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**A COMPETITIVE ENTREPRENEURIAL EXTENDED MODEL**DR. ORIAH AKIR<sup>1</sup>, DR. TANG HOWE ENG<sup>2</sup> AND MR. SENIAN MALIE<sup>3</sup>**ABSTRACT**

This study explores the elements of personality and/or behavioural traits that explain entrepreneurial competitiveness, and devises an extended model in addition to the existing body of knowledge relating to the field of entrepreneurship and entrepreneurs. A cross-sectional survey design was carried out to determine the best competitive entrepreneurial behavioural model. The findings indicated that a proactive trait made the largest contribution in explaining a competitive entrepreneur ( $\beta = 10.4$ ,  $p = 0.420$ ). The next largest contributing factor was the capacity for innovation ( $\beta = 6.02$ ,  $p = 0.286$ ), followed by networking ( $\beta = 3.09$ ,  $p = 0.103$ ) and risk-taking ( $\beta = 2.38$ ,  $p = 0.098$ ). This study has the potential to provide insights for managers and decision-makers in allocating financial/capital assistance to new entrepreneurs or even existing ones, allowing them to assess their capability and the feasibility and future growth of their business ventures.

**Key words:** competitive entrepreneurial model, proactive, innovative, networking, risk-taking

**INTRODUCTION**

The majority of past research on entrepreneurial behaviour and entrepreneurship direction has replicated the models used in the United States of America (USA), European Union (EU) and Asia. There are ongoing debates and arguments over the best models for determining successful entrepreneurs, advanced by positivists, constructivists and behaviourists, with no explicit effort to bridge these conflicting schools of thought. Proponents and opponents alike vary in their commendations on the best ways to decide whether personality traits or behavioural orientations determine the success or failure of an entrepreneur. While there is a substantial body of literature dwelling on successful entrepreneurs, very little literature touches on competitive entrepreneurs.

The main frame of reference for this research arises from the economic theory of entrepreneurs, first introduced by Cantillon (1755) and Say (1803). Cantillon (1755) saw the entrepreneur as a risk-taker, while Say (1803) considered the entrepreneur as a planner. In the 1930s and 1960s, the concept of entrepreneur was expanded to cover the entrepreneur as an innovator, striving for achievement and taking initiative as a change agent transforming problems and opportunities into new products or services and converting a source into a resource (Schumpeter, 1934a and 1934b; McClelland, 1961; Drucker, 1964; Shapero, 1975).

The emphasis of the present Malaysian government policy is for universities to produce entrepreneurs and not only employees for other organisations, especially targeted at Bumiputera graduates to encourage more of them to participate in the business arena, in local operations as well as on the world stage. Quantity matters, but also the competitiveness of an entrepreneur is of central interest. Therefore, since there is no or little initiative in developing a competitive entrepreneurial behaviour model that fits the local environment, there is an urgent need for Malaysian social scientists and scholars to engage in this effort.

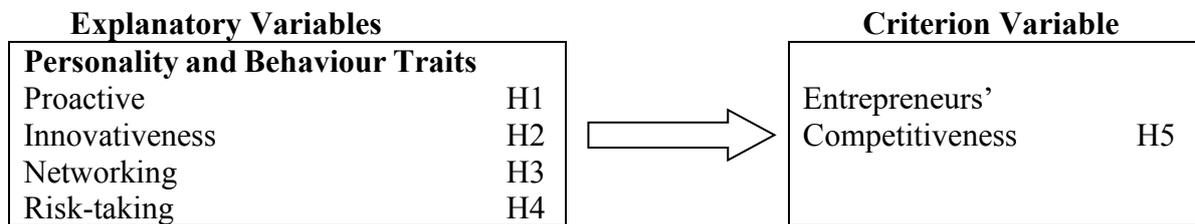
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This paper focuses on two objectives: to determine the relationship between personality and behaviour traits and competitive entrepreneurs; and to develop a competitive entrepreneurial model on this basis. Please refer Figure 1 for the conceptual framework of this research.



