreneur selection method measures collected at stage 1 and as criterion variable we used the 'selection to the implementation stage'. There was a seven month gap between the data collection of the predictors and the criterion variable data collection. Similar to the research stage 1, we also computed three logistic regression models (Table 7).

Results of model 1, including the cognitive competencies and personality characteristics as predictors, evidenced a non-significant fit ( $\chi^2(6) = 9.07, p > 0.05$ ). The result indicated that the included variables do not explain the probability to be selected to the implementation stage. Model 2 included as predictor variables the psychosocial competencies and the management competencies. Results showed an adequate fit ( $\chi^2(6) = 17.69, p < 0.05$ ) and explained 44 per cent of the variance. Self-efficacy, persuasion, resources mobilisation capacity and vision present odd ratios greater than one, suggesting that the participants with greater scores on these dimensions were more likely to be selected to the implementation stage. Model 3 included the business idea prototype and the decision to launch a venture prototype. The model evidenced a non-significant fit ( $\chi^2(7) = 8.64, p > 0.01$ ) and any of the included variables evidence a statistically significant Wald test.

**Table 6.** Mean and Standard Deviations: Selected versus Non-selected Individuals to the Implementation Stage

	Selected to the Implementation Stage		Not selected to the Implementation Stage	
	M	SD	M	SD
General intelligence	3.53	1.06	2.93	1.31
Practical intelligence	2.67	1.05	2.59	1.02
Logical reasoning	3.47	0.83	3.22	1.05
Warmth	6.27	2.52	6.42	1.96
Emotional stability	7.53	2.33	6.90	2.62
Self-confidence	6.13	2.67	6.97	1.89
Social support	4.52	0.44	4.52	0.52
Persuasion capacity*	4.33 <sup>a</sup>	0.25	3.72 <sup>b</sup>	0.74
Resilience	4.09	0.38	4.11	0.45
Self-efficacy	4.42	0.40	4.34	0.60
Resources mobilisation capacity*	4.38 <sup>a</sup>	0.46	3.81 <sup>b</sup>	0.72
Vision*	4.23 <sup>a</sup>	0.53	3.22 <sup>b</sup>	0.85
Change industry	5.30	0.79	4.09	0.71
Positive net cash flow	5.02	1.16	5.23	1.02
Manageable risk	4.99	0.77	5.31	0.92
Overall financial model	5.47	0.89	5.50	1.49
Intuition	5.64	0.83	4.76	1.24
Unique product	6.18	0.64	5.31	1.17
Big potential market	3.53	1.06	5.30	0.98

**Source:** Authors' own work.

**Notes:** \* $p < 0.05$ ; <sup>a</sup>selected; <sup>b</sup>not selected.

**Table 7.** Results of Logistic Regression Analysis on Selection to the Implementation Stage

		Wald	Odds Ratio	$p$
Model 1: $-2$ Log likelihood = 65.54, Nagelkerke $R^2 = 0.18$ , $\chi^2 = 9.07$ , $df = 6$ , $p = 0.17$				
Cognitive competencies	Practical intelligence	0.05	0.92	0.82
	Logical reasoning	0.27	0.79	0.61
	General intelligence	3.124	1.92	0.07
Personality characteristics	Warmth	0.27	0.78	0.60
	Emotional stability	1.99	2.03	0.16
	Self-confidence	4.49	0.70	0.03

(Table 7 continued)

(Table 7 continued)

		Wald	Odds Ratio	<i>p</i>
Model 2: -2 Log likelihood = 36.91, Nagelkerke $R^2 = 0.44$ , $\chi^2 = 17.69$ , $df = 6$ , $p = 0.01$				
Psychosocial competencies	Resilience	1.16	0.28	0.28
	Self-efficacy	1.32	4.81	0.25
	Persuasion	0.26	1.93	0.61
	Social support	0.04	0.79	0.83
Management competencies	Resources mobilization capacity	0.83	2.98	0.36
	Vision	3.19	3.382	0.07
Model 3: -2 Log likelihood = 57.66, Nagelkerke $R^2 = 0.20$ , $\chi^2 = 8.64$ , $df = 7$ , $p = 0.28$				
Business Idea	Change industry	1.73	1.99	0.19
Prototype	Positive net cash flow	0.05	0.89	0.83
	Manageable risk	3.59	0.54	0.06
Decision to Launch a Venture Prototype	Overall financial model	1.07	1.59	0.30
	Intuition	0.43	1.28	0.51
	Unique	1.13	1.56	0.29
	Big potential model	1.38	0.50	0.19

**Source:** Authors' own work.

### Discussion

At the end of the second stage, 15 participants were selected to the implementation stage in accordance with the evaluation of the business-idea plan conducted by a panel of three experts.

