

GENDER AND DECISION-MAKING STYLES OF ENTREPRENEURS

Mahmoud Motvaseli*

Fariba Lotfizadeh**

Abstract

Purpose- The present paper attempts to illustrate the decision-making styles used by entrepreneurs.

Design/methodology/approach- The paper takes a quantitative approach to test decision-making styles of entrepreneurs. Data were gathered through a self-administered survey among 162 students of Tehran University in Iran.

Findings- The results indicated that Iranian female and male students of entrepreneurship employed different decision-making styles.

Research Limitation/Implications- Like most research studies, the main limitation of this study is that, it cannot easily be generalized. In other words, limitations of this study are due to self-reported data and small sample.

Originality-Value- This is one of the first papers to evaluate the decision-making styles of entrepreneurs in Iran.

Keywords- Entrepreneurship- Decision-making styles- Gender Differences- Iranian Students.

* Professor, Department of Entrepreneurship, Tehran University, Tehran, Iran

** MA Student, Department of Entrepreneurship, Tehran University, Tehran, Iran

Introduction

In the knowledge economy with successive unforeseen change, the challenges encountered by the sprouting entrepreneur and the success factors of entrepreneurship have been studied by academics and experts alike (Lin, 2006). According to Gartner (1985), the individual, environment, organization and the entrepreneurial journey itself are the four main factors involved. Based on a model of Timmons (1999) for entrepreneurship management, opportunity is a fundamental factor in the structure of a business and the trigger of this opportunity mostly arises from the external environment. The success of the entrepreneurial attempt is due also in no small part to the decision style of the entrepreneur (Lin, 2006). Based on several studies on the effect of decision style/managerial approach (Allinson et al., 2000; Krueger, 2000; Lee and Tsang, 2001) and environment on the performance of a startup business (Khatri and Ng, 2000), Lin (2006) infers that decision making style is the most common determinant of the startup business performance.

For businesses with various entrepreneurial strategies, there are many contradictory opinions and deductions on the way these startup businesses conform to their environments, building of the connections between organizations and the entrepreneurial behavior (Covin and Slevin, 1991; Karagozoglu and Brown, 1998; Miller, 1983). In 1999, Timmons suggested that on top of leveraging the opportunity, the entrepreneur must constantly make the correct alterations and selections in different steps of business startup. Seeking external opportunities for a new business assists the prosperity of a startup business (Lin, 2006). However, other ways of communication and connections among organizations, are also critical for the prosperity and development of a startup business. Lin (2006) believes that along with various styles of conformation to environment ambiguity, the decision style of the entrepreneur is one of the key determining factors of entrepreneurial behavior. Many organizations consider entrepreneurial behavior as fundamental if they are to withstand in a world driven by hastening change (Lyon et al., 2000). Entrepreneurship contributes to a country's economy by increasing innovation, producing competition, job creation and thus leads to more wealth and expending power (Gurol, 2009). Entrepreneurship has long been recognized as the fundamental driver of economic growth and money creation and researchers have made so many attempts to explain this phenomenon from various viewpoints (Karabey, 2012). Mitchell et al. (2002) have maintained that focusing on the function of cognition, one can meaningfully investigate entrepreneurship.

Literature review

Decision-making styles comprise of many cognitive processes such as data gathering and processing, learning and problem solving (Baiocco et al., 2009). According to Miller and Byrnes (2001), decision-making is the process of choosing among various alternatives while following one's aim. Several scholars have focused their attention on the relationship between personality and decision-making and several typologies of decision-making styles have been proposed (Brew et al., 2001; Franken and Muris, 2005). Driver (1979) and Harren (1979) defined decision-making style as an individual's typical model of interpreting and responding to decision-making tasks. Based on Nutt (1990) decision-making style is a way to conceive why people employ different decision processes in facing obviously similar situations. According to one of the most popular models in the literature, Harren's model, there are three different styles: Rational (making decisions based on rationality), Dependent (making decisions using other's viewpoint and expectations) and Intuitive (making decisions by means of feelings and emotions). In 1984, Phillips, Pazienza and Ferrin added another style to Harren's model: the Avoidant style (the inclination to avoid or postpone decision-making). Based on cognitive complexity and the orientation of values, Rowe and Masan (1987) suggested four decision styles: Behavioral (pleasant and friendly), Conceptual (Perceptive, versatile and flexible), Analytical (mental and control-oriented) and Directive (practical, dictatorial and power-oriented). Mann et al., (1989) suggest different decision-making styles: Self confident (the person is optimistic and sure about his/her own decision), Vigilant (the person cautiously investigates all the alternatives before decision-making), panicked (the person has a tendency to postpone decisions) and complacent (the person can't solve conditions and pursue others). These styles can be arranged in two groups: adaptive and maladaptive decision making style.

