

THE ROLE OF INTUITION IN DECISION MAKING: AN EMPIRICAL STUDY ON ACADEMIC STAFF IN A MALAYSIAN PUBLIC UNIVERSITY

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ABSTRACT

Decision making is the process of deciding something important by a group of people or an organization. An empirical study was investigated to analyze intuitive decision making style among academic staffs at five various faculties in one of the public universities in Malaysia. Its objectives are: to identify intuitive decision making style among academic staffs; to identify difference intuitive decision making style based on age, gender, race, working experiences, professional level and field of expert; and lastly, to identify relationship between intuitive decision making style and situational factors. 94 academic staffs of five various faculties were involved in this study. Data were collected using questionnaire and SPSS was used for data analysis. The findings show that out of four situational factors, two of them, i.e. information and risk factors were found to have significant relationship with intuitive decision making style. Recommendations of the study are highlighted and further research discussions are also suggested.

Keywords: Intuition, Decision Making, Academic Staff, Malaysia

INTRODUCTION

People often involve in daily decision making, whether for simple or complicated problems and whether they are professional or non-professional. More and more people realize that intuition is essential to making good and right decisions, particularly for those managers at all levels in an organization who sometimes are under conditions of high uncertainty or little precedent (Agor, 1984; David, 2009).

The factors of intuitive decision making style consist of experience, knowledge and others (Harteis, Koch, and Morgenthaler, 2008). It is learnt that not only managers and owners of businesses profess to possess competencies for using intuitive alone in decision making, actually academic staffs (tutors, lecturers and professors) also inject their intuitive and judgment into decision making process. Academic staffs are required to have high education level and wide experience in their areas of expertise. Their natures of jobs indeed play important roles in research activities and journals contribution. As yet, there is no study pertaining to academic staffs with intuitive decision making style and furthermore the previous researchers prefer to revolve around managers in intuitive decision making (Agor, 1984).

Moreover, different result findings from educators prompt for the purpose of this study. According to Adams and Adams (2006), current education system focuses on analytical skills. On top of that, Klein (2006) supported that educational staffs prefer to use systematic methods in problem solving regardless of a complex or simple problem whereas intuitive decision is more difficult to use in complex situations. Davis and Davis (2003) also argued that school principals tend to decide intuitively. Apart from that, individual academic staffs have unique characteristics such as field of expert, working experience, age and others. Thus, it is necessary to look at different personal factors with intuitive decision making style of academic staffs.

Sinclair and Ashkanasy (2002) believed that time pressure is a factor of intuitive decision-making style. In addition, Martin, Bandali, and Lamoureux (2005) found that decision maker would use heuristics decision-making style in high time pressure than intuitive decision-making style. The research finding is aligned with the study of Judge and Robbins (2006); they argued that decision makers use intuitive decision making style when time is restricted and pressurized. Many kinds of variables can be defined in different research findings such as information, uncertainty and risk factors; likewise the determination of relationship between intuitive decision making styles and these three factors. Hence, it is urged for this paper to identify the relationship between intuitive decision-making style and situation factors (information, time, risk and uncertainty).

CONCEPTUAL BACKGROUND

Nowadays, intuitive is often integrated in decision making as human nature is becoming hardly to measure. In fact, intuitive decision making has little deviation from human performance. Seeing that human life becomes more complexity and less structured, intuitive recognition is rather useful and effective to make decision. Andersen (2000)

discovered that intuition decision is an effective approach than other decision making functions like sensing, feeling and thinking. This is because his result indicated that majority of the managers believed that intuition decision is effective.

In general, people apply intuition in numerous areas such as medical and nursing, education, business, management, research and development, personal selection, marketing and others. Normally, most of the people use intuition for making decisions in situations of great uncertainty or lack of information (Judge and Robbins, 2006; David, 2009). Sinclair and Ashkanasy (2005) found that intuitive decision is very useful in ambiguous situations, particularly for those decision makers in business world who have restricted information and they must decide which alternative strategies will benefit the companies most. Intuition is considered as a part and parcel of decision making process. Therefore, information is very crucial to academic staffs because they have to be knowledgeable in their lectures and research.

