



DECISION MAKING STYLE OF EXECUTIVES IN INDIA

NEHA VERMA*; DR. S. RANGNEKAR**; DR. M.K BARUA***

*Research Scholar,
Department of Management Studies (DoMS),
Indian Institute of Technology, Roorkee,
Uttarakhand - 247667, India.

**Associate Professor and Head,
Department of Management Studies (DoMS),
Indian Institute of Technology, Roorkee,
Uttarakhand - 247667, India.

***Assistant Professor,
Department of Management Studies (DoMS),
Indian Institute of Technology, Roorkee,
Uttarakhand - 247667, India.

ABSTRACT

Decision Making is a peculiar and vital activity in all organizations. Almost every executive has to take some decisions while disposing the assigned duties. Thus it becomes significant to know whether the executives are right in their decision making approaches or not? This study aimed to identify the type of Decision Making Style (DMS) used by Indian Executives in their work place and to see the association of their DMS with their Organization Sector, Education, Age, Work Experience and Annual Income. Questionnaire survey of Indian manufacturing Organizations' executives was done using General Decision Making Style inventory (Scott & Bruce, 1995). The averages, correlations, independent sample t-tests and ANOVA were found. Analysis revealed highest rational, second highest intuitive and least avoidant DMS. The Rational DMS had positive association with the third highest Dependent DMS and the Intuitive DMS had the same with fourth highest Spontaneous DMS. The rational and dependent DMS of public sector executives were significantly different from that of private sector executives. The avoidant DMS was found least in higher income group executives compared to the lower and middle income group executives. It was concluded that Indian Manufacturing Executives are more rational and least avoidant. They also use their intuition while making decisions and seek advices for better decisions. The results are discussed in the light of literature and recommendations are drawn on that. It is a pioneering effort to study the

phenomenon of DMS in Indian contexts and it added to the dearth of literature on DMS.

KEYWORDS: *Avoidant, Dependent, Decision Making Style, Intuitive, Rational, Spontaneous.*

INTRODUCTION

Decision Making is attributed as the essence of every manager's job. It is a fundamental activity and a critical element of organization's spell. Basi (1998) identified the organization decision making skills required at all organizational levels. According to him the decision makers can be categorized as executives, managers or supervisors. The executives should be able to scan the environment for opportunities and threats; therefore they should possess high level of intuition. To successfully see a decision through implementation, the lower level of managers needs good negotiation skills as they work with many differing units for accomplishing the goals. Whereas the lowest level supervisors need good computational skills because of routine decisions. Simon (1960) addressed decision making as synonymous with managing. Scott and Bruce (1995) defined decision making style (DMS) as "the learned habitual response pattern exhibited by an individual when confronted with a decision situation. It is not a personality trait, but a habit-based propensity to react in a certain way in a specific decision context." Rowe and Boulgarides (1994) quoted that "Knowing an individual's decision style pattern, we can predict how he or she will react to various situations." The Decision Makers have their own perceptions, preexisting beliefs and cognitive limitations while handling the available information and this increases the complexity of the decision making process. Hence it is fruitful to know the ways the decision makers react in any of the decision making contexts. The purpose of this study is to perform a survey of the decision making styles of Indian executives and differences in DMS of executives of varied demographic attributes.

REVIEW OF LITERATURE

Thunholm (2004) found decision-making style closely related to the term cognitive style. Hunt et al. (1989) attributed decision making as individual thinking practices. Jung's typology has been the basis of many cognitive style studies (Anderson, 2000). Jung (1976) concerned with two elements of attitude and functions. Where, the cognitive style with respect to decision making comes under the function element. Further the functions are divided into perception (sensing and intuition) and judgment functions (thinking and feeling), which determine the individual decision making style.