**Figure 1:**

**The Conceptual Framework: An Extended Competitive Entrepreneurial Model**

### LITERATURE REVIEW

Entrepreneurship traditionally has been defined as “the creation of new enterprise” (Low and MacMillan, 1988). Pickle and Abrahamson (1990) describe “an entrepreneur as a person who organises and manages a business entity, assuming the risk for the sake of profit. The entrepreneur evaluates perceived opportunities and strives to make the decisions that will enable the firm to realise sustained growth.” The recent definition of an entrepreneur extends the traditional definition: besides the creator of new wealth, an entrepreneur is also the creator of new jobs, the inventor of new products and services, and the revolutioniser of society and the economy (Cohoon, Wadhwa and Mitchell, 2010).

Several studies have identified and postulated that entrepreneurial behaviour or actions are influenced by psychological trait theories, behavioural orientation theorists and positivist concepts of a goal-oriented perspective (Boyd and Vozikis, 1994). However, the traits approach of entrepreneurship has been criticised by opponents, who argue that personality traits do not distinguish the entrepreneur from managers because most psychological traits are also prevalent in managers and common to other successful individuals or non-entrepreneurs (Virtanen, 1996; Nandram and Samsom, 2007). For example, factors such as the need for achievement, locus of control, a propensity for risk-taking and a tolerance for ambiguity have been identified and examined as possible traits associated with entrepreneurial behaviour. All these traits are related to McClelland’s theory of the need for achievement (Brockhaus, 1982).

Studies also reveal that these traits are not good predictors for entrepreneurial success. The behavioural views connote that the behavioural actions of an entrepreneur, such as their abilities, temperament and dynamic attributes, contribute to success (Nandram and Samson, 2007), and that social networks and environments play a role in contributing to the success and failure of entrepreneur and entrepreneurship alike (Gnyawali and Fogel, 2008). Most of these past works are concerned with the success of the entrepreneurs, but what factors and actions make up a competitive entrepreneur is not clearly defined. Therefore, it is vital to bridge this gap and research on this issue is necessary.

Based on past literature and arguments, it is evident that all personality and behavioural traits in one way or another have an impact on the success of an entrepreneur’s business venture and are equally important in contributing to and influencing an entrepreneur’s competitiveness. Even though this relationship is not directly implicated, it is the assumption of this research and hypothesis that personality and behavioural traits (proactive, innovative, networking and risk-taking) significantly explain the entrepreneurs’ competitive behaviour (criterion variable).

## RESEARCH METHODS

The two research questions to be dealt with are: Is there any significant relationship between different personality and behaviour traits and the competitiveness of entrepreneurs? What are the significant personality and behaviour traits that predict a competitive entrepreneur?

Cross-sectional research was performed to establish validity, stability and reliability among the sets of variables, using factorisation methods and internal consistency tests. The review of the literature was conducted to gather information on entrepreneurial behavioural theories, personality traits theories and social perspective. The information from various sources were fully analysed to gain an understanding of entrepreneurial behaviour concepts and entrepreneurship theories. A survey was conducted among the target group of entrepreneurs operating or basing their businesses in Sarawak, Sabah and Peninsular Malaysia. This group of individuals was selected due to their contribution to influencing and fostering the growth of the Malaysian economy over several decades. These entrepreneurs were taken from three types of industry: the micro-industry, small medium enterprises, and sendirian berhad/holding berhad. They consisted of multiple disciplines, such as hospitality and tourism, healthcare, service firms, retailing, transportation, furniture and fixtures, education, automobiles, and telecommunication, and were selected from each region (Sarawak, Sabah and Peninsular Malaysia). A survey is one of the vital ways to complement the objectives of this research. The analysis involved the process of adding and deleting predicting variables against the criterion variable to compare which of the models had the most predicting power in explaining the criterion variable. In the process of model building, p-value was used as a comparative measure of the alternative models. Hence, this research attempts to develop a model to extend the body of knowledge in the field of entrepreneurial behaviour and competitiveness.

