

INTI UNIVERSITY COLLEGE

MASTER OF BUSINESS ADMINISTRATION

**Exploring the Usage of Decision Making Tools in Malaysia,
Factor Affecting the Accuracy of Decision Making.**

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Submission Date : 16th April, 2010
Final Word Count : 14,082 words

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Acknowledgement

I would like to take this opportunity to thank and show my deepest gratitude to those who have helped and assisted me throughout this study. It would have been difficult to accomplish this study without their guidance, support and encouragement.

First of all, I would like to show my deepest appreciation to Mr. Nanthakumar, who has been a great supervisor for my dissertation throughout this semester. He has taken his time to guide and assist me, and also has been very patient in helping me with my thesis. I am very grateful for his kindness, valuable feedback and support.

Other than that, I would also like to thank Mr. Francis Wong, my second marker. He helped a lot in assisting me to produce a good study.

Next, I would like to give my most sincere gratitude to all my lecturers that has been providing me guidance in my studies during my Master Degree.

Last but not least, I would like to thank my family and friends for all the support that they had given me throughout my study. Without their encouragement, the completion of this thesis would have been hard to accomplish.

Abstract

This research is conducted to explore the roles of Decision Making Tools (DMT) and factors affecting the accuracy of decision making in Malaysia. Based on the literature review, DMT have effectively used in forecasting, analysing and evaluating. 200 sets questionnaire have been distributed to seven companies for the purpose to prove the objectives and the hypothesis of this study. Results revealed time pressure, information accessible, behaviour of decision makers and DMT have influenced the accuracy of decision makers. Lastly, recommendations on the usage of DMT have also discussed in this research.

Keywords: DMT, DSS, Management Science, Accuracy of Decision Making, Malaysia, Time Pressure, Behaviour of Decision Making, Information Accessible

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List of Abbreviations

DMS =Decision Making Software

DMT = Decision Making Tools

DSS = Decision Support System

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Chapter 1

Introduction

The main purpose of this study is to delve the use of Decision Making Tools (DMT) in Malaysia. In addition to that, the importance of using DMT and the possible problems faced by decision makers when making decision will also be well-discussed in this research. Nowadays, the usage of DMT are found to be significant as it could effectively help in forecasting, evaluating, modelling and simulating events that take place various conditions especially in uncertain world and complex situations (Djamasbi, 2006). However, this has been argued by Power (2007) where DMT could create negative outcomes in some situations especially under uncertain environments and critical dilemmas.

1.1 Background of the Study

Good decision making skill is an essential for business success. Dror et al, (1999) indicated that numerous cognitive psychologists have highlighted that decision making is an inseparable component in today business. Salewicz (2005) mentioned that the decisions could be range from very simple (which can be made under less consideration) to very complicated (which involves more factors and considerations). Current market has become more challenging and competitive as the numbers of firms operating in the same marketplace have greatly increased. Previously, firms made decisions based on the knowledge and information they owned (Dimauro, 2009). Mantel et al, (2006) commented that in the past, human was bounded to their ability and simplified heuristics have been used while making decisions. Due to the fast moving and spreading of information, technologies and communications, traditional decision making tools could only offer inaccurate and inadequate decision as argued by Cannon (2005). The organisations would fall in the financial instability when

very good.

wrong decisions have been made as this would significantly affect the business operations and processes. In contrast, the organisations would gain competitive advantage and lead to spectacular success when right decisions have been made. ✓

As compared to DMT, the main disadvantage for traditional decision making is time consuming (Dimauro, 2009). According to Turban et al, (2007), 50 percent of the efforts put in decision making are wasted due the advancement and improvement in technologies. Dimauro (2009) revealed before the emergence of online communications and professional networks, the accessible information is limited. Over the past decades, the accessible information is very limited. Decision makers typically gathered the information needed from their insights, knowledge and also the people they knew. In contract, Dhese (2010) indicated that traditional decision making process are challenging with the fast growing volume of accessible information where the information could be easily collected in various sources and multiple formats. Thus the validity and reliability of the traditional decision making is low. ✓

The simplest and traditional model which is commonly used by many organisations in decision making process is Tree Diagram. Tree Diagram is also known as hierarchy diagram, tree analysis, systematic diagram or analytical tree where it is a graphical representation and strategic decision making diagram that assists in solving probability problem, analysing procedures in detail, probing for the cause and effect of a issue, mapping out the likely consequences of decisions and making a better decision in an uncertain world (Anderson et al., 2007). Alternatively, the efficiency and effectiveness of DMT are more advanced compared to Tree Diagram as it could improve the way the companies operating as commented by Chen and Lee (2002).

Besides, McGowan and Lombordo (1986) have performed a survey and argued that the usage of DMT was not only bounded in corporations, conversely, it also has extensively been used in state government for non-routine and semi-construct decision making. DMT has been used in Department of Highways,

Department of Health, Department of Labour and Employment and Department of Public safety in US (McGowan & Lombordo, 1986). Similarly, Gronlund (2005) supports that DMT is also being used in local government as DMT could effectively help in analysing complicated and politically infected issues.