Although the research on decision-making styles (DMS) has been relatively sparse, but still a number of decision-making styles have been identified. McKenny and Keen (1974) and Mitroff (1983) suggested four different styles acknowledging two dimensions of gathering and an information evaluation. Further these four were reduced to three namely analytic, intuitive and mixed denying the independence of information gathering and information evaluation dimension (Hunt et al., 1989). Hence analytic (information gathering style) and intuitive (information evaluation style) can be used in combination. Still the behavioural implications of cognitive style

in decision making situations are hard to predict due to ambiguous results in the literature (Mytykyn and Green, 1985).

Keegan (1984) propounded decision making styles within the perception and judgment functions. He treated these styles as bipolar in nature where range of styles varied in between two extreme poles of perception and judgement. Further, Epstein and Meier, (1989) identified DMS in terms of behavioral coping/working around difficult tasks. Driver et al. (1993) proposed that individuals have primary and secondary decision making styles. They defined decision-making style as a learned habit and propounded that the key differences among styles are due to the amount of information considered during a decision process and the number of alternatives identified when reaching a decision.

Scott and Bruce (1995) gave four decision making styles namely Rational (a comprehensive search for information, inventory of alternatives and logical evaluation of alternatives), Intuitive (attention to details in the flow of information rather than systematic search for and processing of information and a tendency to rely on premonitions and feelings), Dependent (a search for advice and guidance from others before making important decisions) and Avoidant (attempts to avoid decision-making whenever possible). While validating these styles on military officers' sample the fifth style emerged i.e Spontaneous (a feeling of immediacy and a desire to come through the decision-making process as quickly as possible).

The rational and intuitive have a high resemblance with the analytic and intuitive dimensions of the cognitive style. Simon (1945) believed that rationality is an ideal situation but in real world with all the constraints and limitations such as organizational complexity and manager's cognitive abilities, the rationality turns to bounded rationality. The choices involved are thus "satisficing" rather than "optimizing". Therefore the real life situations allow bounded rationality where the decision makers tend to satisfy themselves with the constrained available information. Schwartz et al. 2002) put forward this view as maximizers/satisficers. Where maximizers have a tendency to look for the best outcome until they find it and satisficers are in search of just a good outcome.

In the words of Cosgrave (1996), emergency situations require quick decision making with the limited available information. Therefore decision making skills are crucial in emergencies. Three constraints create problem for managers in emergencies namely time constraint, limited information constraint and load constraints (too many decisions to be taken). Behaviour need not to be similar rather there is possibility of variations across the style of different position profiles.

Scott and Bruce, (1995) further validated the five styles on samples of students, engineers and technicians. Some styles were consistently found to be correlated, for eg the Intuitive and the Spontaneous scales were positively correlated; the Rational Scale was negatively correlated to the Intuitive, the Spontaneous, and the Avoidant Scales; the Dependent Scale was positively correlated with the Avoidant Scale. Thus, they conclude that the decision-making styles are independent but not mutually exclusive and that people seem to use a combination of decision-making styles. It is clear that they were concerned less with the demands of the decision task and environment and more with individual differences in decision making behaviour. But in general, decision-making styles should not be seen as stable personality features but rather as more

flexible in that the demands of the situation (as understood by the individual) also influence how the decision-making task is handled by the individual (Spicer and Sadler-Smith, 2005).

NEED OF THE STUDY

The phenomenon of decision making has been explored by many researchers but only few actually paid attention to the individual decision making behavior or style for eg Scott & Bruce, (1995) and Loo (2000). As per them the decision maker and his/her style must be taken into consideration while attributing the importance of decision making in management contexts. The organizational executives have to take many decisions to carry out their work smoothly. The study of approaches and preferences of decision making thus become significant and important. No such study on decision making style has been carried out earlier in Indian contexts. Hence this study was planned and conducted as a significant initiative to identify DMS of Indian executives and to identify the variation in DMS.

OBJECTIVES

There are many conceptually developed decision making styles (as discussed above) and individual with different demographic portfolios might be different in their decision making approaches. Hence, the objectives of this study are: To study the decision making styles (DMS) of Indian executives; and to identify the association between DMS and demographic attributes like organization sector, education, age, work experience and annual income. Based on these objectives the following research questions have been formulated:

RQ1: What decision making styles are used by Indian Executives?

