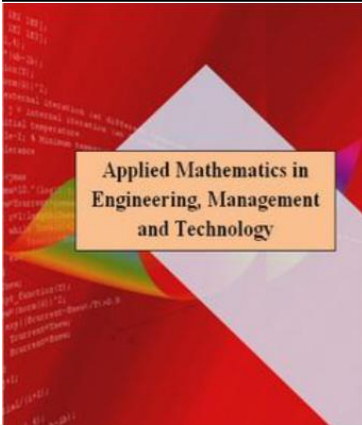


The Effect of Prior Knowledge and Social Networks on Entrepreneurial Alertness

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Abstract

This study aimed to investigate the factors affecting the development of entrepreneurial alertness in the field of Iran advanced industries. The population consisted of all entrepreneurs (core founders and owners of technical knowledge), the companies active in the field of high-tech and knowledge-based industries. According to the Department of technological development and high-tech industries of the Industrial Development and Renovation Organization of Iran, the number of all successful entrepreneurial companies in this field is about 200. The statistical sample of this research is defined through the sampling table of Krejcie and Morgan ($n=127$, $N=200$). Simple random sampling was used and a questionnaire was designed in order to collect data. The questions used in the mentioned questionnaire were selected from standard questionnaires regarding research variables with final opinion of respected professors. To estimate reliability, retest (Cronbach's alpha) was used. In order to analyze the data

and test the research hypotheses, structural equation modeling was used. To determine the construct validity and model fitness, confirmatory factor analysis was used. Smart PLS was also used for data processing. According to the hypotheses test results, social networking and prior knowledge have a significant effect on entrepreneurial alertness of entrepreneurs in the high-tech industries of Iran.

Keywords: social networking, prior knowledge, entrepreneurial alertness

Introduction

Exploring new business opportunities is the most important thing in the field of entrepreneurship. In other words, "opportunity" is a key concept in the field of entrepreneurship. (Shane and Venkataraman, 2000). Opportunities are the pillars of a new venture activity with economic and social benefits created by entrepreneurial activities. Entrepreneurs identify and exploit opportunities to guide the production process and satisfy the social, economic, and sometimes inner needs. Recognizing entrepreneurial opportunities depends on various factors and components such as previous experiences, personal situation, environmental changes, obtaining specific information, etc. (Gaglio and Katz 2001, Shane 2000, Shapheard et al 2007, Tripsas 2008). Knowledge, skills, and personal insights are also effective in discovering opportunities (Kirzner 1991, Kaish & Gilad 1999).

Kirzner (1985, 1979, 1973) indicated that "Consciousness is a human feature that helps some people pay attention to the missing changes and opportunities ignored by most people and discover them. It is suggested that entrepreneurs do their discoveries by being "alert" and "aware" of the current market opportunities. This is the special characteristic of entrepreneurs which enables them to recognize opportunities to achieve entrepreneurial profit. In other words, entrepreneurial alertness enables them to see the opportunities for purchasing a particular product at a certain price and selling it at a higher price (Kirzner, 1985, 1979, 1973).

Researchers use the characteristic of "entrepreneurial alertness" to explain how to "explore opportunities" in an unbalanced and uncertain situation (Kirzner, 1973), identify distinguishing features of entrepreneurs vs. non-entrepreneurs (Kaish & Gilad 1991, Busentiz 1996), and finally describe the mental patterns of entrepreneurs to organize and interpret information (Gaglio & Katz 2001) (Tang, 2007).

For many years, this question had occupied the minds of entrepreneurship researchers and theorists that whether entrepreneurs are born or can be created through education. Many researches were conducted to answer this question. The approaches of personality characteristics of entrepreneurs, demographic characteristics of entrepreneurs, and environmental factors in training entrepreneurs were the results of these studies. Kirzner's definitions such as "the ability to identify opportunities without systematic investigation" and "having supernatural understanding to explore unbalanced opportunities" (Kirzner 1973, 1979) indicated that this concept is an inherent, unintentional, and unplanned feature. Therefore, its trainability seems hard or impossible

and it does not have the capability to be developed. This is while other researches emphasized other dimensions such as obtainability and trainability of human alertness (Tang2010, Vallerie2011, Gaglio & Katz2001). In this study, entrepreneurial alertness is regarded as a decision-making ability in order to see the current and future opportunities (Kirzner1985). Therefore, development of entrepreneurial awareness and its influencing factors can enhance the decision-making ability to see the current and future opportunities and so, we can transform it from the unplanned, unintentional, and inherent state to the obtainable and trainable condition. The main issue is: "what are the factors affecting the development of entrepreneurial alertness in the field of high-tech industries in Iran?"

