

## **CHAPTER 5: CONCLUSION**

### **5.1. Summary of the Findings**

#### **5.1.1. The R&D Practice**

From the study, it appears that although more than half of the companies (63.2%) are undertaking R&D activities regularly and on a constant basis, a high majority of them (89.4%) spend below than 5% on R&D expenditure; taken as a percentage of revenue. Despite the small amount spent on R&D activities, many are concerned with the impact of R&D allocation on current earnings. In times of low earnings 31.6% of the companies would reduce the percentage spent on R&D activities against revenue whilst 52.7% would maintain the percentage. For companies that maintain the R&D percentage, in absolute monetary terms, the R&D expenditure is still reduced. This indicates that in the event of declining revenue 84.3% of the companies would reduce their R&D activities and this would result in lower R&D expenditure expensed off during that year. (The 84.3% figure is obtained by adding 31.6% with 52.7%). However, 15.7% of the Finance Directors responded that the percentage would be increased in the event when the revenue declines. According to the Finance Directors it is the companies' policies to allocate R&D expenditure at a fixed amount regardless of the revenue generated. Hence, when the revenue falls, the percentage of R&D against revenue would correspondingly increase.

Although the R&D activities would be reduced following a reduction in revenue, in the times of high earnings, the practice would not be reversed. 73.7% of the respondents stated that the companies would not increase the R&D expenditure even when they are experiencing high earnings. This shows that generally, the Finance Directors would only be concerned about the impact of R&D on revenue when the companies are facing declining revenue. These results also imply that the Finance Directors are perhaps not placing high importance on R&D activities. If they perceive that the R&D activities are important to the companies but somehow they are constrained with concern for current earnings, during times of high earnings, they could have increased their R&D activities. However, this is

not the case. In times of high earnings, 73.7% of the companies in the study would not increase their R&D activities.

A cross examination of the respective companies' Financial Statements shows that, on average, companies that are concerned with the impact of R&D allocation on current earnings has Average Operating Margin of 11.46%. Companies that are not concerned with the impact of R&D allocation on current earnings on average, have Average Operating Margin of about 20%. However, there are exceptions to this general observance. Two companies that have modest Average Operating Margin of 8.74% and 10.16% respectively appear not to be concerned with R&D allocation expenditure impact upon current earnings. On the other hand, there are two companies with high Average Operating Margin of 30.04% and 21.05% but they seem to be concerned with their current earnings. The exceptions to the general observance can be attributed to the company's strategic policy and performance of the company, the industry outlook and business environment. The high demand for products and good growth prospect of the industry indicates that the industry has a bright outlook. As such, companies operating in this industry are more likely to engage in continuous R&D activities even though their profits are modest without really minding whether R&D would cause a negative impact to their current earnings. On the other hand, economic environment also plays an important role in influencing the perception of the Finance Directors of the companies in question. The horrendous experience of the 1997 Asian Financial Crisis has caused companies to be more prudent when facing the uncertain future economic climate. They are reluctant to invest in R&D activities for fear that it will give a negative impact to the companies' current earnings in the event of gloomy economic climate.

#### **5.1.2. The Finance Directors' Perceptions**

The Finance Directors explained that they would be concerned with R&D activities in the event of economic recession. In such times, they are becoming more cost-conscious. They would increase the efforts to increase revenue and

reduce costs. The companies would not concentrate on R&D activities as they would not be contributing towards the bottom line. Apart from that, other perceptions of the directors include; concern for adequate earnings. The Finance Directors believe that adequate current earnings could help the companies to sustain their operations. Hence R&D activities would not be carried out if they would cause large impact to current earnings. The Finance Directors do not want the companies' operations to be disrupted by inadequate financial resources. Next, the perceptions of the Finance Directors also include focus on other products. This factor is very much related to the timing of R&D activities and marketing activities. In the time where the developed product is marketed, the R&D activities of other products would be delayed. This is to avoid too much expenditure to be expensed off during the year. In this case, the priority is given to market the products rather than carrying out R&D activities for new products. These reasons seem to suggest that the Finance Directors' perceptions are "short-termistic" in nature.

The other Finance Directors' perceptions also include company strategy. The companies that carry out strategies to undertake R&D activities are normally the companies that experience bright prospect of industrial outlook and product growth. Because of this reason, R&D activities are consistently carried out even when the Profit Margin was small. This reason seems to suggest that the companies are not being "short-termistic" as opposed to the companies with reasons described above.

The results of the findings however, are not conclusive due to small sample size and unsatisfactory response rate. This is discussed in section 5.4: Limitations of the study. Nevertheless, the study does provide useful insights in understanding the R&D practice of the companies in the study and current perceptions of the Finance Directors.

## 5.2. Comparison with other study

The findings of this study are compared with that of Demirag's. Demirag's Methodology was quantitative and scientific in nature. The methods being used in the study included distributing questionnaires and conducting interviews. The perceptions of the Finance Directors are sought by using close-ended questions. In the close-ended questions, the factors that might influence the Finance Directors' perceptions were listed and the respondents were then asked to rank the factors using Likert scale. (disagree strongly = 1 to agree strongly = 5). Demirag has classified the factors that could give rise to "short-termism" into external factors i.e. the capital market pressure and internal factors which include strategic emphasis of the companies, strategic planning and company structure, organisational structure of R&D, and accounting-based control mechanism used within the firms. The findings indicated that whilst the Finance Directors perceived the existence of the capital market pressure, they do not seem to believe that their companies are behaving in "short-termistic" manner.