RQ2: Do the decision making styles vary across organization sector, education, age, work experience and annual income?

RESEARCH METHODOLOGY

To pursue the objectives the sample was collected from senior, middle and lower level executives of Indian manufacturing organizations. Responses were gathered at convenience based sampling using the GDMS inventory developed by Scott and Bruce (1995). This instrument consist total 25 items and it measures five styles of decision making namely Rational (item no. 1 to 5) Intuitive (item no. 6 to 10), Dependent (item no. 11 to 15), Avoidant (item no. 16 to 20) and Spontaneous (item no. 21 to 25). All items are measured on a five point scale from strongly disagree (1) to strongly agree (5). The factor structure remained the same after principal component analysis with varimax rotation and the items survived as constructing elements of five components (i.e the five decision making styles). The Kaiser-Meyer-Olkin measure of sampling adequacy showed towards 1 and found to be significant ($p < .01$). The reliability analysis showed high Cronbach's alpha for the overall scale (0.73). For each style individually, the Cronbach's alpha found here as compared to values for the samples (in bracket) in previous studies are: Rational: 0.67 (0.60–0.85), Intuitive: 0.71 (0.68–0.84), Dependent: 0.71 (0.62–0.86), Avoidant: 0.78 (0.83–0.94), and Spontaneous: 0.60 (0.68–0.87), (Scott and Bruce, 1995; Loo, 2000; Spicer and Sadler-Smith, 2005; Thunholm, 2004, 2008; Salo and Allwood, 2011). Few sample items for each style are as follows.

1. I plan my important decisions carefully (Rational)
6. When making decisions, I rely upon my instincts (Intuitive)
11. I often need the assistance of other people when making important decisions (Dependent)
16. I avoid making important decisions until the pressure is on (Avoidant)
21. I put off making many decisions because thinking about them makes me uneasy (Spontaneous)

Participation in the survey was voluntary & respondents were asked to indicate the extent to which they felt the items of GDMS applied to them. Total 200 questionnaires were distributed in 5 different Indian Manufacturing Organizations (3 from private sector and 2 from public sector). Total 147 filled questionnaires were gathered back, but only 100 considerable samples (All male) were made the part of the study due to the limitations of incomplete survey and missing values. Respondents were also asked to report their Education, Annual Income, Age & Work Experience. For the purpose of analysis the demographic details were coded and categorized more elaborately further. For eg the income levels were asked as upto 5 lakh, 5 to 10 lakh and above 10 lakh; later categorized as lower, middle and higher income group. Age and experiences were asked directly asked in terms of years and were later put into categories. Five categories of education were also made after data collection to categorize the responses. Organizations were categorized as either public or private. Majority of the respondents were from private sector (77%) and rest were from public sector (23%). Their educational background was varied with 26% graduates, 7% Graduates and additional diploma holders, 47% Post Graduates, 9% Post Graduates and additional Diploma holders and 11% as only diploma holders. In Age total 41 % (21 to 30 years), 31 % (31 to 40 years), 20 % (41 to 50 years) and 8 % (above 50 years); and the work experience was also varied as 58% had upto 10 years experience, 23% had 11 to 20 years, 15% had 21 to 30 years and 4% had above 30 years of experience. In terms of annual incomes, 43% respondents were having lower level annual income, 44% had middle level annual income and 13% were from higher level annual income group. The data was analysed using SPSS 16.0 with appropriate tools like Descriptive Statistics, Correlation, independent sample T test and ANOVA.

