

**A NEW MEASURE OF  
ENTREPRENEURIAL  
DECISION-MAKING STYLE**

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**Abstract**

This study examines the development of a new measure: The Entrepreneurial Decision-Making Inventory to investigate a previously neglected area of research, namely entrepreneurial decision-making style. Questionnaires were distributed to 578 Victorian New Enterprise Incentive Scheme graduates resulting in 255 useable responses. Confirmatory factor analysis using AMOS 4.0 (Arbuckle and Wothke, 1999) indicated three distinct dimensions in the instrument: *Convergent*, *Divergent*, and *Inventive* decision-making styles. Semi-structured interviews were conducted to gather qualitative data which supported the confirmatory factor analysis and confirmed the multi-dimensional nature of the construct. The new instrument should assist researchers and practitioners to further understanding of the role of decision-making in small business development.

## A NEW MEASURE OF ENTREPRENEURIAL DECISION-MAKING STYLE

### INTRODUCTION

The decision-making process underlies business activity and has fundamental importance for problem-solving, the development of business plans, and goal-directed behavior. Mintzberg, Rasinghani, and Theoret (1976:246) defined a decision process as "a set of actions and dynamic factors that begins with the identification of a stimulus for action and ends with a specific commitment to action." The importance of decision-making has been well recognized by researchers: "If one process in particular characterizes the manager's or entrepreneur's job it is that of making decisions or solving problems" (Mosley, O'Brien and Pietri, 1991:5). Given the importance of decision-making in business, the current study investigates entrepreneurial decision-making based on the assumption that decision-making plays a central role in small business performance.

While considerable research has focused on decision-making in organizations (eg., Buttner and Gyskiewicz, 1993; Hoy and Hellreigel, 1982; Nutt, 1989), the extant literature often views small businesses as merely smaller versions of large organizations. However, the use of various business and economic principles that assist in explaining corporate manoeuvres may be of little assistance in understanding the successes and failures of small business. While the conditions that influence the decision to establish a business have been given adequate attention in the entrepreneurship literature, Amit, Gosten and Muller (1990:1233) commented that there has been "surprisingly little theoretical, quantitative and rigorous literature [which] focuses on decisions of entrepreneurs to develop their ventures." In a meta-analysis of studies which examined small business failure, Berryman (1994) recommended that further research should be conducted to observe the processes and decision-making within small firms. The current study examines decision-making as a process in order to address the deficiencies identified in the literature, and to make a contribution to the development of theories of small business management.

There are a number of difficulties in attempting to discover best prescriptive procedures for decision-making. For example, human decision-making processes cannot be repeated to test the effects of different approaches (Lipshitz, 1995), and different paradigms cannot be compared in terms of the goodness of their results (Watson, 1992). Several approaches to decision-making are evident in the literature. The 'scientific method', where prescriptive frameworks featuring stages or steps in the decision-making process has been described in detail by many researchers (e.g., Bantel and Jackson, 1989; Dewey, 1933; Robbins, 1994). The scientific method provides a logical foundation for decision-making, but fails to ensure good outcomes (Nutt, 1989). Further, in a study of 150 people including fire chiefs, tank platoon leaders, and design engineers making decisions under time pressure, Klein (1989:51) concluded that "... relatively few decisions are made using analytical processes, such as generating a variety of options and contrasting their strengths and weaknesses." Typically, decision-makers do not have the luxury of analytically working through all options attached to a problem (Lord and Maher, 1990). Consequently, although rational models of decision-making are logical, the response to the need for a decision is usually too rapid to allow for orderly sequential analysis (Simon, 1987).

The behavioral decision theory literature elucidates decision-making procedures used to counter the limited human ability to process information. For example, studies have investigated heuristics, the 'rules of thumb' used to reduce mental effort and to simplify decision-making (e.g., Busenitz and Barney, 1997). However, relying on heuristics may interfere with successful problem solving if expert knowledge is applied inappropriately. "Creative strategies for problem solving may require a suspension of one's expertise" (Finke, Ward and Smith, 1992:173). Therefore, even if decision-makers are aware of the need for creative strategies that go beyond the heuristics they normally employ, there is still the problem of knowing when applying expertise is counter-productive and creative thinking is necessary.

Decision-makers often arrive at solutions intuitively without being able to report how they attained the result (Agor, 1986; Watson, 1992). Bowers, Regehr, Balthazard and Parker (1990) propose that intuitions are like hunches that may or may not lead to correct insights or solutions. Thus "managers acquire a set of intuitions, a problem-solving style which is one of the key components of effective managerial behavior" (Simon,

1987:63). Therefore, decision-making style has been defined as the "learned, habitual response pattern exhibited by an individual when confronted with a decision situation" (Scott and Bruce, 1995:820).