1.1.1 DMT in Malaysia

Malaysia, a developing country, has been expanding strongly since early 1970s. Since then, the Gross Domestic Product (GDP) of Malaysia had increased since the year of 1980 to 2006 which can be illustrated based on the graph below (Figure 1). Besides that, Malaysia's GDP growth rate for the year 2007 was 6.2 percent, following by 4.6 percent on 2008 and 2.8 percent on 2009 (CIA, 2010). Moreover, Malaysia had transformed itself from a raw materials producer into an emerging multi-sector economy as they progress throughout the years. In the year of 2001 itself, Malaysia had spent 5.2 percent of its GDP in Information and Communication Technology (ICT) due to the awareness of importance on this particular sector (Junoh, 2004).

Gross Domestic Product in Malaysia

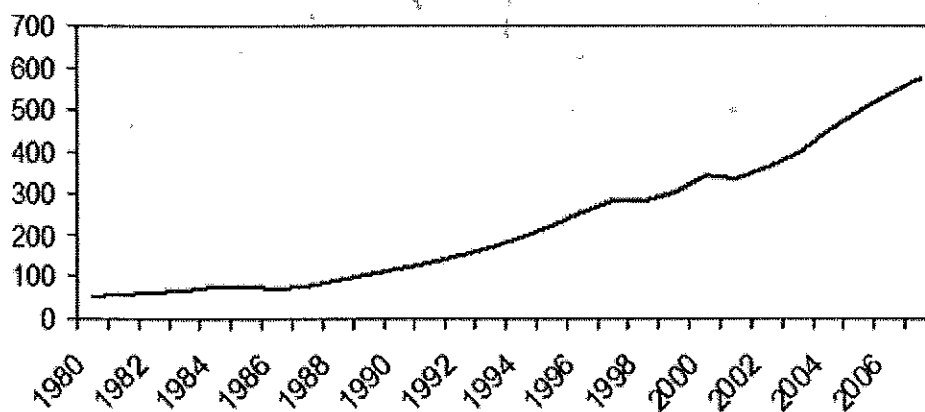


Figure 1-1: Gross Domestic Product for Malaysia (Source: World Bank, 2010)

According to Yusof (2003), the growth of ICT has triggered organisations to implement and adopting ICT in supporting their day to day business operations. Nowadays, numerous surveys have been carried out to investigate the relationship between ICT and decision making. And the results found that ICT is

able to effectively assist in decision making as found by Rantapuska and Ihanainen (2008) who done a similar research in UK, Rohmeyer and Tal (2009) who also done a similar research in US and James et al, (2004) who also done a similar research in UK. Although the prior studies have done a similar research in different location and different time period, however their findings also found that ICT is effectively assist in decision making. Nevertheless, the usage of ICT in decision making has not been progressively developed within Malaysia (Yusof, 2003). According to the research, Yusof (2003) had disclosed that the Malaysia monthly ICT usage among managerial level was approximately 70 percent which can be considered relatively high.

DMT which is also known as Decision Support Systems (DSS) is part of ICT that had been implemented since mid-1960s and have been engaged over the last 40 years (Power, 2007). Yaakup et al, (2007) revealed that the amendment on Town and Country Planning Act, 1976 (Act 172) in year 2001 has offer a strong platform for DSS in Development Planning Malaysia to support either structured or semi-structured decision making. The use of DSS in development planning has successfully improve the decision making process thoroughly.

1.2 Statement of Problem

New Product Development (NPD) is a necessity since the market is continuously changing with the accelerating rate of technological advancements as technology progresses (Ozer, 2003). In order to be successful in the competitive market, organisations must be fast and innovative to be able to produce new products. This is to ensure their rivals would not be able to follow their competitive pace as when the speed of change outside organisation is greater than the speed of change inside organisation, the end of the business is near (Cohen et al, 1996 & Danneels, 2002). Danneels (2002) and Ozer (2003) commented that developing and innovating new product is a risky project as new products are created based on the evolution of technologies and customers' taste and preference. Bojei (1997) agrees that all the companies

business operations. So the agents would make wrong decision based on their self-interest and this would directly bring value losses to the company.

1.3 Research Questions

- i. What is the possible problem arises when making decision?
- ii. What are the roles of DMT?
- iii. What are the impacts of using DMT?
- iv. What are the factors that affect the accuracy of decision making?

1.4 Research Objectives

- i. To determine the problem that arises when making decision.
- ii. To investigate the roles of DMT.
- iii. To identify the impacts of using DMT.
- iv. To study what are the factors will affect the accuracy of decision making.

1.5 Significance of Study

Current researcher's study would be useful as it provides the common DMT available in the market and how it could able to help in making decision. As proven by previous researchers such as Djamasbi (2006), Chen and Lee (2002) and Williams et al, (2004), the use of DMT have significantly influence on decision making process as it could reduce the duration spent on decision making and improve the accuracy of decisions made.

Besides that, this study will provide insights on the impacts of DMT and the possible problems faced when making decisions. Thus this research would be useful as the losses faced by the companies when making wrong decisions based on the wrong determinations and judgements would also be revealed. Thus this research could furnish a signal to the companies and they would be more careful and caution when making decisions.