Entrepreneurs must often make decisions according to/under conditions of high uncertainty (Kinght, 1921; Schumpeter, 1942; Kirzner, 1973; Venkataraman, 1997). It is only in such situations that inventive and venturesome individuals can perceive or make novel opportunities unperceived or unvisualized by others, and follow these opportunities to gain entrepreneurial profits that would not be attainable in more definite and steady situations (Kinght, 1921; Venkataraman, 1997; McGrath and McMillan, 2000). Under situations of "true" Knight (1921) uncertainty, not only the forthcoming results are ambiguous, but even the probabilities are unknown at the decision point, as the related data is simply not attainable (Busentiz and Barney,

1997). What makes things more complicated is that many of the entrepreneurs' decisions are fraught with ethical tension (Timmons and Spinelli, 2004). In addition, while formal business decisions are frequently restricted by social general agreements around the ethics of the condition (Brenkert, 2002), in entrepreneurial conditions technological innovations can advance well in front of social consensus (Marshall, 1999), departing the entrepreneur with less direction for careful considerations and less clearness on the range of probabilities (McVea, 2009). In early days, course of learning on the entrepreneurial character were according to Rotter's (1966) attitude that the identity trait of internal-external control was a significant factor influencing entrepreneurship (Lin, 2006). Sadler-Smith (2004) classified that further decision style in two groups: Rational and Intuitive, stress should also be appointed on the firm's valence to react to unexpected conditions and the significance of the effect of these two kinds of information processing on the proficiency of the firm. According to his study of the personal identity, Chell et al., (1991) detected that further improving the way of evaluating the variables of alteration during the startup, employing decision style to appraise entrepreneurial management was a correct approach. Based on Winterfeld and Edwards (1986), decision making is a cognitive process that includes appraisal of occurrences in order to select series of actions amongst options. During the process of decision-making, individual has to think carefully and merge several types of information in order to create optional selections and detect appropriate strategies to decide (Gambetti et al., 2008). In this process, individuals trust in their own experience and cognition of the world (Gambetti, 2008). Decisions pertain on various factors, such as decisional context (Payn et al., 1993), time pressure (Ahituv et al., 1998), and task intricacy (Brehmer, 1992). Gambetti et al., (2008) combined those with a rising concern in studying personal differences. Actually, they indicated the significance of personal traits for decision-making (Loo, 2000). Based on this, a related concept is decision-making style, returns to personal differences in processing information for unraveling problems and making decisions in various fields (Gambetti, 2008). Investigation shows that the appraisal of these styles is very consequential to a better perceiving of the decision-making process (Thunholm, 2004).

Scott and Bruce (1995) defined decision-making styles as a realized-routine reaction models presented by individuals when they face a decision condition. In addition, based on empirical research, they created a new tool called General Decision-Making Style (Scott and Bruce, 1995), that appraises five various decision-making styles: Rational (e.g. "I make decisions in a logical

and systematic way”), Dependent (e.g. “I rarely make important decisions without consulting other people”), Intuitive (e.g. “when making a decision, I rely upon my instincts”), Avoidant (e.g. “I avoid making important decisions until the pressure is on”) and Spontaneous (e.g. “I generally make snap decisions”). Baiocco et al., (2009) claimed that the GDMS displayed good levels of reliability and satisfactory factor structures in prior researches (Loo, 2000; Scott and Bruce, 1995; Spicer and Sadler-smith, 2005).