RESULTS**TABLE 1: AVERAGES AND CORRELATIONS**

	M _d or M	SD	OS	E	Age	WE	AI	R	I	D	A
OS	Private	-	1								
E	Post Grad.	-	.087	1							
Age	21 to 30yrs	-			1						
WE	Upto 10 yrs	-				1					
AI	Middle	-					1				
R	22.38	2.19	.259**	.032	-.105	-.108	.056	1			
I	18.18	3.98	-.071	-.020	-.048	-.005	-.002	.054	1		
D	17.32	4.01	.306**	-.094	-.137	-.188	-.192	.212*	.145	1	
A	11.73	4.76	.134	.018	-.130	-.112	-.299**	-.110	.090	.156	1
S	15.85	3.46	.031	.041	.140	.095	-.053	-.020	.324**	.136	.128

**p < .01, *p < .05, 2-tailed, n=100

Note: M_d = Median, M= Mean, SD= Standard Deviation, OS= Organization Sector, E= Education, WE= Work experience, AI= Annual Income, R= Rational, I= Intuitive, D= Dependent, A= Avoidant, S= Spontaneous

Tables 1 show averages and correlations. Mean scores from highest to lowest were of Rational, Intuitive, Dependent, Spontaneous and Avoidance DMS, respectively. Negative correlations were found between OS & WE (p < .01); between OS & AI (p < .01) and between AI & Avoidant DMS (p < .01); whereas positive correlations were obtained between OS & Rational DMS (p < .01); between OS & Dependent DMS (p < .01); between Age & WE (p < .01); between Age & AI (p < .01); between WE & AI (p < .01), between Rational DMS & Dependent DMS (p < .05) and between Intuitive DMS & Spontaneous DMS (p < .01).

TABLE 2: VARIATION IN DMS ACROSS DEMOGRAPHIC ATTRIBUTES

DMS	Organization Sector (t)	Education (F)	Work Experience (F)	Annual Income (F)
Rational	-2.281*	1.159	.755	.880
Intuitive	.707	.606	.723	.206
Dependent	-3.185**	.409	2.142	1.887
Avoidant	-1.343	.955	1.457	4.968**
Spontaneous	-.311	.911	.334	.466

* $p < .05$, ** $p < .01$, $n=100$

Table 2 shows t-test and ANOVA results. Only two DMS namely Rational ($p < .05$) and dependent ($p < .01$) were found to be varied significantly across organization sector (i.e Public & Private sector Manufacturing firms). In addition only avoidant DMS was found to be significantly varied with respondents' annual income ($p < .01$). Rest all the styles remained same across the subgroups based on Organization Sector, Education, Age, Work Experience and Annual Income.

DISCUSSION

The highest mean was of Rational DMS followed by Intuitive DMS. However, the Rational and Intuitive style in our study did not show any mutual correlation. But the scores of the two were towards the higher side, which indicates the use of both styles by the respondents. These findings are in congruence with the results of Spicer and Sadler-Smith (2005), who suggested that neither of these two is absolutely "right" way of making a decision but are alternative ways of approaching a problem. They advocated that individuals should ideally balance rational and intuitive decision making as too much of one approach may well be debilitating. The third highest mean of dependent style is also congruent with the findings of Spicer and Sadler-Smith (2005). Dependent individuals are usually keen and interested to seek best advices from peers, superiors and sub-ordinates; and therefore the same tendency seems advantageous for the respondents in this study. The second last mean score of spontaneous style can be remarked as less need of being spontaneous in the surveyed position profiles; however the positive correlation of such less spontaneity with the second highest intuition is alarming and the same is discussed ahead in this section. Least mean of avoidant styles is also appreciable as more avoidant style of decision making might create difficulties by causing delays.

Results revealed a significant negative change in work experience and income from public sector to private sector; it means that the public sector had higher work experience as well as higher annual income as compared to private sector. Indian public sector offers complete job security as compared to private sector, where only performance is required for sustainability. Hence the work experience of public sector executives remains of a single organization whereas the private sector employees are more into job changes. Thus, they have varied work experiences. Indian

public sector also offers a wide range of salary components like Fringe benefits, social security benefits etc., while the private sector is very particular on performance based rewards. Here the employees are asset to the firm only till they reap profits to it. Additionally a negative change in Avoidant style from lower income group to higher income group was noticed. It attributes that the executives from lower income groups show higher avoidant DMS as compared to those of higher income group; or in other words the Avoidant DMS lessens with rising income. Therefore it can be said that if executives are well paid then they take their decisions well in time, rather than avoiding them.