Literature

1. Entrepreneurial alertness

Research has shown that three schools of thought have defined the concept of alertness: 1. Austrian economics approach, 2. behavioral approach, and 3. cognitive approach. In general, these three approaches have some similarities and differences which lead to the formation of different aspects of this concept. The attitude of the "Austrian School" to alertness is focused on a supernatural sense of entrepreneurs to identify and realize the unbalanced attitude conditions containing profitable opportunities in the market. "Behavioral approach" focuses on alertness and information seeking behavior by entrepreneurs. This information seeking may be unplanned, but is continuous and helps the formation of entrepreneurial knowledge base. The "cognitive approach" seeks to define alertness and refers to the specific cognitive processes in this regard. It discusses whether such mental models are different with mental models of non-entrepreneurs or not (Tang, 2007)

	Austrian school of economics	entrepreneurial behavior	Entrepreneurial Recognition
Researchers	Kirzner, Yu	Kaish and Gilad, Ko & Butler, Busenitz	Gaglio & Katz
Focus	supernatural understanding find out unbalanced opportunities	Information seeking behavior	Mental pattern: Cognitive approach

Comparing different perspectives on entrepreneurial alertness

2. Dimensions of entrepreneurial alertness

With a review of the researches and based on information processing approach, Ms. Tang defined the following three complementary dimensions for alertness
 First dimension. Monitoring and searching for new information

It means permanent environment monitoring and seeking unseen information and changes. With the expansion of alertness as a part of entrepreneurial knowledge process (Alvarez & Busenitz 2001, Mitchell et al. 2007), this dimension includes pre-existing knowledge, readiness, and sensitivity to changes containing new or existing opportunities. Although the existing evidence confirms systematic searches, but there is the possibility of information seeking in the form of natural efforts (Gaglio & winter, 2009). Discovery without systematic knowledge is the result of interaction between the individual's prior knowledge and the market events.

In principle, a person's background allows him to understand new information (market events) such that the person can pay attention to the phenomena without systematic search.

The second dimension. Connecting the information

This perspective includes combination of distinct pieces of information and converting them into a logical option. This dimension corresponds to the work of Kirzner in 1999 and shows the way that people respond

cognitively to the evidence and signs and the way they cognitively process the new information (Tang2007). Whenever an unusual or unexpected phenomenon occurs, this dimension of alertness allows the entrepreneurs to change their mind patterns for adaption with inconsistent data (Giglio & katz 2001). This dimension of alertness allows entrepreneurs to get out of routine mental models and modify a set of tool frameworks for current and common goals in their mind (Tang 2007).

The third dimension: Assessment and judgment of information

This dimension includes assessment and judgment of the changes, transitions, and new information and recognizing whether these show a business opportunity of profitable capacity or not. Dimension of evaluation and judgment is an important part of entrepreneurial alertness and expands the boundaries of entrepreneurial alertness. Evaluation and judgment intend to review and estimate whether the new information yield an opportunity or not. Sheppard and McMullen (McMullen and Shepherd, 2006) claimed that Kirzner's theory of alertness indicates attention to the assessment and judgment of new changes, information, or transfers, and decision-making on hidden business opportunities and profitably probability of new changes and information. Note that assessment in this sense does not include real action and investment on opportunities and is only the evaluation of existence of opportunities (Tang 2007).