Creative decision-making is important because it enhances the quality of solutions to life's problems (Milgram, 1990). Creative behavior is considered to be highly intentional even if the intention is not initially evident. According to Albert (1990:19), a person's creativity and personal identity are both emergent: "... they drive one another and are dependent on the other's development." Thus the study of creative decision-making is particularly important in terms of emerging entrepreneurs. Further, pragmatic approaches to the development of creativity have suggested that it is possible to train people to think in more creative ways (Finke, Ward and Smith, 1992). Therefore, research on creative decision-making could lead to the development of new and more effective creative techniques.

### Measurement of Decision-Making Style

Several studies on decision-making have applied the Kilmann and Herden (1976) model of organizational effectiveness criteria to small business (Brodzinski, Scherer and Weibe, 1990; Hoy and Hellreigel, 1982). The underlying premise of the Kilmann and Herden (1976) model, based on Jung's theory of psychological types, is that managers perceive and solve problems in different ways depending on their preferred problem-solving style. The model has been tested using the Myers-Briggs Type Inventory (MBTI) (Myers and Briggs, 1962). Other studies have used the MBTI to investigate decision-making and problem solving. For example, Nutt (1989) developed a Decision Style Survey based on the Jungian classification categories. However, the MBTI was considered too long and time consuming to administer in the current study, and has been discredited as a suitable research instrument (Boyle, 1995). Further, Wiggins (1989:538) stated that "the principal stumbling block to more widespread acceptance of the MBTI lies in the bipolar, discontinuous types to which the test authors are firmly committed." In view of the controversy surrounding the use of the MBTI in research, a multi-dimensional instrument to evaluate entrepreneurial decision-making style, taking into account the criticisms of the MBTI was developed in the current study.

Mosley, O'Brien and Pietri (1991) tested managerial problem-solving styles using a 20-item questionnaire which was a simplified version of the Keirsey Temperament Sorter (Keirsey and Bates, 1984) derived from the Myers-Briggs Type Inventory. Although the current study tested the inventory used by Mosley et al. (1991) in the pretest, the instrument lacked content validity and was considered inappropriate for the purpose of the current study.

Kirton (1976) proposed a theory describing different cognitive styles of creativity, problem-solving and decision-making within an organizational context. He developed a 32-item, self-report scale, the Kirton Adaption-Innovation Inventory (KAI) to measure individual differences in adaption-innovation. Respondents with low scores were labelled Adaptors 'preferring to do things better', while respondents with high scores were labelled Innovators, 'preferring to do things differently' (Taylor, 1989:297). Thus, adaptors and innovators are determined according to whether the score falls below or above the mean (Kirton, 1987). Most applications have treated the KAI as a summed scale (eg., Goldsmith and Kerr, 1991; Holland, 1987). Consequently, a criticism of the KAI relates to the treatment of measures as unidimensional or bi-polar (Caird, 1993; Payne, 1993). According to Payne (1993:7), "multi-dimensional models seem to suggest the possibility of more sophisticated explanations/theories." A further criticism of the instrument relates to the instructions. Respondents are required to assess *How difficult or easy is it to present yourself consistently over a long period?* The degree of difficulty in maintaining an image may not equate with decision-making style. For these reasons, the KAI was considered inappropriate for use in the current study.

According to Scott and Bruce (1995), interest in decision-making style has been hindered by the lack of a psychometrically sound instrument for measuring decision-making style and yet, theoretical progress is impossible without adequate measures (Schwab, 1980). Therefore, a new instrument specifically to ascertain entrepreneurial decision-making style was developed in the current study based on the assumption that "in small companies, strategies [the outcomes of decisions] are usually the sole reflection of the owner/operator" (Olson and Currie, 1992:49).

The objective in designing a new instrument was to address the deficiencies evident in the instruments described previously and to tap into the underlying characteristics of decision-making style such as focusing on detail, risk-taking, or taking the initiative. Further, the current study focuses on the adequacy of the Entrepreneurial Decision-Making Inventory from the perspective of scale construction. In most studies where new instruments are developed, the underlying factor structure is not theoretically predicted but is derived post hoc using exploratory factor analysis. Even though items cluster together, the statistical technique does not ensure that the items are measuring the same theoretical content. In contrast, the current study uses confirmatory factor analyses to examine the factor structure by testing hypothesized factor solutions derived from theory.

According to Schriesheim, Powers, Scandura, Gardiner and Lankau (1993), Confirmatory Factor Analyses (CFA) can improve the rigor with which content validity is assessed. CFA has a number of advantages over exploratory factor analysis. CFA tests the theoretically derived hypothetical structures of an instrument and overcomes the limitations associated with mathematically determined factor structures using exploratory factor analysis (Long, 1983). Empirical data reduction techniques such as exploratory factor analysis do not address the issue of content adequacy which should be based on the theoretical correspondence between a measure's items and a construct's delineated content domain (Schriesheim et al., 1993). However, specific theoretical relationships among observed indicator items can be identified and tested using CFA.

Apart from examining the factor structure of the instrument, there is a need to establish whether entrepreneurial decision-making is a multi-dimensional construct. Qualitative data were gathered in the current study to assist in examining whether the theoretical distinctiveness of the factors could be established. The current study focuses on the psychometric properties of the instrument under review and therefore, the substantive findings of the study have been omitted.