According to the results on project relevance, economic viability and resources acquisition, 15 participants were selected to the implementation stage. Nevertheless, there were also significant differences on persuasion, resources mobilisation capacity and vision. Thus, these dimensions were considered as selection criteria in the implementation stage. Moreover, the results of the logistic regression analysis suggested that psychosocial competencies explained the probability of selection to the implementation stage.

### Research Stage 3—The Implementation Stage

The implementation stage comprised a three-month incubation period during which the entrepreneurs received technical support and mentoring

as they accomplished several tasks. The business plans were reformulated and more accurately described. Some of the business plans were developed in teams. The 15 entrepreneurs were put into nine entrepreneurial teams.

At the end of the implementation stage, the entrepreneurs presented the finished business plans during a public session before an expert panel of judges composed of one member of the local government, one university lecturer, a CEO from a sponsor firm, a venture capitalist and three mentors. Three types of awards were granted: the 3rd prize was monetary, the 2nd prize was an island-place on the entrepreneurship incubator programme, the 1st prize was a store fully stocked with the necessary equipment.

The panel assessing the entrepreneurial business plans decided to award prizes to all nine entrepreneurial projects in competition. The first prize was awarded to a molecular biology and microbiology analysis laboratory project, and a restaurant project promoting healthy eating and nutritional food received the third prize. The other seven entrepreneurial projects were awarded the second prize (an island in an entrepreneurship incubator). Table 8 describes the entrepreneurial projects and the awards.

### *Results and Discussion*

All the participants who were selected to the implementation stage were able to accomplish an entrepreneurial business plan which was successfully assessed by an expert panel. The fact that all the participants selected by the proposed entrepreneur selection method successfully completed the entrepreneurship programme and were ready to start up entrepreneurial projects, is a strong indication that this method could be a useful selection tool for use in future entrepreneurship programmes.

The differences between the implementation awards received are very slight. Only one entrepreneurial team was rewarded with the highest prize, and similarly only one entrepreneurial team was rewarded with the lowest prize. Due to the small number of the entrepreneurs in the implementation stage ( $N = 15$ ) and due to the small variance in implementation awards received, no more data analysis could be carried out.

## **General Discussion**

This study offered an empirically tested proposal for an entrepreneur selection method. Surprisingly, although a considerable amount of

**Table 8.** Entrepreneurial Projects: Activity Area, Brief Business Idea Description, Number of Entrepreneurs Involved on the Project and Awards Received

Activity Area	Brief Business Idea Description	Number of Entrepreneurs Involved	Awards Received
1. Molecular biology and microbiology analysis laboratory	The firm will aim to conduct quality control analysis, more specifically, microbiology and biology molecular analysis in agro-alimentary products. The service will quickly and efficiently check the quality of our customers' products through Microbiological Analysis and Molecular Biology	3	A store completely equipped with the necessary equipment material
2. Domestic and specialised cleaning services	The main objective is to enhance the quality of life of its customers by providing them with longer periods of time to develop their leisure activities that would normally be spent in house cleaning activities. The idea is based on the creation and implementation of a firm oriented to house specialised cleaning services, such as couches, carpets, mattresses and so on. Moreover, the firm would have an ironing service	1	Island on the social entrepreneurship incubator
3. Cleaning services for SMEs	The SME's cleaning is an essential service, mobile, non-seasonal and it is a safe industry, as independently to the economy, the buildings need to be cleaned. The firm presents a client-focused approach, with specialised services.	1	Island on the social entrepreneurship incubator

4. Internal and external communication services	To produce informative pieces for local government agencies, cultural associations and SEM's, so that the internal and external communication is more accurate	2	Island on the social entrepreneurship incubator
5. Business communication consultancy	Communication consultancy on SME, through business communication, training and space enhancement. Provides advisory services to SMEs in the areas of corporate communication, training and remodelling spaces. These services are aimed at improving the communication of our clients, improving all points of contact among customers and the brand, space, corporate image, employees, among others. The mission is to use the communication to enhance the business of its customers	2	Island on the social entrepreneurship incubator
6. Computer services at home	Computer 'doctor' to repair and assist computer related problems. The service is performed at clients' house. The services include diagnosis, repair and maintenance of computers, virus removal, networking and internet installation, data recovery	1	Island on the social entrepreneurship incubator