In addition, intuitive decision makers are likely to be more risk seeking, impulsive and belief in luck (Martin et al., 2005). People rely heavily on intuition to make decision because they are not completely sure of the alternative (Certo and Certo, 2005). When people need to make decision in a short time frame, they would use intuition and they are willing to take risk in deciding alternative, no matter whether the alternative is correct or wrong. Sinclair and Ashkanasy (2002) also stated that risk tolerance is a factor of intuitive decision making. According to Patton (2003), organizations always have to make quick and accurate decisions on timely basis. It is believed that intuition is most often used when time is limited at all levels of decision making (Oblak and Lipuscek, 2003). In the end of the study, this study posits that there is a significant relationship between situational factors (information, uncertainty, risk and time) and intuitive decision making among academic staffs. Hence, this study is aimed to test the following hypotheses:

H1: There is a significant relationship between information and intuitive decision making style.

H2: There is a significant relationship between uncertainty and intuitive decision making style.

H3: There is a significant relationship between risk and intuitive decision making style.

H4: There is a significant relationship between time and intuitive decision making style.

LITERATURE REVIEW

‘Decision making is the process of choosing the best alternative for reaching objective’ (Certo and Certo, 2005). According to Judge and Robbins (2006), ‘decisions are the

choices made from two or more alternatives'. A good alternative can make a good decision. Decision making occurs from two reactions - problem or an opportunity and it depends on decision makers to consider alternative courses of action; Individuals are required to interpret and evaluate the information before making decision.

Type of decision making

Klein (1998) developed Recognition Primed Decision (RPD) model. The model describes two traditional theories in decision making, including analytical and intuitive decision making. Analytical approach is based on some criteria and needs to compare among the criteria in order to choose the optimal and best solutions. Intuitive approach is relied on decision makers' experience and expertise to recognize problems.

Scott and Bruce (1995) developed five styles of decision making style. The decision making style encompasses rational, intuitive, spontaneous, dependent and avoidant. The rational style is assessing the long-term effects of decisions and strong fact-based orientation by deliberate, analytical, and logical. The intuitive style is feeling-oriented, internal ordering of information and fact decision. The spontaneous style is an immediacy of strong sense through the decision making process as quickly as possible. The dependent style is characterized by the use of support from others to make decision and the avoidant style is characterized by delay and denial.

Tavcar (1995) cited in Oblak and Lipuscek (2003) stated that managerial decision making can be separated into routine, analytic and intuitive decision making. Routine decision making is performed normatively and with certain rules. Analytic decision making takes place on the grounds and is based on knowledge to study the matter in complex circumstances. Intuitive decision making is used directly or when all other possibilities of decision making have failed. From the aspect of managerial levels, a high share of intuitive decision making comes from higher management that is personnel selection such as capable and talented managers. At the implemental level, the share of intuitive decision making is smaller and it involves the use of routine decision making to carry out controlled activities.

Intuition decision making style

Intuitive decision making is 'a subconscious process created out of a person's experiences' (Judge and Robbins, 2006). Intuitive decision maker can make quick decision even though there is limited information. Encarta (1999) defined that intuition is known as something instinctively without having to discover or perceive it. Intuition is seen as an innate capacity not directly accessible by considering the process which gives rise to a judgment or action involving it. Patton (2003) stated that intuitive can be innate, general experience or focused learning efforts to develop habits and achieve intuitive reactions to certain situations. The conceptual framework for the term of intuition can be included experience, judgment, insight and gut feelings (Fields, 2001).