## METHOD

Quantitative and qualitative research methods were combined in the current study to enable triangulation, and to examine the results for convergence (Creswell, 1994). The use of multiple methods strengthens the researcher's claims for the validity of the conclusions drawn where mutual confirmation of results can be demonstrated (Bryman, 1988). Further, Patton (1990) suggested that where significant patterns of responses emerge through quantitative methods, it is often helpful to fill out the meaning of those patterns through in-depth study using qualitative methods to give substance to the areas of focus. Consequently, quantitative data were gathered by means of a questionnaire and semi-structured, face-to-face interviews were conducted to gather qualitative data.

### Data Collection

Scheme (NEIS) conducted at centers in metropolitan and country Victoria, which included the instrument, the Entrepreneurial Decision-Making Inventory resulting in 255 useable responses (a 45 per cent response rate). In-depth, semi-structured interviews were conducted with approximately ten per cent of respondents (25 in all) based on stratified proportionate sampling to represent both metropolitan and regional respondents. The following question was used during interviews to yield comments concerning decision-making style: *How do you go about making major decisions in your business?*

### Sample

Over three-quarters (77 per cent) of respondents were male. Almost two-thirds (63 per cent) of the sample was aged under 40 years when the respondents started their businesses. The sample was better educated than the Victorian population with over half (52 per cent) having post-secondary qualifications. The majority of respondents (80 per cent) had businesses that continued to operate at least a year after completing the NEIS course. Only 13.7 per cent of respondents had ceased trading (the criterion for business failure in the current study) and 3.1 per cent of respondents had sold their businesses. A further two per cent of respondents had never started in business. The majority of respondents (64 per cent) did not employ others.

## INSTRUMENTATION

The new instrument design process was commenced by drafting specific measurement questions based on the literature (for example, Buttner and Gryskiewicz, 1993; Keirse and Bates, 1984; Kirton, 1976, 1984; Mosley, O'Brien and Pietri, 1991). The draft instrument was tested among academic colleagues (N=22) and the interrater reliability estimate was calculated based on the formula suggested by Goodwin and Goodwin (1985:7): "number of coding agreements/ number of coding agreements plus number of coding disagreements." *Agreement* meant that raters concurred on the classification of an item. The resulting mean interrater reliability estimate for the instrument was .93, ranging from a low of .86 to 1.00. Modifications to the instrument were made according to the results obtained and suggestions for improvements.

Respondents were required to indicate on a five-point Likert scale how often they used particular decision-making styles. All items in the 17-item scale were rated from *never* (0) to *most of the time* (4). The statements were presented in random order to minimize order bias. The standardized item Cronbach alpha coefficient for the instrument was .69, which exceeded the Cronbach alpha of .63 for a new instrument developed by Niehoff, Enz and Grover (1990:343), who stated that the result was "reasonable, considering the newness of the scale."

## ANALYSES OF DATA

### *Quantitative*

The statistical software package, AMOS (Arbuckle and Wothke, 1999) was used to undertake confirmatory factor analysis (CFA). The most basic form of CFA is a one-factor congeneric measurement model as described by Jöreskog (1971) which enables the specified interrelationships among observed variables for a single latent factor to be examined in detail. The method allows for differences in the degree to which each individual measure contributes to the overall composite (latent) variable (Fleishman and Benson, 1987) and thus the model provides a more accurate representation of the data.

### *Qualitative*

The model produced as a result of confirmatory factor analysis formed the conceptual framework for the qualitative analysis as suggested by Gray and Densten (1998). Aspects concerning decision-making style were inferred from an examination of the comments which were categorised according to the three identified themes. Comments have been used to illustrate the themes in each category and selected background details have been provided for interest while anonymity of respondents has been preserved.

Interrater comparisons were used to assess face validity and to check that the comments assigned to categories reflected the designated theme. An independent researcher recoded the data and interrater reliabilities were calculated. The mean interrater reliability of 0.86 was adequate given the suggestion that 0.70 (70 per cent) intercoder reliability is considered satisfactory (Miles and Huberman, 1984).

## RESULTS

### **Confirmatory Factor Analysis**

A series of one-factor congeneric measurement models was calculated based on substantive theory. Although three observed variables are considered statistically adequate for a just identified model, Chin (1998) suggested that four items loading on each latent variable is preferable to test for convergent validity. Item 17, Prefer to delegate routine tasks was omitted from the start as a result of feedback from respondents indicating that the item was irrelevant as the majority of respondents did not employ others. Items with *t*-values which were not significant and where the standardized regression weights indicated weak effects (less than 0.3) were not good measures of the construct and were omitted from further calculations. Three factors

were generated with four items loading on each factor. Table 1 provides details of the items that were retained and the three factor structure of the instrument.

