CHAPTER 3:   RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the methodology used in conducting this research. Included in this chapter is a description on the sample selection, items in the checklist used to measure the disclosure level, method used to identify the disclosure levels, and statistical methods used to verify the results.

As stated earlier, the main objective of this paper is to examine if there is any significant change in the level of disclosure in corporate annual reports by companies listed on the KLSE before and after corporate governance requirements were made mandatory in 2000. The second objective is to understand further the possible determinants for corporate voluntary disclosures in annual reports in Malaysia. To achieve both these objectives the study uses descriptive statistics to analyze significant changes in the level of disclosure and regression analysis that studies a possible relationship between the extent of disclosure and the corporate governance attributes identified for purposes of this study.

This study replicates partially the methods used by Rahman A(2001) for the first part and Haniffa & Cooke (1990) for the second part. This will be discussed in detail in subsequent sections in this chapter.

3.2 Extent of Voluntary Disclosure and Corporate Governance Attributes

Firstly the paper seeks to measure the extent of voluntary disclosure over two years namely 1998 and 2002. It tries to explore whether there has been any increase in the level of disclosure over the years. For this purpose a disclosure

check-list is developed to gauge the disclosure score. The disclosure index is explained in detail in section 3.5 of this chapter.

Secondly the paper seeks to test for an association between the disclosure score and three major corporate governance attributes such as the board composition, role duality and the numbers of family members on board. An extensive review of literature on the above-mentioned attributes in section 2.5 of the preceding chapter led to the selections of these variables and will be further elaborated on in section 3.7 of this chapter.

3.3 Type and Sources of Data

This study uses secondary data collected from the annual reports of companies listed on the KLSE Main Board during the years 1998 and 2002. Where pertinent information could not be extracted from this source due to non-disclosure then a questionnaire with merely five questions were sent to the Company Secretarial Departments of the respective sample companies.

This research being exploratory in nature, aims at both the qualitative and quantitative analysis of the data extracted. Firstly it can be said quantitative in that statistical methods are employed in determining time, frequency or duration of an event. In this study this refers to the measurement of the extent of disclosure and three major corporate governance attributes. Secondly, it also contains a qualitative element in that the motives and attitudes towards the tendency to disclose voluntarily are studied.

3.4 Sample Selection

As mentioned earlier this study covers annual reports of companies in year 1998 and year 2002. 1998 is chosen as a basis of comparison is because the KLSE

composite index was at it's lowest during this time. Thus if the reason was due to a lack of investors' confidence in the stock market as a result of poor corporate governance then it is appropriate to gauge the level of voluntary disclosure during this year. In 1998 even though the SC had already embarked on a three-phased shift towards the DBR but in essence it was at the Flexible/Hybrid MBR phase. This simply means SC may be emphasizing on disclosure, due diligence and corporate governance but only 62% of market participants were aware of the SC's move towards DBR (PricewaterhouseCoopers and Securities Commission Joint Survey in 2002)

Since this study tries to look at the change in pattern of disclosure before and after corporate governance requirements were made mandatory in 2000 by KLSE, the annual reports, which will be looked at next will be in year 2002. 2001 was not considered since any implementation of ruling always requires some time for companies to adjust and as such 2002 seemed appropriate. Companies from the finance and trust sectors will be excluded due to the specialized nature of business. This is so as this industry is subjected to different regulations and disclosure requirements as compared to others.

A sample of 30 companies was selected from the top (ranked by sales/turnover) 500 public listed companies as at September 2002. Random sampling technique was adopted whereby every 30th company was selected, after excluding 33 companies from the financial and trusts sectors. This is so due to the specialized nature of these industries and that they are subjected to different and additional regulations. Companies listed on the second board were also eliminated since the companies listed on the main board represent the better-established firms. Furthermore this is more consistent with most studies on voluntary disclosures that had used sample of companies listed on the main board of Kuala Lumpur Stock Exchange (KLSE) (see Haniffa & Cooke, 1990; Hossain et al., 1994; Huang et al, 1999; Rahman, 2001). This could be presumably so as only larger

companies tend to disclose more information as compared to companies smaller in size.

The names of the companies are listed in Appendix 1.

