

## CHAPTER 5

### 5.0 Conclusion and Recommendation

This chapter summarises the overall findings and analysis of the research and discuss the implications and recommendations for future research.

#### 5.1 Conclusion

This research was conducted to explore the determinants of accuracy in decision making and the roles and contribution of corporate decision making tools (DMT) in Malaysian context. In this research, 193 sets of questionnaire were and the targeted respondents were employees and professionals who involve in decision making activities and utilising DMT in such decision making activities. It is learned that this study is one of the first conducted in Malaysian context where four variables were used to explore the relationship with accuracy in decision making. There were many such studies conducted in other countries where the results were more favourable to the framework constructed. In contrast, this study in Malaysian context reveals moderately weaker results using the similar framework.

The results in Chapter 4 supports the prior study done by Chen and Lee (2002), Water (2008) and Lombordo (1986) which indicates that DMT is one of the best indicator used in forecasting and analysing as it understands the

importance of time series. The usage of DMT can provide higher accuracy in forecasting and analysing risk in contrast to personal judgement of the decision makers as revealed by Water (2008). The findings supports the prior research done by Kerstholt (1994) and Baker et al, (2001) where the major two roles of DMT are forecasting and evaluating. Besides, the studies also stated that DMT has the ability to forecast the potential errors and evaluate the possible risks faced. The 95.8 percent support in this study reveals that DMT contribute positively to forecasting and analysing risk of future uncertainty.

Accurate decision making is vital for every organisation. DMT as an aid to add value to accurate decision making, is realised to be increasingly important for many organisations. In the era of large business spread and vibrant economic mix, organisations need to assure accurate decision making critically relevant to its industry purview and the core business. In Malaysian context, the usage of DMT is concentrated largely for Government Link Companies (GLCs), multi-national companies (MNC), large manufacturing companies and financial institutions including insurance companies. The usage of DMT and research activities are most of the time outsourced to external research companies in the name of time and cost saving moves. DMT provides convenience to the decision makers as all the information and data insert in the DMT can be automated to obtain quicker results. The usage of DMT is more efficient and effective when compared with the traditional decision making process as DMT will automatically automate the bias result because it realises the importance of time series.

This findings is supported by prior researchers such as Djamasbi (2006), Turban et al, (2007), Chen and Lee (2002) and Wang and Azizah (2005) where DMT is positively improve the quality and accuracy of decision making. Turban et al, (2007) particularly stated that DMT can be designed to answer to 'what if' types of inquiries. However, Giupponi et al, (2006) disagree that some of the decision made by using DMT would not be accurate as some companies may not have appropriate DMT in-line with its business. However in this study, the finding supports that there is a moderate positive correlation between DMT and accuracy of decision making. According to Chen and Lee (2002), DSS or DMT have been envisioned as "executive mind-support systems" that serves as the human mind in supporting non-routine decision making which required judgements, evaluations and insights.

The findings on the relationship between time pressure and accuracy in decision making is supported by prior researchers such as Kowalski-Trakofler et al, (2003) and Dror et al, (2009). This can be concluded that low time pressure can contribute to higher accuracy of decision making. Decision makers preferred to determine a decision under low time pressure as they are able to think suspiciously and critically. Besides, Cao et al, (2009) also indicated that decision makers have to allocate their time wisely and develop heuristic decision strategies in order to make a good decision within given time limit. Sometimes, decision makers may take wrong decision if the time frame given for decision making is too short because they may not have enough time in collecting data or information needed for making accurate

decision. However a prior research conducted by Turban et al, (2007) argued that some of the simple decision can be determined within a short period of time based on individual abilities and extensive working experiences. Thus time pressure would not affect the accuracy of decision making. Although Turban et al, (2007) argued that some simple decisions can be determined in shorter duration. The findings in this research have proven that there is a weak positive correlation between the time pressure and accuracy in decision making.