(Table 8 continued)

(Table 8 continued)

Activity Area	Brief Business Idea Description	Number of Entrepreneurs Involved	Awards Received
7. Low-cost urban rehabilitation and architecture	<p>Architectural and rehabilitation low-cost solutions to urban rehabilitation.</p> <p>For its mode of action in the market and services, constitutes itself as an innovative project, being developed by a team of credentialed architects and external collaborators in different valences complementary techniques estate.</p> <p>The mission is to create synergies among different actors in the housing market. It is intended as a reference in the housing market and the rehabilitation</p>	2	Island on the social entrepreneurship incubator
8. Consultancy and accountability services for SMEs	<p>Creating a service business in accountability area, documents and consultancy. The core business will be focused on the non-organised accountability and organised accountability to SME's. Include also fiscal and human resources management consultancy</p>	2	Island on the social entrepreneurship incubator
9. Healthy and nutritional restaurant	<p>The idea is the creation of a restaurant with healthy food, offering a broad set of natural meals and menus in a cosy space, near schools. It intends to meet the need for a healthy lifestyle, essentially based on a balanced diet that many people end up neglecting. We offer our customers a variety of natural foods, fresh and prepared in a healthy way</p>	1	Monetary award
		15 entrepreneurs	

**Source:** Authors' own work.



research has been carried out both on individual entrepreneurial characteristics and personnel selection, they have not yet been integrated. Thus entrepreneurship activity has gained little practical advantage from the knowledge amassed in these research fields. The idea of the entrepreneur selection method was based on this lack of integration between the literature on personnel selection and the literature on entrepreneurial characteristics.

We aimed to present an entrepreneur selection method conducted on a three-stage entrepreneurship promotion programme. The programme started with 74 participants to start with, 34 participants were selected to the second stage. At the end of the second stage, the participants presented their business idea plans which were assessed. 15 out of 34 participants were finally selected to the implementation stage. During the implementation stage, the 15 entrepreneurs were integrated in nine entrepreneurial projects which were awarded by an expert panel. Thus, all the entrepreneurs selected during the three stages of the entrepreneurship programme were successful on the implementation of entrepreneurial business.

In sum, the results of the this longitudinal study with three research stages showed that: (i) the inclusion of an entrepreneur selection method on a entrepreneurship programme is relevant to the programme's success which allows the selection of participants with highest potential, (ii) the entrepreneur selection method was successfully able to select the highest potential participants, as all the participants selected were able to accomplish a business plan which was successfully rated by an expert panel, (iii) the criteria selection to the training stage were general intelligence, logical reasoning, persuasion, resources mobilisation capacity, vision, project relevance, economic viability and resources acquisition and (iv) the selection criteria to the implementation stage were project relevance, economic viability, resources acquisition, persuasion, resources mobilisation capacity and vision.

### *Theoretical Contributions*

The entrepreneur selection research is based on the integration of personnel selection literature and entrepreneurs' characteristics literature. Although the shared assumption of the strong interdependence between

the entrepreneurial activity and the human performance (e.g., Baum et al., 2007), there was a clear absence on the research of entrepreneur selection.

We developed the framework for entrepreneur selection by designing an entrepreneur selection method for entrepreneurship promotion programmes. Thus, the main theoretical contribution of this research lies in the enlargement of a research topic that gathers evidence from two already well-developed literatures: personnel selection and entrepreneurial characteristics. The entrepreneur selection method is an assessment tool which integrates the main characteristics that the literature has evidenced to be related to the person-entrepreneurship fit (Markman & Baron, 2003).

One of the characteristics of this methodology is that it includes multi-source assessment instruments. More specifically, data were collected through cognitive tests, personality tests, self-reported measures, interviews and three different expert panels.