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Insert Table 1 here

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Several summary measures of the overall fit of the model to the data were calculated. Table 2 provides details of the fit statistics including the Goodness of Fit Index (GFI), the Adjusted Goodness of Fit Index (AGFI). Values close to unity for the GFI and the AGFI indices indicate that the model accounts for most of the joint variances and covariances among observed variables in the model. Unlike the chi-square statistic, the GFI and AGFI indices are independent of sample size and are relatively robust against departures from normality (Rowe, 1995). The Root Mean Square Residual error (RMR) is a measure of the average of the residual variances and covariances when the observed and predicted covariance matrices are compared. Additional indices for assessing model fit are provided including the Comparative Fit Index (CFI) and the Tucker Lewis Index (TLI).

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Insert Table 2 here

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**Dimensionality of The Entrepreneurial Decision-Making Style Inventory**

In order to check whether the Entrepreneurial Decision-Making Style Inventory was unidimensional or multi-dimensional, a null hypothesis, that there were no differences among the factors identified in previous analyses, was tested. A congeneric model was tested with all 12 items constituting one factor which produced a chi-square value of 232.351 df= 29, p=.000, for a chi-square/degrees of freedom ratio of 8.012, a GFI of .865 (AGFI of .802), and a RMR Residual of .078. The Comparative Fit Index of .663 and the Tucker-Lewis Index of .576 which should have approximated 1.0 indicated a poor fitting model. Overall, the results suggest that this was not a robust congeneric model and therefore, the model did not provide an adequate fit of the data. Further testing was conducted with the items which loaded on two of the factors to check whether each factor was a single factor. A congeneric model was established with all eight items. Analyses indicated that the Goodness-of-Fit Index of .887 was still not as good as the fit statistics obtained when the factors were analysed separately. The above analyses confirmed that the model should comprise of three factors in order to parsimoniously fit the data, and therefore the inventory would appear to be multi-dimensional.

A final model was estimated for Entrepreneurial Decision-Making Style based on the three composite factors. The composite factors were calculated by multiplying each raw score for each case by the corresponding standardized weight. The process ensures that the estimation of the composite factor is proportionally weighted by the actual contribution made by each indicator (item). Further, the composite factors take into account individual and joint measurement error of the item indicators (Rowe, 1995). Table 2 indicates that the model produced a chi-square value of 2.836, df= 1, p=.092, for a chi-square/degrees of freedom ratio of 2.836, a GFI of .993 (AGF of .956), and a RMR of .014. The Comparative Fit Index of .980 and the Tucker-Lewis Index of .940 indicated satisfactory fit of the model compared to the null or independence model in which no relationships amongst the variables were proposed. Figure 1 provides a graphic representation of the measurement model.

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Insert Figure 1 here

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Based on the nature of the items loading on each factor, factor one was named *Convergent*, factor two *Divergent*, and factor three *Inventive*. Rummel (1970:473-474), suggested that in selecting factor names, it is important that the labels “communicate the essence of the results . . . [to enable] the rapid identification of similar factors across studies.” Further, labels should be “descriptive of the interrelationships in the data.”

Hudson (1966), in a study of mental processes, classified respondents into two groups: *convergers*, who were narrow and focused on their point of view and concentrated on practical results; and *divergers*, who tended to enlarge problems and expand the boundaries of consideration and sought new things to consider. Mathôt (1989:52), in discussing thought processes in innovation, referred to *Convergent*, a logical thought process which complemented *Divergent*, a more creative thought process. Thus *Convergent* thinking is ideal for well-defined problems for which there is only one allowable conclusion (Finke, Ward and Smith, 1992). Items reflecting a strongly *Convergent* style of decision-making in the inventory included: *Use a commonsense approach* and *Stick to a routine*. *Divergent* decision-makers were considered to be more likely to take risks and to approach a problem from a new angle. Thus *Divergent* thinking allows the exploration of different ideas and idea combinations that may serve as solutions (Finke, Ward and Smith, 1992). Items reflecting a strongly *Divergent* decision-making style in the inventory included, *Enjoy new situations*, and *Work on many ideas at once*.

The third factor included three items such as *Come up with new ideas* and *Always manage to think of something* and was labelled *Inventive*. Inventive behavior, or the generation of new ideas, has been linked to decision-making style in the literature (e.g., Woodman, Sawyer and Griffin, 1993) and is closely associated with innovative and creative behavior. Thus, the label was selected based on the nature of the items in the cluster and the literature including the *Kirton Adaption Innovation Inventory (KAI)* which described an Innovator as someone who prefers to “do things differently . . . [and] discovers problems and avenues of solution” (Kirton, 1984:137-138). Therefore, *Inventive* decision-making style relates specifically to creative strategies for problem solving.

**Qualitative Data**

Interviewees commented on the way they made major decisions in business and the responses were analyzed in relation to the style of decision-making that was evident. A quasi-statistical approach was used to calculate the frequencies of comments classified in each category. Table 3 presents the frequencies, percentage frequencies, and interrater reliabilities for each category.