Gender Differences

Gender has become one of the exciting fields of research. The Male and Female differences could be discussed in two ways. Firstly, there are biological and physical differences, which are due to the genetic structure. These are permanent sexual differences. The second set of differences is concluded by social and cultural factors. In other words, these differences are norms set forth by individuals living in a society. Many studies have claimed that the influence of gender on decision making is indeed very small, and cultural and stereotypical effects are apparently much more significant. So the difference in stereotypes acts an enormous role in decision making process. What individuals believe and suppose to be correct about themselves determine their decision-making style. However, in the context of entrepreneurship, gender differences have been investigated for decades and various researches have proven that within similar context, males have a higher chance of entrepreneurship than females (e.g. Brush, 1992; Haber et al., 1987). Moreover, this difference goes beyond cultural and geographical boundaries (Zhang et al., 2009). Individual approaches are mostly focused on identifying the moral features of individuals. Studies examining the effect of personal factors on decision making have identified several variables as important determinants of behavior. Some of these are as follows:

- Locus of control (Hegarty and Sims, 1978, 1979);
- Moral philosophy (Fritzsche, 1988);
- Stages of moral development (Manning, 1981; Stratton et al., 1981);
- Emotion (Gaudine and Thorne, 2001);
- Age (Serwinck, 1992);
- Years of education (Jones and Gautschi, 1988); and
- Gender (Ruegger and King, 1992).

The challenge for entrepreneurs is to exhibit ethical behavior and willingly accept the responsibility of the consequences of their goals and expectations for themselves and the society (Navran, 1997). The common understanding is, and has always been, that males are less ethically conscious than females (Jckall, 1988), but researchers who have tested gender impacts within the background of ethical decision-making have discovered contradictory results (Glover et al., 2002). Some studies advocate the opinion that females are less tending to unethical treatment than men (Betz et al., 1989; Kidwell et al., 1987). A number of studies support males as being the less ethical decision-makers while others claimed similar ethical selection treatment in both male and female (Chonko and Hunt, 1985; Ruegger and King, 1992). Tsalikis and Ortiz-Buonafina (1990) found no difference in the ethical treatment of males and females or in the way they process information. McDonald and Pak (1996) compared the differences in cognitive frameworks. They found that fundamentally no major difference exists in the cognitive structure employed by males and females, although a separation by country showed an obvious difference in the frameworks used in each cultural situation (Glover et al., 2002). Glover (2002) claimed personal differences appease the role of personal values.

Methodology

Questionnaire

The questionnaire was made up of two parts, with each part evaluating the demographics of respondents and containing questions aimed at depicting a special decision-making style. The first part consisted of questions on, age, gender and experience. The second one was a self-administrated questionnaire, which contained 23 items (Scott and Bruce, 1995). It was arranged based on five distinguish measures, each describing a particular decision-making style: (1) Rational, defined as a logical and systematic approach to decision-making; (2) Intuitive, described as a preference to rely upon intuitions and emotions; (3) Dependent, defined as a necessity to assist and backup of others; (4) Avoidant, defined as the endeavor to delay and eschew decisions; and (5) Spontaneous, characterized by the preference to make decisions with no former thinking. The 23 items except demographic information were measured on a 5-point Likert type scale from “strongly disagree” (1) to “strongly agree” (5). The Iranian GDMS version was an explanation of the original questionnaire, with accurately similar item numbering. Six expert translators confirmed the exactness of the translation.

The empirical data of the present study were collected by conducting a questionnaire survey among students of Entrepreneurship Department of Tehran University in Iran. A combination of comfort sampling was employed for choosing 162 respondents for the study. There was an equal distribution of male and female respondents (Female=81, Male=81) and they completed the questionnaires in class time.