Positive significant change from public to private sector in Rational DMS was found, it means private sector has more rationality as compared to public sector. It also shows that the rationality in public sector is dissimilar with that of private sector. Usually the decisions in public sectors are more often based on a strict step wise procedure (rules) whereas the decisions in private sector are really rational (i. e. the most appropriate alternative is chosen rationally). This difference might be because of the strict performance review system and stringent performance based advancements in private sector. Due to this the private sector executives do not take the risk of missing information to make proper decision. Moreover, the Dependent DMS also was higher in private sector, which means in private sector the dependence is mandatory and advices are sort to improve the decisions to better achieve the tasks, whereas in public sector the dependence in decision making is by default due to increased interdependence amongst position profiles across the hierarchy. The phenomenon is called as red tapism, where every file has to move through various tables and strictly needed to be forwarded through proper positional channels. Hence it is confirmed that in private manufacturing firms the important decisions are measured, weighed and taken after seeking fruitful advices.

Both work experience and annual income had positive association with age, which means that as the age increases the income levels and experience levels also raise. It is justifiable to the fact that everybody proceeds from lower to high levels from young age to old age, in working life. The work experience gets enriched by time and also the salary becomes higher with normal increments or promotions. Similarly, the rise in work experience also leads to rise in annual income or in other words, with increased income levels the experience associated with position profiles is readily assumed by the position holder.

Few significant positive associations amongst the styles were also noticed. Significant correlations between some scale scores (i.e Various DMS) have also been reported in other DMS researches, for eg Scott and Bruce, (1995) and Loo, (2000). But it has been justified on account of the conceptual difference between the decision making scales rather than any mutual exclusivity (Spicer and Sadler-Smith, 2005). In this study the two Styles (Rational and Dependent) were found significantly correlated with each other symbolizing that dependence increases with rationality due to a tendency to maximize the benefits out of the decision. The association can be advocated on the grounds of the finding of Phillips et al., (1984). They proposed that rational DMS reasonably include strong information search characteristics and it might lead to increased dependent decision making, and intuition is likely to include spontaneity depending on the level of control the decision makers feel they have over a problem or decision. However they also attributed that avoidant DMS may also be associated with intuitive DMS, but in our results no such association was observed. The positive correlation between Intuitive and spontaneous styles were also obtained by Spicer and Sadler-Smith, (2005) and Salo and Allwood

(2011). It symbolizes that intuition based decisions are generally taken spontaneously and without wasting time after generating and weighing the alternatives. Thus it may be presumed that rational and dependent DMS style of the sample reflects better approach of decision making in their domain. Their intuition and its association with spontaneous DMS are also obvious and justifiable.

But to discuss it alternatively, it is found by Scott and Bruce, (1995) that Rational DMS & Dependent DMS negatively correlate with innovativeness (on a sample of engineers and technicians). Hence It also may be inferred that the increased dependence on others for selecting the best alternative to decide rationally, in turn reduces the creativity and innovative solutions. As here the decision maker plays safe by acting in most appropriate ways and does not take innovative risks. Therefore, this rationality and associated dependence might reduce their innovativeness and creativity. However the nature of industry and position profiles of the respondents is not prone to such harm. Further, Loo (2000) found a negative correlation between spontaneous decision making style and final percentages of undergraduates, thus here the spontaneity associated with intuition could harm the performance if the intuition is not based on experiences and expertise. Majority of respondents were having upto 10 years work experience (58%), therefore their spontaneity should not be considered beneficial, rather it should be treated as harmful to overall performance. Hence the intuition with spontaneity is not permissible with respect to the performance of the surveyed executives. The intuition should not be utilized spontaneously unless it is based on tremendous accumulated expertise. Salo and Allwood, (2011) also attributed spontaneous DMS as a lesser possibility to plan the work.