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**Convergent Decision-Making Style**

Interrater reliability: 0.88

*Convergent* decision-making style represents a conservative and cautious approach to problem solving in business. The concept is related to the theory that *convergers* tend to be narrow and focused on their point of view and concerned with the details in a decision and the practical results (Hudson, 1966). A total of nine comments reflected a *Convergent* style of decision-making including:

*I'm pretty cautious when it comes to making big decisions so I think about all the alternatives and I often lie awake at night nutting it all out* (Male, 49 years old, hydroponic farming business, four employees).

*I'm a stickler for methodically evaluating all the alternatives- just the way I was trained to do. I'm a great one for attention to detail* (Male, 60 years old, accountancy practice, no employees).

*I'm usually in here by six and the first thing I do is sit down and work out all the things to do that day and I like having them in my mind so that I can decide what has to be done* (Female, 32 years old, garment manufacturing business, seven employees).

The comments reflected a decision-making style characterised by paying attention to detail, carefully weighing up alternatives and being methodical in order to solve problems in business. A *Convergent* style has been described as "providing a logical framework for problem solving as it helps to select the best alternative from those available by narrowing down the range of possibilities" (Stevens, 1988:23).

### **Divergent Decision-Making Style**

Interrater reliability: 0.87

*Divergent* decision-making style is considered most appropriate in novel situations which challenge entrepreneurs. The style is consistent with the theory that *Divergers* tend to enlarge problems, expand the boundaries of consideration and seek new things to consider (Hudson, 1966). *Divergent* thought processes are considered more creative than thought processes associated with a *Convergent* style (Mathôt, 1989; Shouksmith, 1973). A total of eight comments reflected a *Divergent* style of decision-making including:

*We make decisions without a lot of deliberation or discussion. We are pretty flexible really* (Male, 56 years old, with partner, accommodation business, no employees).

*As soon as one project is underway, I'm already thinking of the next* (Female, 39 years old, training consultancy, no employees).

*It seemed a pretty good idea and there was no harm in trying it out* (Male, 52 years old, fencing business, no employees).]

The comments reflected a decision-making style that is adapted to novel and challenging situations where a degree of spontaneity is required to solve problems in business. A *Divergent* decision-making style has been described as a process that "... creates a large range of ideas for solutions. It requires looking beyond the obvious, creating ideas which may, at first, seem unrealistic or have no logical connection with the problem" (Stevens, 1988:23).

### **Inventive Decision-Making Style**

Interrater reliability: 0.83

*Inventive* decision-making style represents a creative approach to problem solving where entrepreneurs formulate innovative solutions. The concept is consistent with the theory that creativity is the generation of ideas that results in improved efficiency or effectiveness (Matherly and Goldsmith, 1985). Similarly, Kirton (1984:137) described an *Innovator* as someone who prefers to "do things differently [and] discovers problems and avenues of solution." A total of six comments reflected an *Inventive* style of decision-making including:

*A lot of it was trial and error - trying out new ideas and sometimes coming up with my own ways of doing things* (Female, 30 years old, retail business, no employees).

*I'm good at thinking of lots of new ideas* (Male, 53 years old, property services business, one employee).

*I just go for it and I'm always thinking up new ideas* (Male, 49 years old, hydroponic farming business, four employees).



The comments reflected a decision-making style that is characterised by the generation of unusual ideas as a means of solving problems in business.

Different aspects of decision-making style were clearly discernible in the comments which were classified into *Convergent*, *Divergent*, and *Inventive* decision-making style according to the definitions generated in the quantitative analysis. The comments expanded the definitions of the factors by providing contextual information concerning entrepreneurial decision-making style. Therefore, the qualitative data provided content validation and support for construct validation of the factors in the Entrepreneurial Decision-Making Inventory.

## DISCUSSION

The Entrepreneurial Decision-Making Inventory was developed in the current study to investigate a previously neglected area of research, namely entrepreneurial decision-making style. The qualitative procedures included in the study provided a means of accessing unquantifiable aspects of the research and captured respondents' personal experiences and perspectives. Overall, The qualitative data supported the confirmatory factor analysis and confirmed the multi-dimensional nature of the construct. The results highlight the inadequacies of bi-polar or unidimensional scales used in previous instrument designs such as the KAI (Kirton, 1976) or the Keirsey Temperament Sorter (Keirsey and Bates, 1984) to evaluate decision-making. Therefore, the instrument design in the current study supports Payne's (1993) comments that a multi-dimensional model seems to account for the complexities of decision-making style in a more appropriate manner .

### Limitations

Several limitations need to be taken into account in this study. Individuals were invited to participate in the study and therefore self-selection by respondents could influence the results. Data gathering techniques relied on self-reporting which may limit the conclusions that can be drawn.

In order to assess the validity of the new instrument, replication of the study is required using multiple samples including: sole traders who are entirely responsible for all the decision-making; small business owners who are in partnerships; as well as individuals involved in medium-sized businesses where collaborative decision-making occurs. Samples should draw on populations interstate and overseas. The potentially moderating effects of variables such as risk-taking propensity, optimism, and decision comprehensiveness need to be investigated. The relationship between previous experience and decision-making style requires further study to determine how entrepreneurs can draw on previous experience and education to improve decision-making.