(3) Identifying factors affecting the development of entrepreneurial alertness

Research conducted on identifying the development of alertness have mostly dealt with identifying the effective factors and backgrounds of alertness. For example, Tang (Tang, 2007) identified the factors affecting entrepreneurial alertness and declared that alertness is the result of prior knowledge and environmental dynamism and that sudden life changes are effective in this regard. In another study (Tang2008), Tang studied the impact of environmental capacity on entrepreneurial alertness. His findings showed that there is a strong correlation between environmental richness and alertness, especially when entrepreneurs have higher self confidence in carrying out their roles and duties in creation of a new business. In another study, Tang attempted to answer this question: "which factors create entrepreneurial alertness?" He believed that entrepreneurial alertness is the result of asymmetric information owned by entrepreneurs and not accessed by others. In his opinion, such information are the result of their unique life experiences. He examined the personal and environmental factors together. The individual factors in his study include:

- Human capital (including prior knowledge, previous work experiences);
- Social capital (structural and relational);
- Social competence (probable perception, adaptability, effectiveness management).

According to him, the impact of these factors on entrepreneurial alertness is subject to environment requirements (internal policies, socio-economic status, and financial and nonfinancial support) and life experiences (sudden changes in positive and negative) of the individual. (Tang 2008). In his study, Valir confirmed that "entrepreneurial alertness is not a rare feature owned only by certain people, but is the development and application of a different set of mental frameworks used for understanding the phenomena". In this research, Valir expressed the entrepreneurial alertness backgrounds in three concepts of experience and expertise, training and practice, and entrepreneurial intention. He believed that we can design and implement some educational programs in order to train future entrepreneurs or improve alertness of the existing entrepreneurs.

Researcher's Name	Year	Research results
Krizner	1973, 1979, 1985, 1999	A supernatural understanding to distinguish the unbalanced opportunities
Kaish & Gilad	1991	Information seeking behavior
Busentiz	1996	Information seeking behavior
Gaglio & Katz	2001	Mental design: the cognitive process
Yu	2001	Supernatural sense to find out the unbalance situations
Alvarez & Busentiz	2001	Information seeking behavior
Ko & Butler	2003	Information seeking behavior
Mc Mullen & Shepherd	2006, 2007	Information seeking behavior
Tang	2007	Mental design: cognitive process
Mitchell	2007	Information seeking behavior
Tripsas	2008	Mental design: cognitive process
Gaglio & Winter	2009	Information seeking behavior
Vallerie	2011	Mental design: cognitive process

Given the undeniable impact of personality factors and social networks in entrepreneurial alertness, efforts are made in this study to examine the effect of these two issues on entrepreneurial alertness. Then, these dimensions are respectively discussed:

Personality factors

Many characteristics are proposed as the personality traits of entrepreneurs during the history by economic and management experts. Each of these studies have identified the factors that influence the development of entrepreneurship and association between the position and process. The most important of these studies are mentioned in the previous sections. Historical trend of these studies shows that in the contemporary era, characteristics of entrepreneurs is no more limited to one or two items and other factors are also known as the entrepreneurial characteristics. Obviously, most emphases in recent studies is on the personality characteristics of entrepreneurs and they are suggested as effective factors in entrepreneurial process. According to Ardichoili et al. (2003), creativity and positive thinking are of major importance in entrepreneurial alertness

Social Networks

Social Networks are a category of groups (e.g., people, organizations) that are connected through a specific type of social relations (for example, friendships, transfer of funds, same membership) (Singh 1998). According to the researchers, the role of different aspects of social networks is less considered simultaneously and synergistically in the scholars' researches. These dimensions include sources of mass information (Ozgen & Baron 2007), methods of data transfer (Nahapiet & Goshal 1998), the structure of social relations (Granovetter 1983), and the content of social relations (Nahapiet & Goshal 1998). As well, scholars have not paid attention to this type of perspective in Iran environment and have not conducted any research in this regard.

According to the literature, research hypotheses are established as follows:

1. Social networks have a significant effect on entrepreneurial alertness of entrepreneurs in high-tech industries of Iran.
2. Prior knowledge has a significant effect on entrepreneurial alertness of entrepreneurs in high-tech industries of Iran.

In this study, entrepreneurial alertness and its indicators, *i.e.* social networks and prior knowledge, are the latent variables; and monitoring and search for new information, links and connections between information, and

assessments and judgments on the information are the indicator variables of entrepreneurial alertness.