There are several approaches in measuring intuition such as Keegan's Type Indicator

(KTI), Nygren's Decision Making Inventory (DMI), Rational-Experiential Inventory (REI) and others. KTI developed by Keegan (1982) which contains 44 questions in the questionnaire. A total of 16 statements are used to measure the sensing and intuition and whereby 16 statements are used to measure thinking and feeling. The questions use bipolar statements and rank scale from 1 to 4. The remaining 12 questions focus on attitudes and bipolar statements.

Nygren (2001) developed DMI which is a 45 items self-report that measures analytical, intuitive or regret-based decision maker. The questions use Likert scale from 1 (strongly disagree) to 6 (strongly agree). There are 15 items on each of the 3 scales, consisting of analytical, intuitive and regret-based emotional decision making style.

The third approach, REI-questionnaire was developed by Pacini and Epstein (1999). REI questionnaire contains 40 items where 20 items focus on Cognition scale and another 20 items focus on faith in intuition scale. There are two subscales, including the engagement and ability. Rational ability refers to the confidence with logical thinking task whereas experiential ability refers to confidence with which someone relies on their intuition. Rational engagement refers to the enjoyment of logical reasoning whereas experiential engagement refers to enjoyment of using intuition. These items use five-point rating scale that range from 'definitely not true of myself' to 'definitely true of myself.'

Intuitive synthesis

According to Oxford dictionary (2005), synthesis refers to the combination of parts, elements, and substances into a system that which results from this process. Khatri and Ng (2000) stated that intuitive synthesis has three operational indicators - reliance on judgment, reliance on past experience and use of gut-feeling. David (2007) urged that the three operational indicators are essential in business strategy.

Previous studies

Khatri and Ng (2000) examined the important role of intuition in strategic decision making. The study focused on senior managers of companies representing computer, banking, and utility industries in the US. The study found that intuitive processes are often used in organizational decision making. The use of intuitive synthesis was found to be positively related to organizational performance in an unstable environment, but negatively related in a stable environment.

Research by Klein (2006) examined the comparison of educational decisions between intuitive and computerized decision support system. Respondents were divided into two groups and they were asked to resolve an educational problem. The holistic procedure and DSS program were used accordingly. Individual group was provided with an identical dilemma but at different levels of complexity. One group had been offered a limited number of alternatives to solve limited number of criteria in order to compare the effectiveness of the various alternatives. The other group was presented with a larger number of alternatives to solve larger number of criteria. The findings showed that

respondents gained the similar result when they solved simple question when they used intuitive or computerized decision support system. However, when respondents solved the complex questions, the two approaches achieved the different results.

Hayes, Allinson, and Armstrong (2004) measured the gender perspectives of managers and non-managers or whether women are more intuitive than male in general. This research examined the gender differences by using Cognitive Style Index to measure the intuition of managers and non-managers from United Kingdom. They found that there is no difference between female and male managers in term of using intuition. But, excitingly, the researchers found that female non-managers are more analytical than male non-managers and female managers.

Pretz (2008) examined the effects of intuitive and analytical strategy and the level of experience on problem solving. Undergraduates were requested to provide response in the research in order to test their problem solving in college life. Results showed that chosen appropriateness of strategy depends on the problem solver's level of experience. The finding found that more experienced respondents would prefer intuitive perspective than analytical.

Sinclair and Ashkanasy (2002) discussed the latest finding of intuitive decision making style among CEOs and senior managers. They found that CEOs and senior managers used analytical decision making style but sometimes they also used intuitive in decision making. Sinclair and Ashkanasy (2002) had discussed four categories of factors which influenced decision making style including problem, decision, context or person.

Robson and Miller (2006) examined the relationship of the use of intuition in decision making and judgments by senior leaders in major Australian organizations. They conducted semi-structured interviews with 10 senior leaders and found that senior leaders used intuition when environment is complex or involved people.