### *Practical Implications, Limitations and Future Research Direction*

This study has some limitations. First, there were dimensions that were not included in the selection method, for example motivational aspects (Shane, Locke & Collins, 2003). We hope that future research can improve on this. Second, the methodology was tested in the context of an entrepreneurship promotion programme. The particular characteristics of such a programme and participants could have biased the selection criteria. Thus, it is suggested that the entrepreneur selection method should also be tested in other entrepreneurship promotion contexts, such as technology-based ventures or university-entrepreneurship. The present research presents clear advantages and opens new research possibilities for entrepreneur selection process. However, as any personnel selection process (e.g., Schmidt & Chan, 1998) the entrepreneurship potential selection methodology requires some adjustments.

This study presents different practical implications for different targets. Public policymakers interested in promoting greater entrepreneurial activity can now use the entrepreneur selection method we described. Business angels, risk investors, entrepreneurship promoters,

public institutes, universities and any entity intending to promote and support entrepreneurs can now adapt the entrepreneur selection method to their purposes. These agents can now assess the potential of all the would-be entrepreneurs seeking their support through a theoretically based and empirically tested methodology. As a consequence, the reliability rate of their investment choices can increase.

The traditional approach of relying primarily on business plan submission and qualitative assessment can be improved upon by adding the entrepreneur selection method set out in this study. These new insights will help incubators and policymakers identify which incubatee applicants have the highest chance of succeeding in their project proposals, and thus add value by avoiding misdirected budgets.

We also offered practicable knowledge to show how it can be implemented in entrepreneurship programmes. In future programmes, it could be of interest to include mentoring whereby successful and unsuccessful entrepreneurs involved in previous entrepreneurship programmes would help by advising others how to overcome certain obstacles. Additionally, formal work experience such as mentoring serves to strengthen feelings of self-efficacy for the tasks associated with owning and managing a business and achieving organisational goals (Scherer, Brodzinski & Wiebe, 1990).

The entrepreneur selection method we implemented is an example of how practice can benefit from empirical evidences. If you are looking for potential entrepreneurs and if you have to decide in whom to invest your resources, you can add value to your decision-making by using this entrepreneur selection method. In general, entrepreneurship practice will improve significantly when theoretical models and empirical evidence become interconnected.

## References

- Baron, R. (2012). *Entrepreneurship: An evidence based guide*. Northampton, MA: Edward Elgar Publishing.
- Baron, R., & Ensley, M. (2006). Opportunity recognition as the detection of meaningful patterns: Evidence from comparisons of novice and experienced entrepreneurs. *Management Science*, 52(9), 1331–1344.
- Baron, R., & Markman, G. (2003). Beyond social capital: The role of entrepreneurs' social competence in their financial success. *Journal of Business Venturing*, 18(1), 41–60.

- Baum, J., Locke, E., & Smith, K. (2001). A multidimensional model of venture growth. *Academy of Management Journal*, 44(2), 292-303.
- Baum, R., Bird, B., & Singh, S. (2011). The practical intelligence of high potential entrepreneurs: Antecedents and links to new venture growth. *Personnel Psychology*, 64(2), 397-425.
- Baum, J., Frese, M., Baron, R., & Katz, J. (2007). Entrepreneurship as an area of psychology study: An introduction. In J.R. Baum, M. Frese, & R. Baron (Eds), *Psychology of entrepreneurship* (pp. 1-18). Lawrence Erlbaum: SIOP Frontier Series.
- Bird, B. (1988). Implementing entrepreneurial ideas: The case for intention. *Academy of Management Review*, 13(3), 442-453.
- Brandstätter, H. (2011). Personality aspects of entrepreneurship: A look at five meta-analyses. *Personality and Individual Differences*, 51(3), 222-230.
- Cardon, M., Sudek, R., & Mitteness, C. (2009). The impact of perceived entrepreneurial passion on angel investing. *Frontiers of Entrepreneurship Research*, 29(2), Article 1.
- Chen, X., Yao, X., & Kotha, S. (2009). Passion and preparedness in entrepreneurs' business plan presentations: A persuasion analysis of venture capitalists' funding decisions. *Academy of Management Journal*, 52(1), 199-214.
- Clarkin, J., & Swavely, S. (2006). The importance of personal characteristics in franchisee selection. *Journal of Retailing and Consumer Services*, 13(2), 133-142.
- Cohen, J., & Cohen, P. (1983). *Applied multiple regression/correlation analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.
- Cortina, J., Goldstein, N., Payne, S., Davison, H., & Gilliland, S. (2000). The incremental validity of interview scores over and above cognitive ability and conscientiousness scores. *Personnel Psychology*, 53(2), 325-351.
- Frese, M., Rousseau, D., & Wiklund, J. (2014). The emergence of evidence-based entrepreneurship. *Entrepreneurship: Theory and Practice*, 38(2), 209-216.
- Gong, Y. (2003). Subsidiary staffing in multinational enterprises: agency, resources, and performance. *Academy of Management Journal*, 46(6), 728-739.
- Guest, D., & Zijlstra, F. (2012). Academic perceptions of the research evidence base in work and organizational psychology: A European perspective. *Journal of Occupational and Organizational Psychology*, 85(4), 542-555.
- Hair, J., Anderson, R., Tatham, R., & Black, W. (1998). *Multivariate data analysis*. Prentice-Hall: Upper Saddle River NJ.
- Hitt, M., Bierman, L., Uhlenbruck, K., & Shimizu, K. (2006). The importance of resources in the internationalization of professional service firms: The good, the bad and the ugly. *Academy of Management Journal*, 49(6), 1137-1157.