Exploratory Factor Analysis

An exploratory factor analysis (EFA), was employed to lessen the 23 items in questionnaire to a more feasible number. The statistical package, Statistical Version 16, was utilized to execute the demanded exploratory factor analysis, incorporating principal factor analysis with Varimax Rotation. In addition, EFA was executed for examining the structure of GDMS. According to the values of Cronbach Coefficient alpha and factor loading, the total factor taken, was assumed appropriate. According to Malhotra (2004), in this field, for both male and female, factors with Eigenvalues equal to 1 and with loadings of 0.4 or higher were considered meaningful. Ultimately, the four factors of decision-making styles for male named, Rational, Dependence and Avoidance, and the three factors of decision-making styles for female were termed, Rational-Intuitive, Rational-Dependence and Intuitive-Avoidance. The results are given in table 1.

Table1- Gender's Decision-Making styles

	GDMS	Item Loa ding	Cron bach Alph a
	<i>Rational-Intuitive</i>		0.73
Female	I double-check my information sources to be sure I have the right facts before making a decision (R)	0.65	
	I postpone decision making whenever possible (A)	0.76	
	I generally make important decisions at the last minute (A)	0.73	
	I often make impulsive decisions (S)	0.55	
	<i>Rational-Dependence</i>		0.75

	I often need the assistance of other people when making important decisions (D)	0.76
	I make decisions in a logical and systematic way (R)	0.52
	I like to have someone to steer me in the right direction when I am faced with important decisions (D)	0.78
	<i>Intuition-Avoidance</i>	0.72
	I avoid making important decisions until the pressure is on (A)	0.45
	When I make decisions. I tend to rely on my intuition (I)	0.69
	When making a decision. It is more important for me to feel the decision is right than to have a rational reason for it (I)	0.49
	I put off making many decisions because thinking about them makes me uneasy (A)	0.61
	<i>Rational</i>	0.77
	I make decisions in a logical and systematic way (R)	0.74
	My decision making requires careful though (R)	0.68
	When making a decision. I consider various options in terms of a special goal (R)	0.86
	I explore all of my options before making a decision (R)	0.45
	<i>Dependence</i>	0.74
	I often need the assistance of other people when making important decisions (D)	0.85
	I rarely make important decisions without consulting other people (D)	0.55
	I use the advice of other people in making my important decisions (D)	0.68
	I like to have someone to steer me in the right direction when I am faced with important decisions (D)	0.80
	<i>Spontaneous</i>	0.78
	I make quick decisions (S)	0.83
	I often make decisions on the spur of the moment (S)	0.83
	I often make impulsive decisions (S)	0.57
Male	I put off making many decisions because thinking about them makes me uneasy	0.68

(A)

<i>Avoidance</i>	0.76
I postpone decision making whenever possible (A)	0.71
I generally make important decisions at the last minute (A)	0.72
I often procrastinate when it comes to making important decisions (A)	0.46
If I have the support of others. It is easier for me to make important decisions	0.58

(D)

Confirmatory Factor Analysis (CFA)

Confirmatory Factor Analysis (CFA), were performed to eliminate items and condensed dimensions. For this purpose, the software AMOS 17.0 was used and with that the reliability and validity of the measurement were assessed.

The appropriateness of the results which were exploited by EFA, was assessed using several indexes: χ^2/df , CFI, RFI, RMSEA and PRATIO. Based on Ballen (1989) the ratio of χ^2/df should mostly be less than 3. Hu and Bentler (1999) claimed the following as a sign of good fit: $CFI \geq 0.95$ and $RMSEA \leq 0.50$. In order to assess the degree of parsimony of the results, the AIC index, with proportionately low values of alike indexes, was used. In comparison with the higher values, AIC index with low values inferring a better fit and parsimony of the results (Raykov and Marcoulides, 2000). The indicators are shown in table 2.

Table2- Good Fit Indexes

	χ^2	DF	χ^2/df	RFI	CFI	RMSEA	PRATIO	AIC
Female	56	41	1.36	0.56	0.93	0.06	0.74	128
male	113	98	1.15	0.68	0.95	0.065	0.81	221

Reliability Coefficient

If reliability coefficient was lower than 0.60, a suspect situation would be regarded, near to 0.70 factors intended allowableness and higher than 0.80 figures revealed a good situation (Sekaran, 2003). In this study, coefficient Alphas for the 23 item decision-making style, for both male and female were 0.76, which are well compatible with the suggested value and are in line with reliabilities for that measure informed in several studies (e.g. shimpan and shorma, 1987; Netemeger et al., 1991; Sharma et al., 1995).