The private sector had better rationality and dependence as compared to the public sector, as found through tests for variation. Rests of the styles were similar across the sectors. As discussed above the rationality of public and private sectors are not similar. Indian public sector follows a strict procedural rationality while the private sector seeks rationality in terms of maximum gains out of the decisions. The dependence also is aimed at improved decisions with better advices (in private sector) while in the public sector, the burden of positional and procedural interdependence is enforced. Avoidant DMS varied with the income levels of respondents, symbolizing that executives of different income levels have different types and amount of avoidance in their decision making. For eg a lower income group executive might deny the decisions or tasks which are not in the purview of the salary package being offered to him/her. Whereas a high income group executive would not avoid decisions unless these are inappropriate for his/her performance or the organization's performance.

RECOMMENDATIONS

The findings are creating awareness about the DMS preferences of the respondents and the strengths and weaknesses of such approaches; hence with these the surveyed executives may develop their weak areas and exhibit styles that are important to their profiles. The executives of similar nature of organizations might be advised to pay attention to their decision making styles while confronting any decision making situation. To say precisely, the executives are suggested to adopt outcome oriented rationality, experience based intuition, expert advices to depend upon, least avoidant unless required and spontaneity based on situation and expertise. As almost every DMS carry its significance and has influence on the effectiveness of executives hence the findings here carry significant implications for the subject teachers of organizational behaviour,

industrial consultants, researchers and OD (organizational development) authorities to better develop their students, clients, subjects and organizations, respectively; For eg a recommendation for rise in salary can be made because the same will lead to reduced decision avoidance (as per the findings).

The same research may be carried out in other National and Cultural settings. Furthermore a Comparative study of DMS across nations could be carried out to see whether executives from different Nations are similar in their decision making approaches or not?. It is also recommended to find association of DMS with other variables like Leadership Style, Emotional Intelligence, Conflict Management, Managerial Effectiveness, etc to further affirm the significance to the concept of decision making style as a separate concept. Spicer and Sadler-Smith, (2005) suggested that most familiar tasks are often guided by intuition and the unfamiliar ones are often dealt with rationality; as well the level of emotional involvement might also determine the use of any particular style. Therefore, future research may also incorporate few situation based analysis to identify the most suitable styles as per situation. Such context specific analysis will help attain more insights into the DMS and will definitely probe into uncovered areas of research to reveal new facts.

CONCLUSION

The Rational & Dependent and Intuitive & Spontaneous DMS were found correlated. Thus it may be inferred that most preferred style DMS amongst the Indian manufacturing executives is Rational, and the same is positively improved by their dependence on coworkers. The second most preferred style was intuitive, but the lack of experience and positive correlation amongst the intuition and spontaneity of the respondents alarms for attention. The addition of demographic attributes to the analysis prominently improved the quality of this study. Only three variations were observed by applying the t- tests and ANOVA, i.e Rational and dependent DMS were significantly different across the public and private sector (Private sector executives were highly rational as well as dependent in their Decision Making approaches) and also the avoidant DMS was observed to degrade with rising income levels. All other styles remained unchanged across all the grouping variables. On the basis of these results we may infer that decision making styles remain same across the organization sector, Education, Work experience and Annual Income levels except for a few variation.

Like every other research this study also had its limitations. Foremost is the sample size, i.e small to represent the entire Indian Manufacturing Industry. The Data was collected using questionnaire which is always subject to respondent biases; therefore it became the second limitation. Moreover, only few specific styles were measured here, whereas literature serves many other styles like Maximiser, Satisficers, behavioral coping, authoritative etc., which were not made part of this study. Although the results have shown similarity with other findings in terms of the order of preference, but one must not ignore that few other factors equally could influence the choice of approach (Spicer and Sadler-Smith, 2005). In spite of such limitations of the research drew the attention on importance of behavioural aspects of decision making phenomenon. This way this research extended the work on the concept of DMS particularly in Indian context and added to the dearth of its literature.