The development of a new instrument to evaluate decision-making style may assist in the identification of businesses at risk of failure. With professional counselling, strategies could be suggested to reduce the likelihood of failure and the personal and social consequences that often accompany business closure.

## CONCLUSION

In conclusion, the current study was conducted in order to advance research on entrepreneurial decision style. The use of confirmatory factor analyses techniques in the current study provided a rigorous assessment of the content and construct validity of the instrument which was supported by the qualitative data. A reliable and valid measure of entrepreneurial decision making style should be of interest to researchers and practitioners to further understanding of the role of decision-making and its relationship to key dependent variables such as business strategy and business success.

## REFERENCES

- Agor, W.H. (1986). The logic of intuition: How top executives make important decisions. *Organizational Dynamics*, Winter, 5-18.
- Albert, R.S. (1990). Identity, experiences, and career choice among the exceptionally gifted and eminent. In M.A. Runco & R.S. Albert (Eds.). *Theories of Creativity*, Newbury Park: Sage Publications.
- Amit, R., Glosten, L. & Muller, E. (1990). Entrepreneurial ability, venture investments, and risk sharing. *Management Science*, Oct. 1232-1245.
- Arbuckle, J.L. & Wothke, W. (1999). *AMOS 4.0 User's Guide*. Chicago: SPSS.
- Bantel, K.A., & Jackson, S.E. (1989). Top management and innovations in banking: Does the composition of the top team make a difference? *Strategic Management Journal*, 10, (Special Issue): 107-124.
- Berryman, J.E. (1994). Small business failure and bankruptcy: What progress has been made in a decade? *Small Enterprise Research - The Journal of SEAANZ* 2, 5-27.
- Bowers, K.S., Regehr, G., Balthazard, C. & Parker, K. (1990). Intuition in the context of discovery. *Cognitive Psychology*, 22, 72-109.
- Boyle, G.J. (1995). Myers-Briggs Type Indicator (MBTI): Some Psychometric Limitations. *Australian Psychologist*, 30(1), 71-74.
- Briggs, K. & Briggs Myers, I. (1977). *Myers-Briggs Type Indicator*. Palo Alto, CA: Consulting Psychologists Press.
- Brodzinski, J., Scherer, R. & Weibe, R. (1990). Boundary spanning activity as a function of the small business owner's decision style. *Journal of Business and Entrepreneurship* 2(2), 1-11.
- Bryman, A. (1988). *Quantity and Quality in Social Research*. London: Unwin Hyman.
- 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*, 12(1), 9-30.
- Buttner, E.H. & Gyskiewicz, N. (1993). Entrepreneurs' problem-solving styles: an empirical study using the Kirton Adaption/Innovation theory. *Journal of Small Business Management*, January, 22-31.
- Caird, S.P. (1993). What do psychological tests suggest about entrepreneurs? *Journal of Managerial Psychology*, 8(6), 11-20.
- Chin, W.W. (1998). Issues and opinion on structural equation modeling. *MIS Quarterly*, March, 7-16.
- Creswell, J. (1994). *Research Design. Qualitative and Quantitative Approaches*. Thousand Oaks, CA: Sage Publications.
- Dewey, J. (1933). *How We Think*. Boston, MA: D.C. Heath.
- Finke, R.A., Ward, T.B. & Smith, S.M. (1992). *Creative Cognition: Theory, Research, and Applications*. Cambridge, MA: MIT Press.
- Fleishman, J. & Benson, J. (1987). Using LISREL to evaluate measurement models and scale reliability. *Educational and Psychological Measurement*, 47, 929-939.
- Goldsmith, R.E., & Kerr, J.R. (1991). Entrepreneurship and adaption-innovation theory. *Technovation*, 11(6), 373-382.
- Goodwin, L.D. & Goodwin, W.L. (1985). Statistical techniques in AERJ articles, 1979-1983: The preparation of graduate students to read the educational research literature. *Educational Researcher*, 14(2), 5-11.
- Gray, J.H. & Densten, I.L. (1998). Integrating quantitative and qualitative analysis using latent and manifest variables. *Quality and Quantity International Journal of Methodology*, 32(4): 419-431.
- Holland, P.A. (1987). Adaptors and innovators: Application of the Kirton Adaption-Innovation Inventory to bank employees. *Psychological Reports*, 60, 263-270.