The study is conducted by adopting the Qualitative Methodology. This study is similar with Demirag's on the grounds that it also attempts to find out the perceptions of the directors. However, the perceptions of the Finance Directors are sought by using open-ended questionnaires rather than using close-ended questions. In this study, the Finance Directors did not identify the capital market factor as a factor that could influence their perceptions of being concerned/not concerned of the impact of R&D expenditure upon current earnings. An attempt to determine whether the capital market is a significant factor to be considered was not successful. Telephone interviews made to Finance Managers revealed that capital market factor is a factor that should remain as the companies' confidential matters. The Finance Directors however provided other reasons (in the questionnaires) such as concern for the economic environment, focus on other products, concern for adequate earnings to maintain operation, companies' strategy and business environment. These have been discussed in section 5.1.2. above.

### 5.3. Implications

The issue of lack of commitment from Malaysian companies in undertaking R&D activities has been the concern of many parties, including the government. The Malaysian government so far, has carried out various measures to encourage more participation by the private sectors in R&D activities. This include the provision of fiscal and financial incentives, infrastructure such as the Technology Park Malaysia and the Kulim High-Tech Park, as well as the promotion of collaborative efforts among private companies, universities and research agencies. (Zainuddin, 1996). The importance of R&D activities in today's world is so much so that in the 21<sup>st</sup> century, comparative advantage will become much less a function of natural resource endowments and capital-labour ratios and much more a function of technology and skills. (Ibid). Engaging in R&D activities would help to improve the quality of the products and increase productivity through more efficient method of production. However, many companies often overlook the importance of R&D activities in enhancing competitiveness. This situation was well expressed recently in the local press; "They see the allocation of money, time and energy to R&D as an investment with little prospect of quick profits. This short-sighted view of R&D must be corrected. Companies must look at long term potential." (New Straits Times, 27/04/2001).

In order to "correct" the perceptions of the companies, we need to understand the implication of the study. The implication that could be gathered from this study is that R&D activities need to be supported by adequate financial resources. As mentioned above, the Malaysian government offers various fiscal and financial incentives to assist the private sector in becoming more actively involved in R&D activities. Amongst the incentives include the IRPA, IGS, MGS, DAGS and TAF. An explanation to these schemes could be found in APPENDIX C at the end of this thesis. This would ensure that companies could still carry out R&D activities on an ongoing basis even when times are bad. Apart from that, the over-prudence and pessimistic view upheld by the

companies should be changed. The short-sighted view of R&D would never be corrected if companies remain over-prudent and pessimistic.

#### **5.4. Limitations of the Study**

Due to the very focused and confined research scope there are areas not addressed sufficiently in the study. The limitations are discussed below:

- The sample size for this study is small i.e. 60 KLSE companies. This size is within the capability of the researcher in terms of financial resources and time. However, the drawback of this is, the findings would not be "representative" to the population and the result would not be "conclusive". Future research needs to be aware of this limitation.
- The sampling method used in this study is purposive sampling. This kind of sampling is another nonprobability sampling technique. This sample is selected on the basis of one's knowledge of the population, its characteristics, and the research questions. (Schloss & Smith, 1999). Judgement and purposive sampling are generally used by single subject and qualitative researchers. (Ibid). Under this method of sampling, the sample is selected to support the goal of the study, rather than to find out the "representativeness" of the sample to broader population. Because of that, the findings of the study may not be "representative". However, the aim of the study is not to provide conclusive evidence to the existence of "short-termism" but rather to gain general understanding of R&D practices and the respective Finance Directors' perceptions.
- Another limitation faced in conducting this study was due to the low response rate. This problem persist despite various attempts being made to collect the completed questionnaires from the respondents including making frequent contacts with the respondents and offering more alternatives mode of replying such as using e-mails, fax and pre-paid self-addressed envelopes.
- Difficulties were also faced in getting the Finance Directors for interview sessions.
- Time constraint was also as an apparent limitation for this study since the

study needs to be completed within a specified time period. As an attempt to overcome this problem, questionnaires were designed, prepared and sent to respondents since 14<sup>th</sup> of October, 2000. Despite this effort and various attempts made to collect the questionnaires, the response rate was still unsatisfactory. Therefore the attempts to collect the questionnaires had to be stopped on 15<sup>th</sup> of March, 2001 in order to allow ample time for analysis of the findings.

- Researchers for future studies conducted in this area should thus be fully aware of these limitations. By recognising these limitations, future researchers would be able to come out with a more appropriate research design as a way to overcome the constraints.

### **5.5 Suggestions for Future Research**

This study attempts to find out the perceptions of Finance Directors of KLSE listed companies. It also tries to gain an understanding of the reasoning behind this perception. As mentioned under the limitations, the sample size for this study is not large enough to draw conclusive evidence to represent the population. Future research would need to explore this issue on a larger scale with larger sample size. Future research would also be needed to address the issues that are not being highlighted in the study. For example, a correlational study could be established to determine whether the Finance Directors' concern about current earnings perceptions can be statistically associated with industry groups specified in the SIC code and the intensity of R&D expenditure. Future research could also be directed in determining whether the Finance Director's self motivation could influence their perceptions. It is hoped that future research would further assist in understanding the R&D practices and the Finance Directors' perceptions pertaining to R&D. Gaining a sound understanding would be useful so that suggestions and remedies could be forwarded in an attempt to encourage Malaysian companies to be more actively involved in R&D and to change their short-termistic views into long-term visions. This would be beneficial to the firms in increasing their competitiveness.