Research Conceptual Model

Research methodology

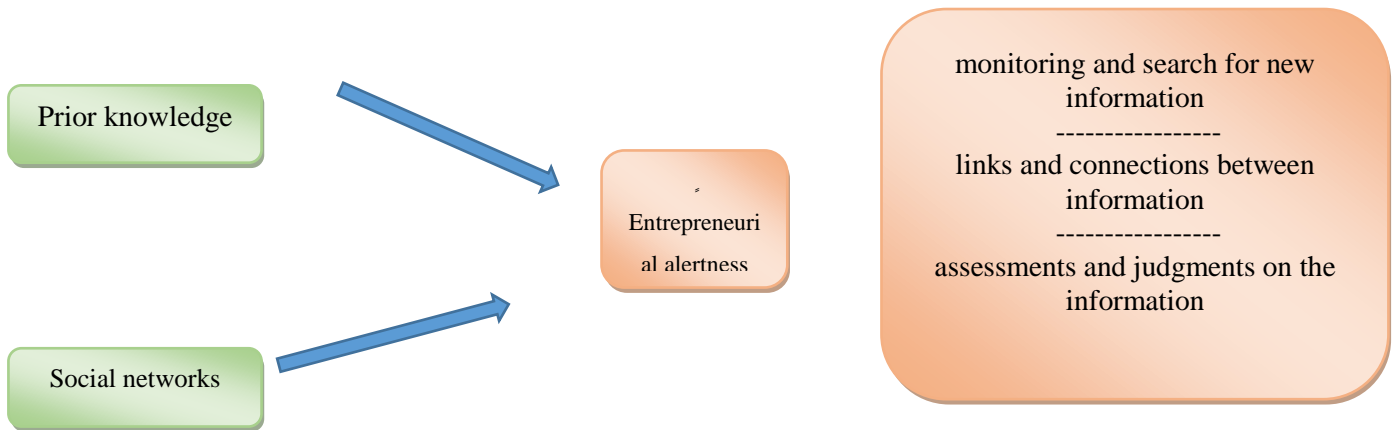


Fig.3 the model and units for the opportunity identification and development theory.

Reference 1. Journal of Business Venturing 18 (2003) 105-123 A. Ardichvili, R. Cardozo, S. Ray

Reference 2. Figure.1 model of entrepreneurial alertness Tang,J., Michele.K., Busentiz.L, 2012. Entrepreneurial alertness in the pursuit of new opportunities. Journal of Bussiness Venturing 27, 77-94.

Research methodology

This is an applied research which studies the impact of entrepreneurial alertness on developing potential capabilities of entrepreneurs and creating the business space. The intended target is the Industrial Development and Renovation Organization of Iran which is one of the executive arms of the Ministry of Industry, Trade and Mines, and most active entrepreneurs in high-tech industries visit there to receive a variety of support services. This paper attempts to examine the experiences of entrepreneurs on methods of developing entrepreneurial alertness in seasoned entrepreneurs. This is a correlational study examining the effect of independent variables including social networks and prior knowledge on entrepreneurial alertness as the dependent variable. This is also a survey regarding the research method because in this research, qualitative data are quantified using questionnaires as data collection tools.

Population and sample

The population consisted of all entrepreneurs (the core founders and owner of technical knowledge) of the companies active in the field of high-tech and knowledge-based industries. According to announcement of the Deputy of Technology Development and Advanced Industries of IDRO, the number of all successful entrepreneurial companies in the field of high-tech industries is 200 which is based on the evaluation and performance report of IDRO. The sample size is defined using sample size table of Krejcie & Morgan (n=127, N=200). Simple random sampling is used for each company. Questionnaires were distributed among 140 companies and 122 analyzable questionnaires were obtained.

Data analysis: To collect data, a questionnaire consisting of 54 questions is used to measure the research variables and its reliability is measured by Cronbach's alpha coefficient.

All questions of this questionnaire, designed by scientifically validated questionnaires, are analyzed using confirmatory factor analysis. This is done using structural equation modeling and statistical software of Smart PLS.