Table 3-1: Results of previous studies referred to in developing disclosure index

Researchers(Year)	No Of Items	Nature Of Index	Type of Analysis	Country
Singhvi & Desai(1971)	34	Weighted	Univariate Multivariate	USA
Firth(1980)	48	Weighted	Univariate	New Zealand
Tan et al.(1990)	25	Weighted	Bivariate	Malaysia
Raffournier(1995)	30	Unweighted	Univariate Multivariate	Switzerland
Meek, Roberts & Gray(1995)	85	Unweighted	Multivariate	USA, UK & Continental Europe
Schadewitz & Blevins(1998)	26	Weighted	Multivariate	Finland
Haniffa & Cooke(2000)	65	Unweighted	Multivariate	Malaysia
Rahman A (2001)	20	Unweighted	Multivariate	Malaysia
Ho & Wong (2001)	20	Weighted	Univariate Multivariate	Hong Kong
Eng & Mak(2002)	44	Weighted	Univariate Multivariate	Singapore
Ferguson, Lam & Lee(2002)	93	Unweighted	Multivariate	Hong Kong

3.5 Developing the disclosure index

The selection of items to be included in the disclosure index is not confined to the financial statements alone but also covers the entire contents of the annual report. The following criteria were used in selecting the disclosure items:

22

i. The items have been included in previous researches and are relevant to a developing country. (As discussed in Chapter 2)

ii. Items, which are mandatorily required by statutory regulations, were excluded.

iii. The item is deemed to be disclosed by all companies regardless of the type of industries they are engaged in.

Besides the criteria stated above, numerous studies in the past were also referred to for purposing of developing the disclosure index (refer to Table 3-2 above). The number of items, which was finally decided upon is 45 and this forms the basis of the disclosure index. The disclosure index, which was used for the purpose of carrying out this study, is shown in Appendix 2.

3.6 Disclosure index

The dependent variable used in this part of the study is the disclosure score, which is eventually derived using a disclosure index. This methodology was used in several studies after being first used by Cooke in 1989 [Haniffa & Cooke(2000), Hossain et al.(1995), Meek et al(1995), Raffournier(1995) and Cooke (1990) & Rahman A(2001)]. According to this method an item scores one if disclosed in the annual report and zero otherwise. The total disclosure score(TDS) for a company is thus:

$$TDS_j = \sum_{i=1}^{m_j} d_i$$

where

d   = 1 if the item d_i is disclosed

d   = 0 if the item d_i is not disclosed

m_j = the number of items actually disclosed

n_j = the number of items which the company is expected to disclose

$$m_j \leq n_j$$

If an item of information is not disclosed in any part of the annual report, for example research and development expenditure, it is thus concluded that the item of disclosure is not relevant to the company. In determining whether the item is relevant or not, the entire annual report must be read to ascertain that it has not been mentioned in any part of the annual report. By excluding the irrelevant items we can avoid penalizing the company for not disclosing it. On the other hand if the research and development expenditure was mentioned in the Chairman's Statement but no amount is stated in any part of the report then a score of zero will be given.

Thus the maximum score a company can earn depending on the relevance of all items will be:

$$MS_j = \sum_{i=1}^{n_j} d_i$$

where d_i = expected item of disclosure

n_j = the number of items which the company is expected to disclose

Once all items have been scored, finally an index is created to measure the relative level of disclosure. This index will be the ratio of the actual scores awarded to a company to the scores the company is expected to earn. In other words the total index for a company is obtained as follows:

$$TSCORE_j = \frac{TDS_j}{MS_j}$$

As mentioned in Chapter 2 the preferred method used here is the unweighted index as opposed to the weighted index.

3.7 Hypothesis development

The main purpose of this part is to study how certain corporate governance mechanisms affect a firm's voluntary disclosure behaviors. In this study, three corporate governance variables are examined. These are the percentage of independent non-executive directors, role duality, and the existence of family members on board. The table below indicates summary of the operationalisation of the three independent variables mentioned earlier:

Table 3-2: Summary of The Operationalization of Independent Variables

INDEPENDENT VARIABLES	OPERATIONALISATION	SOURCE OF INFORMATION
1 Board Composition	Ratio of non-executive directors to total number of directors on board	KLSE Annual Companies Handbook 1998/99 & 2002/03 and Company Annual Report
2 Role Duality	Dichotomous; Yes/No	Company Annual Report
3 Family members on board	Ratio of family members on board total number of directors	Registrar of Companies

3.7.1 Independent non-executive directors and voluntary disclosures

An independent non-executive director (IND) is a person who is not involved in the day-to-day affairs of the company. The need for IND is crucial in providing some sort of check-and-balance for executive directors who may try and act to the benefit of their own interest. Inclusion of INDs on boards has been said to improve a firm's disclosure requirements thus enhancing quality and comprehensiveness of disclosures (Chen & Jaggi, 2000). Two arguments were stated in support of INDs. Firstly the INDs are said to improve the firm's economic and financial performance by providing advice on strategic decisions. Secondly there is better monitoring of management decisions and activities by corporate boards in the presence of INDs (Fama, 1980). These arguments stem from the agency theory which states that boards are required in order to monitor

and control the actions of directors due to their opportunistic behavior (Jensen & Meckling,1976).