## FINDINGS

The questionnaire on the personality and behaviour traits of a competitive entrepreneur used five scales for measuring five constructs (proactive, innovative, networking, risk-taking, and competitiveness). The items were adapted from well-known entrepreneurship questionnaires and comprised of 23 items, with an additional five to measure competitiveness that were newly developed by the researchers. After data reduction was performed using exploratory factor analysis (EFA) and principal component (PCA) analysis, the 28 total items were reduced to 18, factorised into five components that yielded good scores and met the Kaiser criterion threshold, which was above 0.70 (Nunnally, 1978; Malhotra, 2004). The items were answered by 499 respondents. The Cronbach's Alpha result for the 18 items was 0.944 (refer to Table 1). The result of the reliability measure was high:  $\alpha = 0.944$ . All items contribute to the reliability of the questionnaire. These items were used to analyse the five constructs in the analysis of the personality and behaviour traits of a competitive entrepreneur. The item statistics for each of the 18 items are shown in Table 2.

**Table 1: Reliability Analysis for Personality and Behaviour Traits Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha on Standardised Items	No. of Items
0.944	0.947	18

**Table 2: Item Statistics for Eighteen Items**

	Mean	Std. Deviation	N
Proactive 3	4.0822	0.90028	499
Proactive 4	4.0240	0.91145	499
Proactive 5	3.9679	0.99747	499
Innovative 11	3.6653	0.99709	499
Innovative 12	3.5491	0.95852	499
Innovative 13	3.6232	1.00518	499
Innovative 22	4.0020	1.03065	499
Innovative 23	3.8557	1.03707	499
Innovative 24	3.7575	0.97936	499
Networking 19	3.6693	1.16891	499
Networking 20	3.4349	1.24397	499
Networking 21	3.3868	1.32807	499
Risk-taking 26	3.8076	0.95641	499
Risk-taking 27	3.9118	0.95703	499
Risk-taking 28	3.7876	1.05424	499
Competitive 15	3.7014	1.05331	499
Competitive 16	4.0441	1.04231	499
Competitive 17	4.1042	1.05147	499

Correlation analysis was used to determine if there is any significant relationship between the personality and behaviour traits (proactive, innovative, networking, and risk-taking) of a competitive entrepreneur. Generally, the respondents agreed that the personality and behaviour traits of a competitive entrepreneur (Table 3) consisted of proactive trait (mean = 4.02), innovative trait (mean = 3.74), networking trait (mean = 3.50), and risk-taking trait (mean = 3.84).

**Table 3: Descriptive Statistics for the Personality and Behaviour Traits of a Competitive Entrepreneur**

	Mean	Std. Deviation	N
Proactive	4.0247	0.86277	499
Networking	3.4970	1.13999	499
Innovative	3.7422	0.81354	499
Risk-taking	3.8357	0.83256	499
Competitive	3.9499	0.94064	499

Correlational analysis yielded a significant relationship between the personality and behaviour traits and the competitive entrepreneur. Table 4 shows that all four traits were significantly associated with the competitive entrepreneur: the proactive trait was ( $r, 499$ ) = 0.729,  $p < 0.05$ ); the innovative trait was ( $r, 499$ ) = 0.713,  $p < 0.05$ ); the risk-taking trait was ( $r, 499$ ) = 0.609,  $p < 0.05$ ); and the networking trait ( $r, 499$ ) = 0.468,  $p < 0.05$ ).

The regression analysis indicated that higher levels of competitiveness were associated with positive personality and behaviour traits. The regression analysis had an overall significance at  $p < 0.05$  with an adjusted R-Square of 0.615 (Table 5) and an F-value of 199.54 (Table 6). The multiple regression results suggest that the four constructs of personality and behaviour traits (proactive, innovative, networking, and risk-taking) provided a 62% positive incremental  $R^2$  change (Table 5).

**Table 4: Pearson Correlation Analysis for the Personality and Behaviour Traits of a Competitive Entrepreneur**

		Proactive	Networking	Innovative	Risk-taking	Competitive
Proactive	Pearson	1	0.398**	0.727**	0.614**	0.729**
	Sig. (2-tailed)		0.000	0.000	0.000	0.000
	N	499	499	499	499	499
Networking	Pearson	0.398**	1	0.520**	0.501**	0.468**
	Sig. (2-tailed)	0.000		0.000	0.000	0.000
	N	499	499	499	499	499
Innovative	Pearson	0.727**	0.520**	1	0.704**	0.713**
	Sig. (2-tailed)	0.000	0.000		0.000	0.000
	N	499	499	499	499	499
Risk-taking	Pearson	0.614**	0.501**	0.704**	1	0.609**
	Sig. (2-tailed)	0.000	0.000	0.000		0.000
	N	499	499	499	499	499
Competitive	Pearson	0.729**	0.468**	0.713**	0.609**	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	
	N	499	499	499	499	499