Discussion and conclusion

According to the results of hypotheses tests, it was seen that social networks and prior knowledge have a significant effect on entrepreneurial alertness of entrepreneurs in high-tech industries of Iran. To measure entrepreneurial alertness, Dabbin model is used which includes two indicators (social networks and prior knowledge). To assess the impact of these factors on success in the business environment and becoming a successful entrepreneur, Tang model is used which includes three dimensions (monitoring and search of new information, links and connections between information, and assessments and judgments about the information). In order to provide a conceptual model, studies conducted by Tang et al. (2003) and Ardichvili et al. (2012) were used. In Tang's research (2007), which identifies the factors affecting entrepreneurial alertness, it is expressed that alertness is the result of prior knowledge which is also obtained in the present study. Robert Ronshtat (1985) believed that entrepreneurship is the dynamic process of creating more wealth. This wealth is created by those who accept the great risk in terms of time, money, and occupational commitment for determining the value of goods or services. The entrepreneur must somehow create this value in goods or services by supplying and allocating the necessary skills and resources. Ardichvili et al. (2003) and Tang (2007) considered social networks as an effective factor in the formation of alertness. In addition, Tang (2007) expressed "social network" as another factor in developing the flow of information among people and alertness to the opportunities. By reviewing the results of this study, the effect of social networks on entrepreneurial alertness was confirmed which was consistent with the studies conducted by Ardichvili et al. (2003) and Tang (2007).

Recommendations

Identifying the factors reinforcing the entrepreneurial opportunities in Iran is of high importance. One of the factors influencing the perception of entrepreneurial opportunities is entrepreneurial alertness. In fact, entrepreneurial alertness can be defined as an inner tendency to be aware and sensitive to the unfulfilled information, problems, needs, and interests of potential and current customers (Ray and Cardozo 1996). Alertness is not an innate talent but is obtained through entrepreneurial experience and collection of business experiences where the information are acquired through practice and action, and it is not written in any book (Gagaliou and Katz, 2001). Factors affecting entrepreneurial alertness were studied in this study. For this purpose, some hypotheses were proposed and tested. According to the results of hypotheses put forward in this section, recommendations relating to the results of research in this field are offered.

According to the hypothesis test result, it was observed that social networks have a significant effect on entrepreneurial alertness of the entrepreneurs in high-tech industries of Iran.

It is recommended that the managers of high-tech industries create, develop, and strengthen social networks so that the experienced and successful entrepreneurs can transfer their experience and knowledge to the entrepreneurs who still have no experience of professional activity. Social networks can be used as a bridge for communication between those who have worked for years in the field of entrepreneurship and university graduates. In this way, they can share knowledge and experience. According to the hypothesis test result, it is observed that prior knowledge has a significant effect on entrepreneurial alertness of the entrepreneurs in high-tech industries of Iran. Since many entrepreneurial characteristics such as alertness can be educated and developed and also regarding the confirmation of hypotheses on the effect of prior knowledge on entrepreneurial alertness, we can say that using knowledge and experiences of successful internal and external entrepreneurs can improve the process of entrepreneurial development.

It is recommended to the managers of high-tech industries to create a comprehensive database of knowledge and experiences of successful entrepreneurs. Hence, they can develop entrepreneurship in the country and increase opportunities for entrepreneurship education and pave the way for increasing knowledge and entrepreneurial alertness. This can be done by holding alternate educational workshops and using this information and inviting entrepreneurs as well as those active in the field of entrepreneurship.