- Hoy, F. & Hellreigel, D. (1982). The Killman and Herden model of organizational effectiveness: criteria for small business managers. *Academy of Management Journal*, 25, 308-322.
- Hudson, L. (1968). *Contrary Imaginations: A Psychological Study of the English Schoolboy*. Harmondsworth: Penguin.
- Jöreskog, K.G. (1971). Statistical analysis of sets of congeneric tests. *Psychometrika*, 36, 109-133.
- Keirse, D. & Bates, M. (1984). *Please Understand Me*. Delmar, CA: Prometheus Nemesis Press.
- Kirton, M. (1976). Adaption and innovation: a description and measure. *Journal of Applied Psychology*, 61, October, 622-629.
- Kirton, M. (1984). Adaptors and Innovators - why new initiatives get blocked. *Long Range Planning*, 17(2), 137-143.
- Klein, G.A. (1989). Recognition-primed decisions. *Advances in Man-Machine Systems Research*, 5, 47-92.
- Lipshitz, R. (1995). Judgment by outcomes: Why is it interesting? *Organizational Behavior and Human Decision Processes*, 62, 123-126.
- Long, J.S. (1983). *Confirmatory Factor Analysis: A Preface to LISREL*. Newbury Park, CA: Sage Publications.
- Lord, R.G. & Maher, K.J. (1990). Alternative information processing models and their implications for theory, research and practice. *Academy of Management Review*, 15, 9-28.
- Matherly, T.A. & Goldsmith, R.E. (1985). The two faces of creativity. *Business Horizons*, September-October, 8.
- Mathôt, G.B. (1989). How to get new products to market quicker in B. Lloyd (Ed.). *Entrepreneurship Creating and Managing New Ventures*. Oxford: Pergamon.
- Miles, M.B. & Huberman, A. (1984). *Qualitative Data Analysis: A Sourcebook of New Methods*. Beverley Hills, CA: Sage.
- Milgram, R.M. (1990). Creativity: An idea whose time has come and gone? In M.A. Runco & R.S. Albert (Eds.). *Theories of Creativity*, Newbury Park: Sage Publications.
- Mintzberg, H., Rasinghani, D. & Theoret, A. (1976). The structure of unstructured decision processes. *Administrative Science Quarterly*, 21, 246-275.
- Mosley, D.C., O'Brien, F.P. & Pietri, P.H. (1991). Problem-solving styles determine manager's approach to making decisions. *Industrial Management*, Sept/Oct, 5-9.
- Myers, I.B. & Briggs, K.C. (1962). *The Myers-Briggs Type Indicator*. Princeton, NJ: Educational Testing Service.
- Rummel, R.J. (1970). *Applied Factor Analysis*. Evanston, IL: Northwestern University Press.
- Niehoff, B.P., Enz, C. & Grover, R.A. (1990). The impact of top-management actions on employee attitudes and perceptions. *Group and Organization Studies*, 15(3), Sept. 337-352.
- Nutt, P. (1989). *Making Tough Decisions*. San Francisco, CA: Jossey-Bass Inc. Publishers.
- Olson, S.F. & Currie, H.M. (1992). Female entrepreneurs: personal value systems and business strategies in a male-dominated industry. *Journal of Small Business Management*, Jan. 49-57.
- Patton, M.Q. (1990). *Qualitative Evaluation and Research Methods*. Newbury Park, CA: Sage Publications.
- Payne, R. (1987). Individual differences and performance amongst R and D personnel: Some implications for management development. *R & D Management*, 17, 153-161.
- Robbins, S. (1994). *Management*. (4th ed.). Englewood Cliffs, NJ: Prentice Hall.
- Rowe, K. (1995). Structural Equation Modelling. A Thematic, Integrated Course. Paper presented at the Social Research Methods and Research Technology Conference, University of Adelaide, South Australia.
- Rummel, R.J. (1970). *Applied Factor Analysis*. Evanston, IL: Northwestern University Press.

- Schriesheim, C.A., Powers, K.J., Scandura, T., Gardiner, C. & Lankau, M. (1993). Improving construct measurement in management research: Comments and a quantitative approach for assessing the theoretical content adequacy of paper-and-pencil survey-type instruments. *Journal of Management*, 19(2), 385-417.
- Schwab, D. (1980). Construct validity in organizational behavior. In B. Staw & L. Cummings, (Eds.). *Research in Organizational Behavior*, Vol. 2. Greenwich, CT: JAI.
- Scott, B.R. & Bruce, R. (1987). Five stages of growth in small business. *Long Range Planning*, 20(3), 45-52.
- Shouksmith, G. (1973). *Intelligence, Creativity and Cognitive Style*. Sydney: Angus and Robertson.
- Simon, H.A. (1987). Making management decisions: The role of intuition and emotion. *Academy of Management Executive*, Feb., 57-64.
- Stevens, M. (1988). *Practical Problem Solving for Managers*. London: Kogan Page
- Taylor, W.G. (1989). The Kirton Adaption-Innovation Inventory: A re-examination of the factor structure. *Journal of Organizational Behavior*, 10, 297-307.
- Watson, S.R. (1992). The presumptions of prescription. *Acta Psychologica*, 80, 7-31.
- Wiggins, J.S. (1989). Review of the Myers-Briggs Type Indicator. *Tenth Mental Measurements Yearbook*, 1, 537-538
- Woodman, R.W., Sawyer, J.E. & Griffin, R.W. (1993). Toward a theory of organizational creativity. *Academy of Management Review*, 18, 293-321.