In Malaysia the Best Practices Codes suggests the need for a balance of executive and IND in a board's composition. It further states that, "for a board to be effective INDs should make up at least one third of the membership of the board" (Malaysian Code on Corporate Governance, AA Para III). Furthermore, the KLSE Listing Requirements 2001 (para 3.14(1)) provides that every applicant for listing on the KLSE must ensure that at least two directors or $1/3^{rd}$ of the board, whichever is higher, are independent directors.

Several researches in the past have attempted to link the proportion of INDs on board with quality or the extent of financial disclosure. However some have not been successful in establishing a link or have obtained mixed findings (Ho & Wong, 2001 and Haniffa & Cooke 2000) whilst some others have managed to derive a positive association (Chen & Jaggi, 1998). It is thus hypothesized that:

> H_1: *Ceteris paribus,* **there is a positive association between the proportion of INDs on corporate boards and the level of voluntary disclosure.**

3.7.2 Impact of role duality on voluntary disclosures

An individual who is considered to be highly managerially dominated is one who carries out the roles of both the chairman and the chief executive officer. (Molz,1988). Thus there is a tendency here for this individual to withhold certain information to outsiders especially if it is unfavorable. Forker(1992) found a significant negative relationship between the existence of a dominant personality and the quality of disclosure. In another study by Ho & Wong (2001) the hypothesized direction was correct but the hypothesis was not significantly supported. Hence it is hypothesized that:

26

H_2: *Ceteris paribus,* there is a negative association between CEO duality and the level of voluntary disclosure.

3.7.3 Impact of family members on board on voluntary disclosures

The main approach to corporate governance stems from minimizing conflicts of interests between owners and managers. However in countries where families tend to hold a substantial equity holding then there really is no or little physical separation between those who own and those who manage the assets (Nichols & Ahmed, 1995). After all, what is the necessity to disclose information when the owners have greater access to internal information? Haniffa & Cooke (2000) found a significant negative coefficient, which indicates that firms with more family members on board disclose less. As such it is hypothesized that:

H_3: *Ceteris paribus,* there is a negative association between having family members on board and the level of voluntary disclosure.

3.8 Statistical Methods

In this study, the **Statistical Package for Social Sciences (SPSS)** was used as an aid in the analytical process. In the first part there was no hypothesis developed and only a trend analysis was required. Therefore descriptive statistics was used to analyze the data based on the disclosure and non-disclosure items. In the second part of the study where three hypotheses were developed, a Correlation Analysis is first carried out. This analysis describes the degree to which one variable is related to another. It is normally used in conjunction with the regression analysis to measure how well the regression line explains the variation of the dependent variable.

The regression model analysis is finally used to test the association between the dependent variable of comprehensiveness of voluntary disclosure and the independent variables such as proportion of independent non-executive directors, chairpersons who are also CEOs and proportion of family members on board. The variables used to test the hypotheses are defined in the Table 3-3 below.

Table 3-3 Variable Specifications for Regression

Dependent Variables	Notation	Definition
Total Disclosure Score	TSCORE	The ratio of the actual scores awarded to a company to the scores the company is expected to earn.

Explanatory Variables	Notation	Definition
Board Composition	IND	Proportion of independent non-executive directors
Role Duality	RDUA	Chairpersons who are also CEOs
Family members on board	FMEM	Proportion of family members on board

The following model is thus estimated:

$$TSCORE = \beta_0 + \beta_1 IND + \beta_2 RDUA + \beta_3 FMEM + \varepsilon$$

TSCORE = Total disclosure score

IND = Proportion of independent non-executive directors

RDUA = Chairpersons who are also CEOs

FMEM = Proportion of family members on board

ε = Error term

β_0 = intercept term and

β_1, β_2 and β_3 are the coefficients of the independent variables.

3.9　Summary

This chapter has briefly explained the method adopted in carrying out the study. The subsequent chapter will discuss on the findings obtained from the tests conducted.