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**Table 5: Model Summary of Regression Analysis**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	0.786 <sup>3</sup>	0.618	0.615	0.58396	0.618	199.543	4	494	0.000

- a. Predictors: (Constant), risk-taking, networking, proactive, innovative  
b. Dependent Variable: Competitive

**Table 6: ANOVA of Regression Analysis**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	272.180	4	68.045	199.543	0.000 <sup>b</sup>
	Residual	168.456	494	0.341		
	Total	440.636	498			

- a. Dependent Variable: Competitive  
b. Predictors: (Constant), risk-taking, networking, proactive, innovative

A collinearity diagnostic test was further conducted to assess multi-collinearity. Collinearity may be indicated by a Variable Inflation Index (VIF) greater than 10. No indicators had a VIF value greater than 10; thus, the results suggested that the data did not violate the assumption of multi-collinearity in this research. Overall, proactive, networking, innovative and risk-taking traits are typically more responsive to competitiveness (Table 7).

**Table 7: Coefficients Analysis**

Model	Unstandardised Coefficients		Standardised Coefficients	T	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	0.149	0.140		1.067	0.287		
Proactive	0.458	0.045	0.420	10.143	0.000	0.451	2.216
Networking	0.085	0.028	0.103	3.090	0.002	0.694	1.442
Innovative	0.330	0.055	0.286	6.021	0.000	0.344	2.908
Risk-taking	0.111	0.046	0.098	2.384	0.018	0.458	2.181

a. Dependent Variable: Competitive

## DISCUSSIONS

Entrepreneurial behaviour and strategic actions are complimentary when integrated and can achieve the greatest wealth (Sharma and Chrisman, 1999). While entrepreneurial behaviour and strategic actions linked to wealth creation are products of the firm's resources (Hitt et al., 2001a), Jury (1999) suggests that an entrepreneur must pay extra attention to proactive behaviour. Evaluating marketing opportunities and showing proactive behavioural skills reflect the characteristics of proactivity and having an entrepreneurial vision.

**Proactive:** Bateman and Crant (1993) argued that the proactive personality scale may have implications for vocational choice and entrepreneurship in particular. Such an assertion is intuitively appealing, given the definition of a proactive personality and previous research on its correlation with entrepreneurship. Proactivity may be crucial to an entrepreneurial orientation because it suggests innovative activity and risk-taking accompanied by a forward-looking perspective.

Arguments favouring a positive relationship between entrepreneurial proactivity, performance and competitiveness do exist (Bateman and Crant, 1993); but this relationship is manifested in terms of the performance of the firms (Blesa and Ripolles, 2009). It was revealed that most successful firms were headed by someone or entrepreneurs who were competent and competitive. For example, in family-oriented firms in particular, it was indicated that proactivity and innovation have a positive relationship and the extent of risk-taking was lesser than in a non-family-oriented business (Bateman and Crant, 1993; Naldi et al., 2007).

**Innovative:** Innovation is an important factor to characterise entrepreneurship (Miller and Friesen, 1982; Miller and Friesen, 1983; Karagozoglu and Brown, 1988; Covin and Slevin, 1989). Schumpeter (1934) pointed out that innovativeness stimulates economic development and is the engine of corporate growth and wealth creation. Innovation resulting from a new combination of production factors is critical to firms' wealth-creating efforts.

Innovation is also linked to the successful performance of firms in the industrial and service sectors, as well as to entire economies (Kluge, Meffert and Stein, 2000). Effective innovation creates new value for customers (Mizik and Jacobson, 2003) and is required to help firms survive gales of creative destruction, along with serving as a catalyst for those gales (Danneels, 2002). Entrepreneurial activity is closely related to the innovative, proactive and risk-taking actions of the entrepreneurs (Covin and Selvin, 1989; Moreno and Casillas, 2008). In fact, innovation contributes the most to predicting firm growth (Bruderer and Preisendorfer, 2000) and is very important in both family-oriented firms and non-family-oriented firms (Price, Stoica and Boncella, 2013).