References

- Argyris, C., Schoen, D., 1978. *Organizational Learning: A Theory of Action Perspective*. Addison-Wesley, Reading, MA.
- A. Ardichvili et al. / *Journal of Business Venturing* 18 (2003) 105–123 121
- Bhave, M., 1994. A process model of entrepreneurial venture creation. *J. Bus. Venturing* 9 (2), 223–242.
- Buzenitz, L., 1996. Research on entrepreneurial alertness. *J. Small Bus. Manage.* 34 (4), 35–44.
- Caracelli, V., Greene, J., 1997. Crafting mixed-method evaluation designs. *New Dir. Eval.* 74, 19–32.
- Cardozo, R.N., 1986. Product classification in marketing: an appraisal and proposal. White paper, Carlson School of Management, University of Minnesota, Minneapolis.
- Casson, M., 1982. *The Entrepreneur*. Barnes and Noble Books, Totowa, NJ.
- Christensen, P.S., Madsen, O.O., Peterson, R., 1989. *Opportunity Identification: The Contribution of Entrepreneurship to Strategic Management*. Aarhus University Institute of Management, Denmark.
- Conway, H.A., McGuinness, A., 1986. Idea generation in technology-based firms. *J. Prod. Innovation Manage.* 4 (3), 276–291.
- De Koning, A., 1999. *Conceptualizing Opportunity Recognition as a Socio-Cognitive Process*. Centre for Advanced Studies in Leadership, Stockholm.
- Drucker, P.F., 1985. *Innovation and Entrepreneurship: Practice and Principles*. Harper & Row, New York.
- Dubin, R., 1978. *Theory Building*, second ed. Free Press, New York.
- Endsley, M., 1995. Toward a theory of situation awareness in dynamic systems. *Hum. Factors* 37 (1), 32–64.
- Gaglio, C.M., Taub, R.P., 1992. Entrepreneurs and opportunity recognition. In: Churchill, N.C., Birley, S., Bygrave, W., Muzyka, D., Wetzel, W.E. (Eds.), *Frontiers of Entrepreneurship Research*, 136–147.
- Getzels, J., 1962. *Creativity and Intelligence*. Routledge, London.
- Granovetter, M., 1973. The strength of weak ties. *Am. J. Sociol.* 78 (6), 1360–1380.
- Guth, W.D., Kumaraswamy, A., McEarlean, M., 1991. Cognition, enactment, and learning in the entrepreneurial process. In: Churchill, N.C., Bygrave, W.D., Covin, J.G. (Eds.), *Frontiers of Entrepreneurship Research*. Babson College, Babson Park, MA.
- Hayek, F., 1945. The use of knowledge in society. *Am. Econ. Rev.* 35 (4), 519–530.
- Hills, G.E., 1995. Opportunity recognition by successful entrepreneurs: A pilot study. *Frontiers of Entrepreneurship Research*. Babson College, Wellesley, MA, 103–121.
- Hills, G., Lumpkin, G.T., Singh, R.P., 1997. Opportunity recognition: perceptions and behaviors of entrepreneurs. *Frontiers of Entrepreneurship Research*. Babson College, Wellesley, MA, 203–218.
- Hisrich, R.D., 1990. Entrepreneurship/intrapreneurship. *Am. Psychol.* 45 (2), 209–222 (February).
- Kaish, S., Gilad, B., 1991. Characteristics of opportunities search of entrepreneurs versus executives: sources, interest, and general alertness. *J. Bus. Venturing* 6, 45–61.
- Kay, C.J., 1986. *The Identification of Catalysts Preceding Decision Making as Described by Innovators and Entrepreneurs*. University of San Francisco, San Francisco.
- Kirzner, I.M., 1973. *Competition and Entrepreneurship*. University of Chicago Press, Chicago, IL.
- Kirzner, I.M., 1979. *Perception, Opportunity and Profit*. University of Chicago Press, Chicago, IL.
- Kirzner, I., 1997. Entrepreneurial discovery and the competitive market process: an Austrian approach. *J. Econ. Lit.* 35, 60–85.
- Koller, R.H., 1988. On the source of entrepreneurial ideas. *Frontiers of Entrepreneurship Research*. Babson College, Wellesley, MA, 78–85.
- Krueger, N.J., Brazeal, D.H., 1994. Entrepreneurial potential and potential entrepreneurs. *Entrepreneurship Theory Pract.* 19, 91–104.
- Krueger, N.J., Dickson, P.R., 1994. How believing in ourselves increases risk taking: perceived self-efficacy and opportunity recognition. *Decis. Sci.* 25, 385–400.
- MacMillan, I., 1986. To really learn about entrepreneurship, let's study habitual entrepreneurs. *J. Bus. Venturing* 1, 241–243.
- McGrath, R., Venkataraman, S., 1994. Present promise, future payoff? The nature of expectations in internal corporate ventures. Working paper, Sol Snider Entrepreneurial Center, Wharton School, University of Pennsylvania.
- Mintzberg, H., 1998. *Strategy Safari: A Guided Tour Through the Wilds of Strategic Management*. Free Press, New York.
- 122 A. Ardichvili et al. / *Journal of Business Venturing* 18 (2003) 105–123
- Neck, C.P., Manz, C.C., 1992. Thought self-leadership: the influence of self-talk and mental imagery on performance. *J. Organ. Behav.* 13, 681–699.
- Neck, C.P., Manz, C.C., 1996. Thought self-leadership: the impact of mental strategies training on employee cognition, behavior, and affect. *J. Organ. Behav.* 17, 445–467.
- Nelson, R., 1987. *Capitalism as an engine of progress*. Working paper, Columbia University.
- Pavia, T.M., 1991. The early stages of new product development in entrepreneurial high-tech firms. *J. Prod. Innovation Manage.* 8 (1), 18–31.