- Hunter, J., & Schmidt, F. (1996). Intelligence and job performance: Economic and social implications. *Psychology, Public Policy, and Law*, 2(3–4), 447–472.
- Jambulingham, T., & Nevin, J. (1999). Influence on franchisee selection criteria on outcomes desired by the franchisor. *Journal of Business Venturing*, 14(4), 363–395.
- Judge, T., Higgins C., & Cable D. (2000). The employment interview: A review of recent research and recommendations for future research. *Human Resource Management Review*, 10(4), 383–406.
- Kaufmann, P., & Rangan, V. (1990). A model of managing system conflict during franchise expansion. *Journal of Retailing*, 66(2), 155–173.
- Markman, G., & Baron, R. (2003). Person-entrepreneurship fit: Why some people are more successful as entrepreneurs than others. *Human Resources Management Review*, 13(2), 281–301.
- McMullen, J., & Shepherd, D. (2006). Entrepreneurial action and the role of uncertainty in the theory of the entrepreneur. *Academy of Management Review*, 31(1), 132–152.
- Neter, J., Kutner, M., Nachtsheim, C., & Wasserman, W. (1996). *Applied linear statistical models* (4th ed.). Chicago: Irwin.
- Ones, D., Viswesvaran, C., & Dilchert, S. (2005). Personality at work: Raising awareness and correcting misconceptions. *Human Performance*, 18(4), 389–404.
- Rousseau, D. (2006). Is there such a thing as evidence-based management? *Academy of Management Review*, 31(2), 256–69.
- Salgado, J., & Moscoso, S. (2002). Comprehensive meta-analysis of the construct validity of the employment interview. *European Journal of Work and Organizational Psychology*, 11(3), 299–324.
- Santos, S., Caetano, A., & Curral, L. (2014). Psychosocial aspects of entrepreneurial potential. *Journal of Small Business and Entrepreneurship*, DOI: 10.1080/08276331.2014.892313.
- Scherer, R., Brodzinski, J., & Wiebe, F. (1990). Entrepreneur career selection and gender: A socialization approach. *Journal of Small Business Management*, 29(2), 37–44.
- Schmidt, F., & Hunter, I. (1998). The validity and utility of selection methods in personnel psychology: Practical and theoretical implications of 85 years of research findings. *Psychology Bulletin*, 124(2), 262–274.
- Schmidt, N., & Chan, D. (1998). *Personnel selection: A theoretical approach*. Thousand Oaks, CA: SAGE Publications.
- Schwenk, C., & Shrader, C. (1993). Effects of formal strategic planning on financial performance in small firms: A meta-analysis. *Entrepreneurship Theory and Practice*, 17(3), 48–53.

- Shane, S. (2003). *A general theory of entrepreneurship: The individual-opportunity nexus*. Cheltenham: Edward Elgar Publishing.
- Shane, S., Locke, E., & Collins, C. J. (2003). Entrepreneurial motivation. *Human Resources Management Review*, 13(2), 257–279.
- Sternberg, R., Wagner, R., & Okagaki, L. (1993). Practical intelligence: The nature and role of tacit knowledge in work and school. In J.M. Puckett & H.W. Reese (Eds), *Mechanisms of everyday cognition* (pp. 205–227). Hillsdale, NJ: Erlbaum.