REFERENCES

- Andersen, J.A. (2000) Intuition in managers: are intuitive managers more effective? *Journal of Managerial Psychology*, 15(1), 46–67.
- Basi, R.S. (1998) Administrative decision making: a contextual analysis. *Management Decision*, 36, 232-240.
- Cosgrave, J. (1996) Decision making in Emergencies. *Disaster Prevention and Management*, 5(4), 28–35.
- Driver, M.J., Brousseau, K.E. and Hunsaker, P.L. (1993) *The dynamic decision maker*. San Francisco, Jossey-Bass Publishers.
- Epstein, S. and Meier, P. (1989) Constructive thinking: a broad coping variable with specific components. *Journal of Personality and Social Psychology*, 57, 332–350.
- Hunt, R., Krzystofiak, F., Meindl, J. and Yousry, A. (1989) Cognitive style and decision making. *Organizational Behavior and Human Decision Processes*, 44, 436–453.
- Jung, C.G. (1976) *Typologi: Till fragan om de psykologiska typerna (Typologie—Zur Frage der Psychologischen Typen*. Olten: Walter—Verlag AG, 1972). Stockholm: Berghs Forlag (translated from German).
- Keegan, W.J. (1984) *Judgements, choices and decisions*. New York, Wiley.
- Loo, R. (2000) A psychometric evaluation of the general decision-making style inventory. *Personality and Individual Differences*, 29, 895–905.
- McKenny, J. and Keen, P. (1974) How managers' minds work. *Harvard Business Review*, 52, 79–90.
- Mitroff, I.I. (1983) *Stakeholders of the organizational mind*. San Francisco, Jossey-Bass.
- Mytykyn, Jr. P. P. and Green G. I. (1985) Effects of cognitive style and task structure on decision-making with a DSS. Doctoral dissertation, College of Business, Arizona State University. *Dissertation Abstracts International*.
- Parker, A.M., Bruine de Bruin, W. and Fischhoff, B. (2007) Maximizers versus satisficers: decision-making styles, competence, and outcomes. *Judgment and Decision Making*, 2 (6), 342-50.
- Phillips, S.D., Paziienza, N.J. and Ferrin, H.H. (1984) Decision making styles and problem-solving appraisal. *Journal of Counselling Psychology*, 31, 497-502.
- Rowe, A.J. and Boulgarides, J.D. (1994) *Managerial Decision Making*. Englewood Cliffs, NJ, Prentice-Hall.

Russ, F.A., McNeilly, K.M. and Comer, J.M. (1996). Leadership, decision-making and performance of sales managers: a multi-level approach. *Journal of Personal Selling & Sales Management*, 16 (3), 1–15.

Salo, I. and Allwood, C. M. (2011) Decision-making styles, stress and gender among investigators. *Policing: An International Journal of Police Strategies & Management*, 34 (1), 97–119.

Schwartz, B., Ward, A., Monterosso, J., Lyubomirsky, S., White, K. and Lehman, D. (2002).

Maximizing versus satisficing: happiness is a matter of choice. *Journal of Personality and Social Psychology*, 83 (5), 1178-1197.

Scott, S. G. and Bruce, R. A. (1995) Decision-making style: the development and assessment of a new measure. *Educational and Psychological Measurement*, 55(5), 818–831.

Simon, H.A. (1945) *Administrative behavior*, New York, Free Press.

Simon, H.A. (1960) *The New Science of Management Decision*. New York, Harper & Row.

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*, 20(2), 137-149.

Thunholm, P. (2004) Decision-making style: habit, style or both?'. *Personality and Individual Differences*, 36, 931–944.

Thunholm, P. (2008) Decision-making styles and physiological correlates of negative stress: is there a relation?'. *Scandinavian Journal of Psychology*, 49 (3), 213-219.