**Social Networking:** Networking is often mentioned in a business scenario, because people feel the need to distinguish “networking” behaviour from ordinary business behaviour. Hence, entrepreneurs’ networks are important for opportunity recognition (Hills, Lumpkin and Singh, 1997). Entrepreneurial “networking” is a special kind of relationship within personal networks. It is a network built on strong ties, relations that entrepreneurs can “count on” (Hitt et al., 2001b).

“Networking” involves expanding one’s inner circle of trust (such as the set of people the entrepreneurs have a long relationship with, and even those individuals with whom the entrepreneurs have weak ties: Ardichvili, Cardozo and Ray, 2003). This trust relationship evolves slowly. The accumulation of such acts enables the parties to expand their relations and eventually engage in major transactions (Blau, 1964). Therefore, successful and competitive entrepreneurs are more likely to be found in positions that are connected to diverse information sources (Aldrich, Rosen and Woodward, 1987).

Networking is also about activity through which entrepreneurs obtain information about new entrepreneurial ideas (Soh, 2002). Social networks consist of chains of persons who provide a specific service or support to a person, who is also expected to provide similar support in return (Donnell et al., 2001). In networks, relationships provide emotional support for entrepreneurial risk-taking, and this can be fruitful in some situations (Hoang and Antoncic, 2003). In entrepreneurship, networks focus on social processes that influence social structures and make mobilisation easier (Greve, 1995).

The size of a social network refers to the number of individuals in the network, and its composition refers to the degree to which a network is made up of either family members or friends (Allen, 2000). An individual must gain access to wide variety of different sources of information to develop business tactics (Ucbasaran, Westhead and Wright, 2008). In entrepreneurship activities, social networking is considered as an important tool for business enhancement and competitiveness (Helm, Mauroner and Dowling, 2010). The argument is that network connections and structure facilitate the flow of information and create mutual trust and cooperation (Kwanghui and Brian, 2010). Individuals can start a business through networks in the markets and socialising with peers in social media and social organisations.

**Risk-taking:** Risk-taking has almost been accepted as being closely related to the entrepreneurship concept, or the entrepreneurs’ willingness to engage in calculated business-related risk (Brockhaus, 1980; Okhomina, 2007). Uncertainties in business ventures have an important effect on entrepreneurs’ risk-taking, which coincides alongside other personality characteristics such as proactivity and innovation. The increasing uncertainties in the business world, and the possibility of high risk which causes these uncertainties, can be turned into an opportunity by the entrepreneurs.

Entrepreneurship would be unnecessary without uncertainty (Wang and Hanna, 2006). What is necessary is to anticipate the risks arising from such uncertainties and knowing how to overcome them (Palmer, 1971; Martin 1984; Lee and Peterson, 2000; Price, 2004; Kamalanabhan et al., 2006; Li, 2006). McGrath and MacMillan (2000) view an entrepreneurial mindset as a way of thinking about business that focuses on and captures the benefits of uncertainty. Uncertainty is a perceptual phenomenon derived from an inability to assign probabilities to future events (Hoskisson and Busenitz, 2002).

Risk and ambiguity are part of organisational uncertainty (Priem, Love and Shaffer, 2002). Lunnan et al. (2006) identify two main elements of entrepreneurship: the ability to recognise business opportunities and the ability to take calculated risks (Zimmerer and Scarborough, 1998). Similarly, Dickson and Giglierano (1986) pay attention to the relationship between entrepreneurs and risk-taking that is inherent in entrepreneurship. It is

necessary to associate this personality characteristic closely with the entrepreneur's competitiveness because entrepreneurs have the desire to start new a business and develop workable products and services (Stoner and Freeman, 1992; Ufuk and Ozgen, 2001).

Based on the arguments above and the findings of this research, it is evident that all these personality and behaviour traits (proactive, innovative, networking and risk-taking) have a significant impact on the success of an entrepreneurs' business venture and are equally important in contributing and influencing the competitiveness of entrepreneurs. The assumption of this study, which postulated that both personality and behaviour traits are positively responsive to an entrepreneur's competitiveness, is thus strongly supported and contributes significantly to the field of entrepreneurship and entrepreneurial behaviour.