Results and findings

Table 3 presents the demographic information of our sample of female and male entrepreneurship students. As the purpose of this research is to settle if there are any important difference between decision making style of females and males with entrepreneurship background, the data was analyzed using EFA (Exploratory Factor Analyses) in order to explore the decision making styles of males and females separately; also, CFA (Confirmatory Factor Analysis) confirmed the results of EFA. As shown in table 3, females had less work experience compared to males.

Table 1 reports the decision-making styles consequence for our sample of females and males. As shown in table 1, females almost use 3 decision-making styles. These styles are Rational-Intuitive, Rational-Dependence and Intuitive-Avoidance. In the same table, on that section which relates to decision-making styles of males, it can be seen that males face a decision-making situation they often employ a special decision-making style. As presented in table 1, the decision-making styles of males with entrepreneurship background were named Rational, Dependence, Avoidance and Spontaneous.

Table 3-Profile of respondents

	year	Female	Male
Age	Younger than 23-23	-	6%
	23-25	2.5%	92%
	26-28	-	2%
	29-31	93%	-
	32-older	1.2%	-
Experience	Less than 3	23%	25%

3-6	15%	28%
7-10	6%	12%
More than 10	3%	6%
0	23%	9%

Conclusion and Implication

Our quantitative study gives some insight on to the impact of gender differences on decision making styles. It was concluded that Iranian female and male students employ different decision making styles. Thus, the organizations should take these differences into consideration when they decide to recruit new employees. Furthermore, this study could benefit entrepreneurial venture capitalists. In this sense it is important to perceive how a female or male entrepreneur makes decisions more efficiently and assist investors trust them with their capital.

In this part, some limitations of this research are demonstrated and also suggestions for further studies are given. Main limitation of this study is that it was only focused on students of entrepreneurship; disregarding other entrepreneurs. It is recommended to future researchers to conduct the study on entrepreneurs in general. Another limitation was that, this research didn't regard the impacts of culture. So it is suggested to note this factor in further studies. Furthermore, we cannot generalize the findings of this research, to establish more generality, it must be conducted on other people, especially other entrepreneurs.

Reference

- Ahituv, N., Igarria, M., and Sella, A. (1998), "The Effects of Time pressure and completeness of information on decision making", *Journal of Management Information Systems*, Vol. 15, No. 2, pp.153–172.
- Allinson, C. W., Chell, E., and Hayes, J. (2000), "Intuition and Entrepreneurial Behavior", *European Journal of Work and Organizational Psychology*, Vol. 9, No. 1, pp. 31–43.
- Baiocco, R., Laghi, F., D'Alessio, M., Guerrieri, G., and Di Chiacchio, C. (2007), "Gli stili nella presa di decisione in adolescenza: quale rilevanza nella pratica orientativa", *Psicologia dell'educazione e formazione*, Vol. 9, No. 1, pp.67-98.
- Betz, N., O'Connell, M. and Shepard, J. (1989), "Gender Differences in Proclivity for Unethical Behavior", *Journal of Business Ethics*, Vol. 8, No. 5, pp. 321-324.
- Bollen, K. A. (1989). *Structural equations with latent variables*. New York: Wiley.
- Brehmer, B. (1992), "Dynamic Decision Making: Human Control of Complex Systems", *Acta Psychologica*, Vol. 81, No. 3, pp. 211–241.
- Brenkert, G., (2002), "Entrepreneurship, Ethics and the Good Society", *Business Ethics Quarterly*, Vol. 3, pp. 5–43.
- Brew, F. P., Hesketh, B., and Taylor, A. (2001), "Individualistic-collectivist Differences in Adolescent Decision Making and Decision Styles With Chinese and Anglos", *International Journal of Intercultural Relations*, Vol. 25, No. 1, pp. 1-19.
- Brush, C. G. (1992), "Research on Women Business Owners: Past Trends, a New Perspective and Future Directions", *Entrepreneurship Theory and Practice*, Vol. 16, No. 4, pp. 5–30.
- Bucholtz, R. and Rosenthal, S., (2005), "Toward a Contemporary Conceptual Framework for Stakeholder Theory", *Journal of Business Ethics*, Vol. 58, No. 1-3, PP. 137-148.
- Busenitz, L.W., Barney, J.B., (1997), "Differences between Entrepreneurs and Managers in Large Organizations: Biases and Heuristics in Strategic Decision-Making", *Journal of Business Venturing*, Vol. 12, No. 1, pp.9–30.
- Chell, E. J., Haworth, M., and Brearley, S. (1991). *The entrepreneurial personality: Concepts, cases and constructs*. London: Routledge.
- Covin, J. G., and Slevin, D. P. (1991), "A Conceptual Model of Entrepreneurship as Firm Behavior", *Entrepreneurship Theory and Practice*, Vol. 16, No. 1, pp. 7–24.
- Driver, M. J. (1979). *Individual decision making and creativity*. In S. Kerr (Ed.), *Organizational behavior* (pp. 59e91). Columbus, OH: Grid Publishing, Inc..