The finding on the relationship between information accessible and accuracy in decision making is supported by prior researchers such as Marakas (1999), Prelec and Loewenstein (1991) and Schwenk (1995). Marakas (1999) stated that information could be easily accessible with availability of fast growing information technology (ICT) facilities. Schwenk (1995) also supported that the decision makers should collect more relevant information in decision making process. The truthfulness of the information collected would positively increase the accuracy of decision made. Dimauro (2009) commented on his research by saying that due to the advancement in ICT, some information may have been disrupted by the social media which may influence the accuracy in decision making negatively. However in this research, the finding has proven that there is a moderate weak positive correlation between information accessible and the accuracy of decision making.

The finding on the relationship between behaviour of decision makers and accuracy in decision making was supported by prior researchers such as

Djamasbi (2006) and Ozer (2003). Ozer (2003), state that the characteristic of the decision makers positively influences the quality of the decision made. Another research conducted by Djamasbi (2006) and Ozer (2003) stated that some decision makers did not put enough efforts and being careless when making decision. Such decision makers decide based on their own judgement rather than doing sufficient findings due the convergence of interest between agent and principal. In this research, findings support that the behaviour of decision makers have moderately weak positive relationship with the accuracy in decision making.

In summary, the findings from this study reveal that sufficient data and information accessibility shows higher relationship with the accuracy of decision making. In Malaysian context, time pressure and behaviour of decision makers showing weaker form of relationship with the accuracy of decision making. However, prior researchers such as Cao et al, (2009), Dror, et al, (1999), Kerstholt (1994), Lee et al, (2008), Marakas (1999), Prelec and Loewenstein (1991) and Workman (2004) in their studies at different location and different years, evidenced the relationship between independent and dependent variables as per the framework are significant.

## **5.2 Limitation of Study**

The sample size and the representative of sampling of this study are relatively small which is approximately 193 respondents and mainly focused on selected companies. This would be the first limitation as the results collected

may not be sufficient in representing entire scenario Malaysian companies. Also, the information collected for this study would be inadequate due to short period of study which is approximately 12 weeks. Other variables which could possibly determine the accuracy of decision making process were omitted due to the short period of this study and simplification of the model.

Weak relationship between the independent variables and dependent variable may have occurred due to time pressure in completing this study. Some respondent may have not properly answered the questionnaire due to time constraint or may not have understood the importance of this study. The questionnaire itself could also been bias towards the expected results which could have impacted the normal distribution of the results obtained.

Information about research and usage of DMT in Malaysia for accurate decision making is found to be very limited. Most of the studies, research journals, articles and secondary data obtained for this study were referred to researches conducted in foreign countries. Such information was assumed to be replicable and applicable for this study.

### **5.3 Recommendation**

This research was not a full time research and it was conducted only within a short period of time. Ideally, this research is only able to include the four relevant variables (time pressure, information accessible, behaviour of

decision making and DMT) which are previously found to have influence on the accuracy in decision making. It is recommended that future research in this topic should take into account other factors such as budget, speed of the computer, server or internet connection, ICT facilities and expertise in using DMT itself.

It is suggested that future researcher could focus on the companies listed in both Main Board and Second Board and also SMEs. This should give a good business mix of companies and mix in term of size and scale. The sampling period or the duration in distributing and collecting the questionnaires should be expanded to give more time in obtaining more relevant results. Factors that affect the decision making in the long run might have been ignored in this case. Future research should concern on factors affecting accuracy of decision making in both short run and long run.

#### **5.4 Further Research**

Based on the result in multiple regression,  $R^2$  of 24.4% which means the variation in rating of the accuracy of decision making is explained by the regression. In future the research should increase the sample size of the respondents and included more independent variables in the study such as stated above. The questions in the questionnaire may need to be reconstructed in different manner to ease the respondents in providing more reliable results.

## 5.4 Personal Reflection

This study had been carried out for one semester, and it has been a truly beneficial academic journey throughout this duration. However, conducting a study in just approximately 12 weeks is not enough to produce a good research. Although there had been many difficulties in completing this study, there were also many benefits gained. Even though results obtained from this research was not as desired, it was a bold decision made to reveal and accept such results. The lesson learned was that the same framework model may give different results when testing is done in different locations, different years, with different respondents. The results don't have to be as desired always, but accept and explain them as it reveals is vital.