### **CONCLUSIONS AND IMPLICATIONS**

On the basis of beta value, proactive made the largest contribution in explaining a competitive entrepreneur ( $\beta = 10.4$ ,  $p = 0.000$ ). The next largest contributing factor was the capacity for innovation ( $\beta = 6.02$ ,  $p = 0.000$ ), followed by networking ( $\beta = 3.09$ ,  $p = 0.002$ ) and risk-taking ( $\beta = 2.38$ ,  $p = 0.018$ ). It could thus be concluded that (regardless of education, motivating factors, success factors, challenges and other related social factors) to be competitive in their business ventures an entrepreneur must possess all these personality and behaviour traits (proactive, innovative, networking and risk-taking) to ensure their competitive advantage and sustainability in the market place. This answers the following questions: "Is there any significant relationship between different personality and behaviour traits and the competitiveness of entrepreneurs?" and "What are the significant personality and behaviour traits that predict a competitive entrepreneur?"

Theoretically, this research contributes to the field of entrepreneurship and entrepreneurial behaviour through the development of an extended competitive entrepreneurial model. This research also develops new measurements for the competitiveness of an entrepreneur, reflected through personality and behaviour traits. The items used to measure competitiveness are new and developed by the researchers using exploratory factor analysis to validate what the items are intended to measure.

The implication of the findings of this research in terms of practice is that it has potential to provide an insight for managers and decision makers in allocating financial/capital assistance to new or existing entrepreneurs, helping them assess their capability and the feasibility and future growth of their business ventures. In the long run, this benefits the entrepreneurs and fosters the nation economy.

This research is fundamental in nature. Therefore, caution has to be exercised in interpreting the results, as the sample used was not representative of all entrepreneurs in Malaysia and the ASEAN region. The research results displayed the entrepreneurs' behaviour while carrying out business ventures mostly in the Sarawak region, and comprised of the majority (90%) of the respondents to the research survey. It is recommended that the direction for future research is necessary to investigate issues relating to the personality and behaviour traits of a competitive entrepreneur on a broader perspective, to replicate and validate the parsimony and robustness of the research model.

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### **REFERENCES**

- Allen, W. (2000) Social networks and self-employment. *Journal of Socio-economics*, 29(5), 487-501.
- Ardichvili, A., Cardozo, R. and Ray, S. (2003) A theory of entrepreneurial opportunity identification and development. *Journal of Business Venturing*, 18(1), 105-123.

- Aldrich, H. Rosen, B. and Woodward, W. (1987) *The impact of social networks on business fundings and profit*. In N. Churchill (eds.). *Frontiers of Entrepreneurship Research*. Wellesley, MA: Babson College Center for Entrepreneurial Studies, 154-168.
- Bateman, T. S. and Crant, J.M. (1993) The Proactive Component of Organizational Behavior. *Journal of Organizational Behavior*, 14(2), 103-118.
- Blau, P. (1964) *Exchange and Power in Social Life*. New York: Wiley.
- Blesa, A. and Ripolles, M. (2003) The role of market orientation in the relationship between entrepreneurial proactiveness and performance. *Journal of Entrepreneurship*, 12(1), 1-19.
- Boyd, N.G. and Vozikis, G.S. (1994) The influence of self-efficacy on the development of entrepreneurial intentions and actions. [Online]. *Entrepreneurship: Theory and Practice*, 63-77. Available from: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.477.4240&rep=rep1&type=pdf> [Accessed 23 August 2016].
- Brockhaus, R.H. (1980) Risk taking propensity of entrepreneurs. *Academy of Management Journal*, 2(3), 509-520.
- Brockhaus, R.H. (1982) The Psychology of the Entrepreneur. In: C.A. Kent, D. Sexton and K. Vesper (eds.). *Encyclopedia of Entrepreneurship*. London: Prentice Hall, 39-57.
- Bruderi, J. and Preisdorfer, P. (2000) Fast growing businesses: empirical evidence from a German study. *International Journal of Sociology*, 30, 45-70.
- Cantillon, R. (1755) *Essai sur la nature du commerce en general*. London: Gyles.
- Cphoon, J.M., Wadhwa, V. and Mitchell, L. (2010) *The Anatomy of an Entrepreneur: Are Successful Women Entrepreneurs Different from Men?* [Online]. Kauffman, The Foundation of Entrepreneurship: 1-12. Available from: [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1604653](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1604653) [Accessed 23 August 2016].
- Covin, J.G. and Slevin, D.P. (1989) Strategic management of small firms in hostile and benign environments. *Strategic Management Journal*, 10(1), 75-87.
- Danneels, E. (2002) The dynamics of product innovation and firm competencies. *Strategic Management Journal*, 23(12), 1095-1121.
- Dickson, P.R. and Gigilierano, J.J. (1986) Missing the boat and sinking the boat: a conceptual model of entrepreneurial risk. *Journal of Marketing*, 50(3), 58-70.
- Donnell, A. et al. (2001) The network construct in entrepreneurship research: a review and critique. *Journal of Management Decision*, 39(9), 749-760.
- Gnyawali, D.R. and Fogel, D.S. (2008) Environments for entrepreneurship development: key dimensions and research implications. *Entrepreneurship: Theory and Practice*, 18, 43-62.
- Greve, A. (1995) Networks and entrepreneurship – an analysis of social relations, occupational background, and use of contacts during the establishment process. *Scandinavian Journal of Management*, 11(1), 1-24.
- Helm, R., Mauroner, O. and Dowling, M. (2010) Innovation as mediator between entrepreneurial orientation and spin-off venture performance. *International Journal of Entrepreneurship and Small Business*, 4(11), 472-491.
- Hills, G., Lumpkin, G.T. and Singh, R.P. (1997) *Opportunity recognition: perceptions and behaviors of entrepreneurs*. Wellesley, MA: Frontiers of Entrepreneurship Research, Babson College, 203-218.
- Hitt, M.A. et al. (2001a) Direct and moderating effects of human capital on strategy and performance in professional service firms: a resource-based perspective. *Academy of Management Journal*, 44(1), 13-28.