- Franken, I. H. A., and Muris, P. (2005), "Individual Differences in Decision Making", *Personality and Individual Differences*, Vol. 39, No. 5, pp. 991-998.
- Fritzch, D. (1988), "The Effects of Personal Values and Organizational Goals upon the Ethical Dimensions of Decision Making", paper submitted to the Social Issues Division of the Academy of Management Meetings, San Francisco, CA.
- Gambetti, E., Fabbri, M., Bensi, L., and Tonetti, L., (2008), "A Contribution to the Italian Validation of the General Decision-making Style Inventory", *Personality and Individual Differences*, Vol. 44 No.4, pp. 842-852.
- Gartner, W. B. (1985), "A Conceptual Framework for Describing the Phenomenon of New Venture Creation". *Academy of Management Review*, Vol. 10, No. 4, pp. 696-706.
- Glover, S. H., Bumpus, M. A., Sharp, G. F. and Muchus, G. A. (2002), "Gender Differences in Ethical Decision Making", *Women in Management review*. Vol. 17 No. 5, pp. 217-227.
- Guadine, A. and Thorne, L. (2001), "Emotion and Ethical Decision Making in Organizations", *Journal of Business Ethics*, Vol. 31, No. 2, pp. 175-87.
- Gurol, Y., and Atsan, N. (2006), "Entrepreneurial Characteristics amongst University Students: Some insights for Entrepreneurship Education and Training in Turkey", *Education and Training*, Vol. 48, No. 1, pp. 25-38.
- Haber, S., Lamas, E., and Lichtenstein, J. H. (1987), "On Their Own: The self-Employed and Others in Private Business", *Monthly Labor Review*, Vol. 110, No. 5, pp. 16-23.
- Harren, V. A. (1979), "A Model of Career Decision Making for College Students", *Journal of Vocational Behavior*, Vol. 14, No. 2, pp. 119-133.
- Hegarty, W. and Sims, H. (1978), "Some Determinants of Unethical Decision Behavior: an Experiment", *Journal of Applied Psychology*, Vol. 63, No. 4, pp.451-457.
- Hegarty, W. and Sims, H. (1979), "Organizational Philosophy, Policies, and Objectives Related to Unethical Behavior: a Laboratory Experiment", *Journal of Applied Psychology*, Vol. 64 No. 3, pp.331-8.
- Hu, L., and Bentler, P. M. (1995). Evaluating model fit. In R. H. Hoyle (Ed.), *Structural equation modeling: Concepts, issues, and applications* (pp. 76-99). Thousand Oaks, CA :Sage.
- Jackall, R. (1988), *Moral Mazes*, Oxford University Press, New York, NY.
- Jones, T. and Gautschi, F. III (1988), "Will the Ethics of Business Change? A Survey of Future Executives", *Journal of Business Ethics*, Vol. 7, No. 4, pp. 231-248.