Van Riel, Lemmink, and Ouwersloot (2006) investigated relationship between characteristics of decision task, decision style and decision making effectiveness. Cognitive styles describe that under various task conditions, intuition and analysis will be identified and evaluated for their relative effectiveness. Propositions are developed with respect to the relationships between decision task characteristics and the likelihood of using two cognitive systems, and with respect to potential moderators of decision making effectiveness. Research also provided implications and some suggestions for managerial practices.

RESEARCH METHODOLOGY

Sample

The population of this study was academic staffs from 5 faculties in Universiti Teknologi Malaysia (UTM) with total staffs of 855. The five faculties (FP, FS, FAB, FKM, and FSKSM) were selected because they are in the vicinity of to the centre point of UTM and

it is convenient to obtain data. The expert fields of selected staffs were education, science, computer, engineering, and building. A total of 265 academic staffs were selected randomly as sample of this study. Based on Krejcie and Morgan (1970) sampling table, this 265 sample of academic staffs was considered enough for this study. Out of 265 questionnaires distributed, only 94 sets were collected for data analysis. The respond rate is moderate, which is only 35.5%. The profile of the respondents (academic staffs) is shown in Table 1. From the data, it shows that majority of the respondents were in the age range between 30 to 40 years old (34%), male (73%) and Malay (91%). Besides, most of the respondents had more than 12 years working experience (54%) and they were lecturers (54%). Respondents from Faculty of Science (FS) had the highest response rate among the faculties in this study (37%).

Table 1
Profile of respondents.

Demographic variables	Frequency	Percentage (%)
Age		
Less than 30 years	10	11
30-40 years	32	34
40-50 years	29	31
More than 50 years	23	24
Gender		
Male	69	73
Female	25	27
Race		
Malay	85	91
Chinese	3	3
India	0	0
Other	6	6
Years of working experience		
Less than 4 years	6	6
4-8 years	12	13
8-12 years	25	27
More than 12 years	51	54
Professional level		
Lecturer	51	54
Senior lecturer	18	19
Associate Professional	21	23
Professional	4	4
Faculties		
FS	34	37
FE	19	20
FSKSM	19	20
FKM	18	19
FAB	4	4

Measurement

The instrument to measure intuitive decision making style was adapted from previous researchers. Respondents were requested to choose their intuitive decision making style based on five- point Likert scale (1 = “Strongly Agree”, 2 = “Agree”, 3 = “Neutral”, 4 = “Disagree” and 5 = “Strongly Disagree”). Table 2 is the reliability analysis for the four independents variables and a dependent variable in this study. The range of reliability

was from 0.700 to 0.902. The highest reliability result was the factor of uncertainty (0.902) followed by factor of risk and time (0.896 respectively), information factor (0.891) and intuitive decision-making style (0.7). This means scales in this reliability analysis were well-established and the result was acceptable.

Table 2
Reliability analysis

Variables	Cronbach's Alpha	Number of items
Information	0.891	3
Uncertainty	0.902	3
Risk	0.896	3
Time	0.896	3
Intuitive decision making style	0.700	5

RESULTS

Independent sample T-test was used to compare between male and female academic staffs with intuitive decision-making style. The p value was 0.689 at 5% level of significance and it showed that there was no significance difference between the male and female academic staffs with intuitive decision-making style. On the other hand, one way ANOVA was used to test difference intuitive decision-making style based on age, race, years of working experience, professional level and faculties. Based on the obtained result from one way ANOVA, it concluded that there was no significance difference in the mean score of intuitive decision making based on age, race, years of working experience, professional level and various faculties.

The result of the correlation between independent and dependent variables is depicted in Table 3. Correlation coefficient, r represents the linear relation between two variables. The finding showed that it had weak positive relationship of intuitive decision making style with information (0.405, $\rho < 0.01$), uncertainty (0.363, $\rho < 0.01$), risk (0.411, $\rho < 0.01$) and time (0.325, $\rho < 0.01$). As $\rho < 0.01$, it could be concluded that intuitive decision making style had a significance relationship with information, uncertainty, risk and time factors.