- Hitt, M.A. et al. (2001b) The institutional effects on strategic alliance partner selection in transition economies: China vs. Russia. *Organisation Science*, 15(2), 173-185.
- Hoang, H. and Antoncic, B. (2003) Network-based research in entrepreneurship: a critical review. *Journal of Business Venturing*, 18(2), 165-187.
- Hoskisson, R.E. and Busenitz, L.W. (2002) Market Uncertainty and Learning Distance in Corporate Entrepreneurship Entry Mode Choice. In: M.A. Hitt, R.D. Ireland, S.M. Camp and D.L. Sexton (eds.). *Strategic Entrepreneurship: Creating a New Integrated Mindset*. Oxford: Blackwell Publishers, 151-172.
- Jury, J.J. (1999) Focus: Sweden-Venture capitalists flock to Swedish high-tech. *European Venture Capital Journal*, 1, 34-38.
- Kamalanabhan, T.J., Sunder, D.L. and Manshor, A.T. (2006) Evaluation of entrepreneurial risk-taking using magnitude of loss scale. *The Journal of Entrepreneurship*, 15(1), 37-46.
- Karagozoglu, N. and Brown, W.B. (1988) Adaptive responses by conservative and entrepreneurial firms. *Journal of Product Innovation Management*, 5(4), 269-281.
- Kluge, J., Meffert, J. and Stein, L. (2000) The German road to innovation. *The McKinsey Quarterly*, 2, 99-105.
- Kwanghui, L. and Brian, C. (2010) The effects of social networks and contractual characteristics on the relationship between venture capitalists and entrepreneurs. *Asia Pacific Journal of Management*, 29(3), 573-596.
- Lee, S.M. and Peterson, J.S. (2000) Culture, entrepreneurial orientation, and global competitiveness. *Journal of World Business*, 35(4), 401-415.
- Li, J. (2006) *Entrepreneurship and small business development in China*. Bradford: Emerald Group Publishing Limited.
- Low, M.B. and MacMillan, I.C. (1988). Entrepreneurship: past research and future challenges. *Journal of Management*, 14(2), 139-161.
- Lunnan, A., Nybakk, E. and Vennesland, B. (2006) Entrepreneurial attitudes and probability for start-ups an investigation of Norwegian non-industrial private forest owner. *Forest Policy and Economics*, 8, 683-690.
- Malhotra, N.K. (2004) *Marketing research: an applied orientation*. 4<sup>th</sup>ed., Upper Saddle, New Jersey: Prentice Hall.
- Martin, S.S. (1984) Exploring the concept of enterprise. *Nursing Economics*, 2, 406-408.
- McClelland, D.C. (1961) *The achieving society*. Princeton, NJ: Van Nostrand.
- McGrath, R.G. and MacMillan, I. (2000) *The entrepreneurial mindset*. Boston: Harvard Business School Press.
- Miller, D. and Friesen, P.H. (1982) Innovation in conservative and entrepreneurial firms: two models of strategic momentum. *Strategic Management Journal*, 3(1), 1-25.
- Miller, D. (1983) The correlates of entrepreneurship in three types of firms. *Management Science*, 29(7), 770-791.
- Mizik, N. and Jacobson, R. (2003) Trading off between value creation and value appropriation: the financial implications of shifts in strategic emphasis. *Journal of Marketing*, 67, 63-76.
- Moreno, A.M. and Casillas, J.C. (2008) Entrepreneurial orientation and growth of SMEs: a causal model. *Entrepreneurship: Theory and Practice*, 32(3), 507-528.
- Naldi, L. et al. (2007) Entrepreneurial orientation, risk taking, and performance in family firms. *Family Business Review*, 20(1), 33-47.
- Nandram, S. and Samsom, K. (2007) *Entrepreneurial Behavior*. NRG Working Paper no. 07-04, Nyendore, Business Universiteit, Holland.
- Nunnally, J. (1978) *Psychometric theory*. New York: McGraw-Hill.