- Karabey, C.N. (2012), "Understanding Entrepreneurial Cognition through Thinking Style, Entrepreneurial Alertness and Risk Preference: Do Entrepreneurs Differ from Others?", *Procedia-Social and Behavioral Sciences*, Vol. 58, pp. 861-870
- Karagozoglu, N., and Brown, W. B. (1988), "Adaptive Responses by Conservative and Entrepreneurial firms", *Journal of Product Innovation Management*, Vol. 5, No. 4, pp. 269-281.
- Khatri, N., and Ng, H. A. (2000), "The Role of Intuition in Strategic Decision Making", *Human Relations*, Vol. 53, No. , pp. 57-86.
- Kirzner, I.M., 1973. *Competition and Entrepreneurship*. The University of Chicago Press, Chicago.
- Knight, F.H., 1921. *Risk, Uncertainty, and Profit*. Sentry Press, New York.
- Krueger, N. F. (2000), "The Cognitive Infrastructure of Opportunity Emergence", *Entrepreneurship Theory and Practice*, Vol. 24, pp. 5-23.
- Lee, D. Y., & Tsang, E. W. K. (2001), "The Effects of Entrepreneurial Personality, Background and Network Activities on Venture Growth", *Journal of Management Studies*, Vol. 38, No. 3, pp. 583-602.
- Loo, R. (2000), "A Psychometric Evaluation of the General Decision-Making Style Inventory", *Personality and Individual Differences*, Vol. 29, No. 5, pp. 895-905.
- Lyon, D.W., and Ferrier, W.F. (1998), *The Relationship between Innovative Firm Behavior and Performance: The Moderating Role of the Top Management Team. Paper presented at the Academy of Management Meetings*, San Diego, CA.
- Lin, W. (2006), "A Comparative Study on the Trends of Entrepreneurial Behaviors of Enterprises in Different Strategies: Application of the Social Cognition Theory", *Expert Systems with Applications*, Vol. 31 No. 2, pp. 207-220.
- Malhotra, N.K. (2004) *Marketing Research: An Applied Orientation* (4th Edn) Pearson Education, Inc: New Jersey.
- Mann, L., Harmoni, R., & Power, C. (1989), "Adolescent Decision-Making, the Development of Competence", *Journal of Adolescence*, Vol. 12, No. 3, pp. 265-278.
- Manning, F. (1981), *Managerial Dilemmas and Executive Growth*, Reston Publishing, Reston, VA.
- Marshall, K.P., (1999), "Has Technology Introduced New Ethical Problems?" *Journal of Business Ethics*, Vol. 19, No. 1, pp. 81-90.
- McDonald, G. and Pak, P. (1996), "It's all Fair in Love, War, and Business: Cognitive Philosophies in Ethical Decision Making", *Journal of Business Ethics*, Vol. 15, No. 9, pp. 973-96.