Table 3
Pearson correlation.

Variables	Mean	SD	1	2	3	4	5
1.Information	3.5638	.79428		.741**	.329**	.515**	.405**
2.Uncertainty	3.2837	.84943	.741**		.523**	.589**	.363**
3.Risk	2.9149	.98609	.329**	.523**		.396**	.411*
4.Time	3.5426	.90924	.515**	.589**	.396**		.325**
5.Intuitive decision making style	3.3447	.58835	.405**	.363**	.411**	.325**	

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

Lastly, Multiple Regression analysis used to assess four independent variables and intuitive decision-making style. The four independent variables are information, uncertainty, risk and time factors. Table 4 is the summary of multiple regression analysis of the study. It showed that the final model accounted for 22.3% of the variance (Adjusted R square = 0.223). It means that there was a significant relationship between information, risk factor and intuitive decision-making style. There was no significant relationship between uncertainty, time and intuitive decision-making style. As a result, out of the 4 hypotheses of this study, 2 hypotheses (H1 and H3) were substantiated.

Table 4
Linear Regression model

Situational factors	Overall intuitive decision making style Beta (β)
Information	0.243
Uncertainty	-0.068
Risk	0.191
Time	0.057
Adjusted R Square	0.223
R Square	0.257
F	7.683

DISCUSSION AND IMPLICATIONS

The study reveals that majority of the respondents (academic staffs) used intuition to make decisions. They made decision with the gut-feel that when they assumed it is a right decision; they trusted their feeling and believed that their instincts are always correct. It implies that academic staffs preferred trusting their own feeling rather than other people. In addition, it is explained that academic staffs relied on situation when there is a need to use intuition in decision making. According to Judge and Robbins (2006), individuals use intuition to make decision when situation is under high level of uncertainty, facts is limited and time is pressurized. It is noted that factor of information was mostly used by respondents, followed by the factor of uncertainty situation in their intuitive decision making. In the other hand, minority of respondents took into consideration of risk factor in intuitive decision making style. Besides, study has found that there was no difference in mean score of intuitive decision making style based on demographic factors.

In relation to information factor, the result shows that there was a significant relationship between information and intuitive decision making style. Academic staffs had higher field of expertise, knowledge and decision-making skill. They believed in their judgment and relied on their working experiences and intuition to make decision. Sometimes, respondents would face situations of limited information; they had never encountered similar cases from the past and would deal with the complicated information. The result is consistent with Klein (2006), Robson and Miller (2006) and Mara (2003), who stated that intuition decisions are useful when there is a lack of information. Similarly, risk factor had a significant effect on intuitive decision-making style. The result of this study is aligned with the study of Harteis and Gruber (2008); they stated that individuals with risk-taking readiness would tend to use intuition to make decision. Finally, the findings show that there was no significant relationship between uncertainty and time with intuitive decision-making style of academic staffs. The two factors were not significantly affecting intuition decision making, therefore it is urged to gather more and adequate data to support these two factors.

LIMITATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

This study was confined to the intuition decision-making style, therefore it is suggested that future studies to include other decision making styles such as analytical decision-making style or they can compare intuitive and analytical decision-making style with information, time, uncertainty and risk factors and locate their relationship among respondents. In addition, this study only focused on four situational factors (information, time, uncertainty and risk), thus it is proposed that other factors like creativity, innovation, implicit learning performance and stable environment to be added in future studies in order to examine the impact on intuitive decision-making style. In terms of instruments, future research is advised to use both qualitative and quantitative methods. This should be done by putting some open-ended questions or interview for open discussion on the topics. The limited sample size of this study may not be generalized, because out of 265 questionnaires distributed, only 94 sets (35.5%) were collected for data analysis. Future studies are advised to expand the sample size by including more faculties or other universities and colleges in Malaysia. By doing this, future study should be able to generate some exciting results as the academic staffs would have diverse background and knowledge.

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