- Okhomina, D. (2007) Does level of education influence psychological traits? Evidence from used car entrepreneurs. *Journal of Management and Marketing Research*, 3(1), 1-14.
- Palmer, M. (1971) The application of psychological testing to entrepreneurial potential. *California Management Review*, 13(3), 32-38.
- Pickle, H.B. and Abrahamson, R.L. (1990) *Small Business Management*. New Jersey: John Wiley and Sons, Inc.
- Price, R.W. (2004) *Roadmap to Entrepreneurial Success: Powerful Strategies for Building a High-Profit Business*. Saranac Lake, NY, USA: Amacom.
- Price, D.P., Stoica, M. and Boncella, R.J. (2013) The relationship between innovation, knowledge, and performance in family and non-family firms: An analysis of SMEs. *Journal of Innovation and Entrepreneurship*, 2(14), 1-20.
- Priem, R.L., Love, L.G. and Shaffer, M.A. (2002) Executives' perceptions of uncertainty scores: A numerical taxonomy and underlying dimensions. *Journal of Management*, 28(6), 725-746.
- Say, J.B. (1830) *Cours complet d'économie politique*. Paris: Guillaume.
- Schumpeter, J.A. (1934) *The theory of economic development*. Cambridge, MA: Harvard University Press.
- Shapero, A. (1975) The displaced, uncomfortable entrepreneur. *Psychology Today*, 11(9), 83-133.
- Sharma, P. and Chrisman, J. J. (1999) Toward a reconciliation of the definitional issues in the field of corporate entrepreneurship. *Entrepreneurship Theory and Practice*, 23(3), 11-27.
- Soh, P.H. (2003) The role of networking alliances in information acquisition and its implications for new product performance. *Journal of Business Venturing*, 18(6), 727-744.
- Stoner, J.A. and Freeman, R.E. (1992) *Management*. 5<sup>th</sup> ed., New Jersey: Prentice-Hall Inc.
- Ucbasaran, D., Westhead, P. and Wright, M. (2008) Opportunity identification and pursuit: does an entrepreneur's human capital matter? *Small Business Economics*, 30(2), 153-173.
- Ufuk, H. and Ozgen, O. (2001) The profile of women entrepreneurs: A sample from Turkey. *International Journal of Consumer Studies*, 25(4), 299-308.
- Virtanen, M. (1996) *Entrepreneurial Finance and Venture Capital Advantage*. Finland: Helsinki School of Economics Publications.
- Wang, C. and Hanna, D.S. (2006) The risk tolerance and stock ownership of business-owning households. *Consumer Interests Annual*, 52, 257-270.
- Zimmerer, W.T. and Scarborough, N.M. (1998) *Essential of entrepreneurship and small business management*. New Jersey: Prentice-Hall.