- MCGrath, R.G., Macmillan, I.C., 2000. *The Entrepreneurial Mindset. Strategies for Continuously Creating Opportunity in an Age of Uncertainty.* Harvard Business School Press, Cambridge.
- McVea, J., Freeman, E., (2005), "A Names- and Faces-Approach to Stakeholder Management: How Focusing on Stakeholders as Individuals can Bring Ethics and Entrepreneurial Strategy Together", *Journal of Management Inquiry*, Vol. 14, No. 1, pp. 57–70.
- Miller, D. (1983), "Entrepreneurship Correlates in Three Types of Firms", *Management Science*, Vol. 29, No. 7, pp. 770–791.
- Miller, D. C., & Byrnes, J. P. (2001), "Adolescents' Decision Making in Social Situations, A Self-Regulation Perspective", *Applied Developmental Psychology*, Vol. 22, No. 3, pp.237-256.
- Mitchell, R. K., Busenitz, L., Lant, T., McDougall, P. P., Morse, E. A. and Smith, J. B. (2002), "Toward a Theory of Entrepreneurial Cognition: Rethinking the People Side of Entrepreneurship Research", *Entrepreneurship Theory and Practice*, Vol. , No. 2, pp. 93-104.
- Navran, F. (1997), "Promoting ethical behavior", available at: www.navran.com/articles/ethics/EthBehaviour.htm, pp. 1-6
- Nutt, P. C. (1990), "Strategic Decisions Made by Top Executives and Middle Managers with Data and Process Dominant Style", *Journal of Management Studies*, Vol. 27, No. 2, pp.173-194.
- Phillips, S. D., Pazienza, N. Y., and Ferrin, H. H. (1984), "Decision Making Styles and Problem Solving Appraisal", *Journal of Counseling Psychology*, Vol. 31, No. 4, pp. 497-502.
- Payne, J. W., Bettman, J. R., and Johnson, E. J. (1993). *The adaptive decision maker.* Cambridge, NY: University Press
- Rotter, J. B. (1966), "Generalized Expectancies for Internal Versus External Control of Reinforcement", *Psychological Monographs*, Vol. 80, No. 1, pp. 1-28.
- Rowe, A. J., and Mason, R. O. (1987), *Managing with style: A guide to understanding, assessing, and improving decision making.* San Francisco: Jossey-Bass.
- Ruegger, D. and King, E. (1992), "A Study of the Effect of Age and Gender upon Student Business Ethics", *Journal of Business Ethics*, Vol. 11, No. 3, pp. 179-86.
- Sadler-Smith, E. (2004), "Cognitive Style and the Management of Small and Medium-Sized Enterprises", *Organization Studies*, Vol. 25, No. 2, pp. 155–181.
- Schumpeter, J.A., 1942. *Capitalism, Socialism, and Democracy.* Harper and Brothers, New York. (Harper Colophon edition, 1976.
- Scott, S. G., and Bruce, R. A. (1995). "Decision-Making Style: The Development and Assessment of a New Measure". *Educational and Psychological Measurement*, Vol. 55 No.5, pp. 818–831.

- Sekaran, U. (2003). *Research methods for business* (4th Ed.). Hoboken, NJ: John Wiley & Sons.
- Serwinck, P. (1992), "Demographic and Related Differences in Ethical Views among Small Business", *Journal of Business Ethics*, Vol. 11, No. 7, pp. 555-66.
- Sharma, Subhash, Terence A. Shimp, and Jeongshin Shin (1995), "Consumer Ethnocentrism: A Test of Antecedents and Moderators," *Journal of the Academy of Marketing Science*, Vol. 23, No. 1, pp. 26-37.
- Shimp, Terence A. and Subhash Sharma (1987), "Consumer Ethnocentrism: Construction and Validation of the CETSCALE," *Journal of Marketing Research*, Vol. 27, No. , pp.280-289.
- Spicer, D. P., and Sadler-Smith, E. (2005). "An examination of the General Decision Making Style questionnaire in two UK samples". *Journal of Managerial Psychology*, Vol. 20, No. 2, pp.137-149.
- Stratton, W., Flynn, W. and Johnson, G. (1981), "Moral development and decision making: a study of student ethics", *Journal of Enterprise Management*, Vol. 3, pp. 35-41.
- Thunholm, P. (2004), "Decision Making Style: Habit, Style or Both?" *Personality and Individual Differences*, Vol. 36, No. 4, pp. 931-944.
- Timmons, J. A. (1999). *New venture creation* (5th Ed.). Singapore: McGraw- Hill (pp. 37-40).
- Timmons, J., Spinelli Jr., S., 2004. *New venture creation: entrepreneurship for the 21st century*. McGraw Hill Irwin, New York.
- Tsalikis, J. and Ortiz-Buonafina, M. (1990), "Ethical beliefs` differences of males and females", *Journal of Business Ethics*, Vol. 9, No. 6, pp. 509-17.
- Venkataraman, S., 1997. The distinctive domain of entrepreneurship research. In: Katz, J. (Ed.), *Advances in entrepreneurship, firm emergence and growth, III*. JAI Press.
- von Winterfeld, D., & Edwards, W. (1986). *Decision analysis and behavioral research*. Cambridge, NY: University Press.
- Zhang, Z., and Arvey, R. D. (in press). Rule Breaking in Adolescence and Entrepreneurial Status: An Empirical Investigation. *Journal of Business Venturing*, doi:10.1016/j.jbusvent.2008.04.009.