**Table 1**  
**Confirmatory Factor Analysis for the Three-Factor**  
**Entrepreneurial Decision-Making Style Inventory**  
**(N=255)**

Item No.	Factor Items	X	$\lambda_x$	$\delta$
<i>Convergent</i>				
5	Stick to tried and true methods	X <sub>1</sub>	.525	.106
7	Use a common sense approach	X <sub>2</sub>	.782	.098
11	Pay attention to detail	X <sub>3</sub>	.359	.101
14	Stick to a routine	X <sub>4</sub>	.178	.102
<i>Divergent</i>				
8	Work on many ideas at once	X <sub>5</sub>	.447	.060
12	Approach a problem from a new angle	X <sub>6</sub>	.671	.095
15	Enjoy new situations	X <sub>7</sub>	.614	.111
16	Prefer to do things differently	X <sub>8</sub>	.476	.109
<i>Inventive</i>				
1	Come up with new ideas	X <sub>9</sub>	.571	.107
6	Come up with a risky idea	X <sub>10</sub>	.534	.123
10	Invent a way of your own	X <sub>11</sub>	.357	.114
13	Always manage to think of something	X <sub>12</sub>	.672	.082

X = Manifest Variable,  $\lambda_x$  = Lambda,  $\delta$  = Residual (error term).

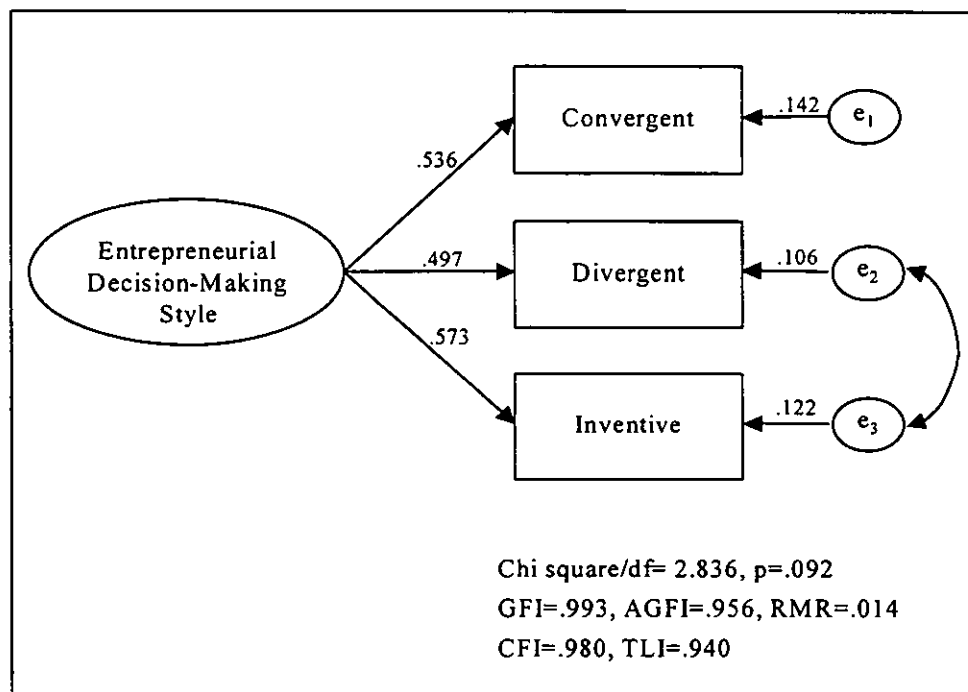
**Table 2**  
**Entrepreneurial Decision-Making Style Inventory**  
**Fit Statistics**  
**(N=255)**

Model	$\chi^2$	df	$\chi^2/df$	P	GFI	AGFI	RMR	CFI	TLI
Factor 1 (4 items)	1.519	1	1.519	0.218	0.997	0.970	0.012	0.993	0.961
Factor 2 (4 items)	1.990	1	1.990	0.137	0.992	0.961	0.025	0.983	0.950
Factor 3 (4 items)	0.440	1	0.440	0.507	0.999	0.991	0.008	0.999	0.974
12 item model	232.351	29	8.012	0.000	0.865	0.802	0.078	0.663	0.576
3 composite factors model	2.836	1	2.836	0.092	0.993	0.956	0.014	0.980	0.940

**Table 3**  
Analysis of Interview Data: Frequency, Percentage Frequency Distributions,  
and Interrater Reliabilities

Theme	f	% <sup>a</sup>	I.R. <sup>b</sup>
<b>DECISION-MAKING STYLE</b>			
<i>Convergent</i>	9	39	.88
<i>Divergent</i>	8	35	.87
<i>Inventive</i>	6	26	.83
<b>Theme total</b>	<b>23</b>	<b>100</b>	

<sup>a</sup> Percentages have been rounded    <sup>b</sup> Interrater Reliability



**Figure 1**  
**Model for Entrepreneurial Decision-Making Style**

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