- Phillips, J., 1991. Handbook of Training Evaluation and Measurement Methods. Gulf Publishing, Houston, TX.
- Ray, S., Cardozo, R., 1996. Sensitivity and creativity in entrepreneurial opportunity recognition: a framework for empirical investigation. Presented at the Sixth Global Entrepreneurship Research Conference, Imperial College, London.
- Ronstadt, R., 1988. The corridor principle. *J. Bus. Venturing* 1 (3), 31–40.
- Sathe, V., 1989. Fostering entrepreneurship in the large, diversified firm. *Organ. Dyn.* 18 (1), 20–32.
- Schroeder, R.G., Buckman, J., Cardozo, R.N., 1996. New value creation: the next development in quality management. White paper, Carlson School of Management, University of Minnesota, Minneapolis.
- Schumpeter, J., 1934. *Capitalism, Socialism, and Democracy*. Harper & Row, New York.
- Schwartz, R., Teach, R., 1999. A model of opportunity recognition and exploitation: an empirical study of incubator firms. Presented at the 13th UIC/AMA Symposium on Marketing and Entrepreneurship Interface, Nice, June.
- Shane, S., 1999. Prior knowledge and the discovery of entrepreneurial opportunities. *Organ. Sci.* 11 (4), 448–469.
- Shapiro, A., 1975. The displaced, uncomfortable entrepreneur. *Psychol. Today* 11 (9), 83–88, 133 (November).
- Shaver, K.G., Scott, L.R., 1991. Person, process, choice: the psychology of new venture creation. *Entrepreneurship Theory and Practice* 16 (2), 23–45.
- Sigrist, B., 1999. Entrepreneurial opportunity recognition. A presentation at the Annual UIC/AMA symposium at Marketing/Entrepreneurship Interface, Sofia-Antipolis, France.
- Singh, R., Hills, H., Lumpkin, G.T., 1999. Examining the role of self-perceived entrepreneurial alertness in the opportunity recognition process. Presented at the 13th UIC/AMA Symposium on Marketing and Entrepreneurship Interface, Nice, June.
- Stevenson, H.H., Roberts, M.J., Grousbeck, H.I., 1985. *New Business Ventures and the Entrepreneur*. Irwin, Homewood, IL.
- Teach, R.D., Schwartz, R.G., Tarpley, F.A., 1989. The recognition and exploitation of opportunity in the software industry: a study of surviving firms. In: Brockhaus, R.H., Churchill, W.C., Katz, J., Kirchoff, B.A., Vesper, K.H., Wetzell, W. (Eds.), *Frontiers of Entrepreneurship Research*, 383–397.
- Timmons, J.A., Muzyka, D.F., Stevenson, H.H., Bygrave, W.D., 1987. Opportunity recognition: the core of entrepreneurship. In: Churchill, N.C., et al. (Eds.), *Frontiers of Entrepreneurship Research*. Babson College, Wellesley, MA.
- Van de Ven, A., 1996. The business creation journey in different organizational settings. Paper presented at the Academy of Management Meeting.
- Venkataraman, S., 1997. The distinctive domain of entrepreneurship research: an editor's perspective. In: Katz, J., Brockhaus, R. (Eds.), *Advances in Entrepreneurship, Firm Emergence, and Growth*, vol. 3, pp. 119–138.
- Von Hippel, E., 1994. "Sticky information" and the locus of problem solving: implications for innovation. *Manage. Sci.* 40 (4), 429–439.
- Winslow, E.K., Solomon, G.T., 1993. Entrepreneurs: architects of innovation, paradigm pioneers and change. *J. Creat. Behav.* 27 (2), 75–88.