CHAPTER 3

RESEARCH METHODOLOGY

3.0 Introduction

This chapter covers the research methodology that was used to test the hypotheses generated from the research framework and elaborate research design under taken to study the responses of Malaysian public listed companies to the IFRS convergence. This study was carried out using questionnaire survey in order to investigate the key drivers and internal barriers that impact the adoption of IFRS. The survey method of research enables this study to identify external drivers that influence the preparedness of companies for IFRS convergence by drawing upon institutional theory perspectives as well as examine internal barriers that may impede the implementation of IFRS from the resource-based view.

This chapter is organized as follows: Section 3.1 outlines the research design. Section 3.2 presents research framework and follow by Section 3.3 focuses on the hypotheses development. Section 3.4 details measurements of research variables. Section 3.5 discusses sampling design and data collection procedures. Section 3.6 identifies unit of analysis. Section 3.7 shows measurement development. Section 3.8 presents administration of questionnaire. Section 3.9 focuses on data analyses procedures. Section 3.10 summarizes what was achieved from this chapter.

3.1 Research Design

Research design is clarified by Cooper and Emory (1995) as, first, to have a detailed plan that includes the selection of sources and types of information that used to answer the research questions of the study. Second, it aims to investigate the relationship between the variables, and thirdly, it is used to specify methods and procedures for collecting and analyzing the data collected.

For this study, the research strategy used is a quantitative approach, which is also referring to a positivism paradigm. Positivism is an approach to social research that seeks to apply the natural science model of research to investigation of social phenomena and explanation of the social context (Denscombe, 2003). This approach is used in this study to investigate the drivers and barriers that affect the preparedness of companies for IFRS convergence.

3.2 Research Framework

Based on the literatures that presented in Chapter 2, a research framework has been developed. The framework for this study seeks to investigate the key drivers and internal barriers that influence the preparedness of companies for the full convergence with IFRS. The framework is shown in Figure 3.2. The institutional theory is employed to identify the key drivers that influence the adoption of IFRS. Meanwhile, internal barriers that impede the implementation of IFRS are developed through the lens of resource-based view.

The research framework shown in Figure 3.2 consists of four independent variables (IV) which are coercive forces from stakeholders, imitation tendencies in organization field, participation in professional bodies and internal barriers as well as dependent variable (DV) of preparedness for IFRS convergence. Industries type and auditor type are considered as control variables (CV) in the framework.

Figure 3.2: *Research Framework*
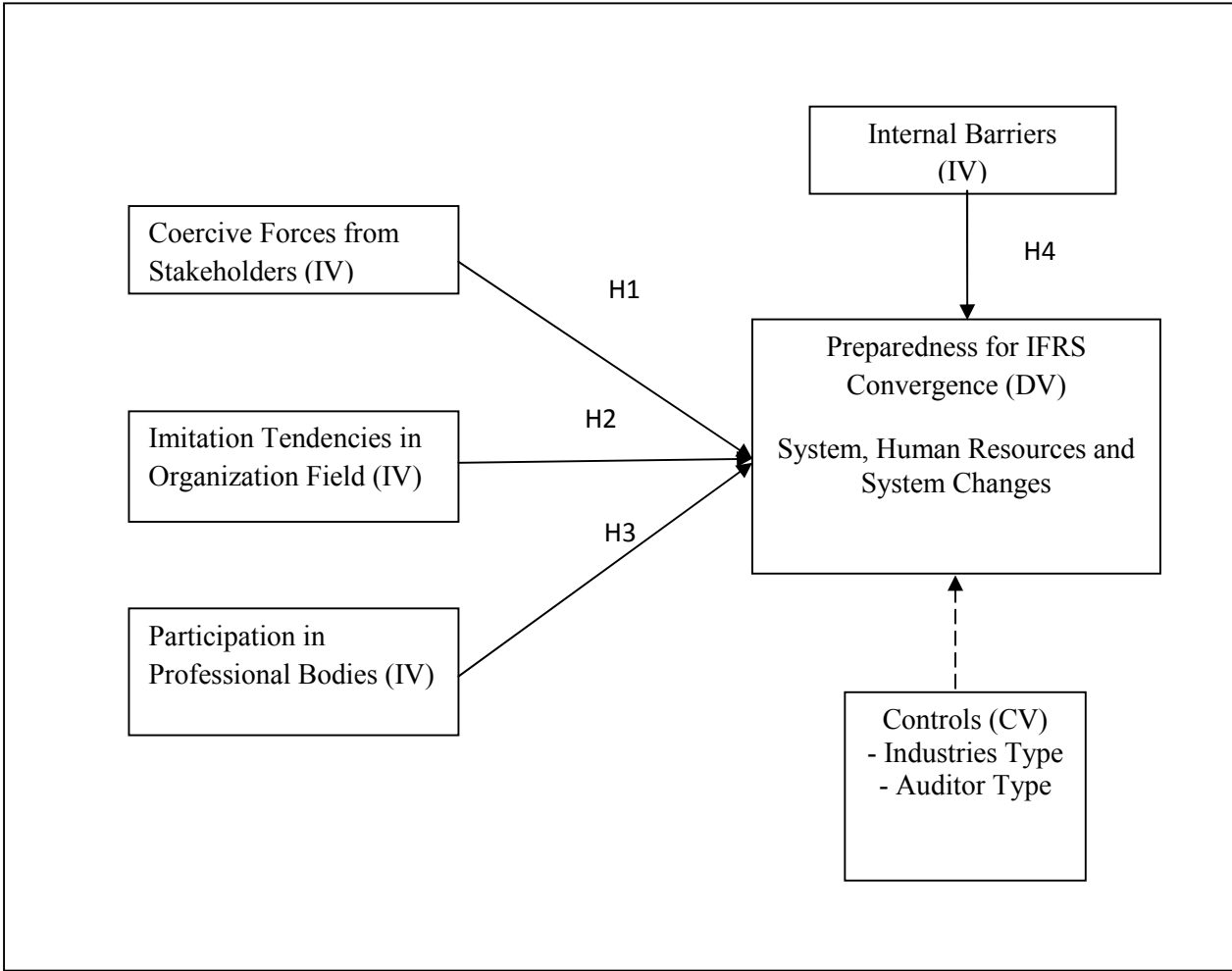
3.3 Hypothesis Development

Saunders et al. (2009) defines a hypothesis as a testable proposition about the relationship between two or more events or concepts. By testing the hypotheses and confirming the conjectured relationships, it is expected that solutions can be provided to answer the problem encountered (Cavana et al., 2001). Therefore, the following hypotheses that shown in Figure 3.2 are developed as follows:

H1   There is a positive association between coercive forces from stakeholders and the preparedness of companies for IFRS convergence.

H2   There is a positive association between imitation tendencies of companies in organization field and the preparedness of companies for IFRS convergence.

H3   There is a positive association between the participation in accounting professional bodies and the preparedness of companies for IFRS convergence.

H4   There is a negative association between internal barriers and the preparedness of companies for IFRS convergence.

3.4 Measurement of Research Variables

The research instrument was designed after an exhaustive literature review of different studies that provide the basis ground to develop appropriate measurement scales of variables to be used in this study.

3.4.1 Dependent Variable

In the absence of prior researches for the preparedness of companies for convergence with IFRS, the measurement of the scale was guided by the empirical studies done by Guerreiro et al. (2008) to investigate the preparedness of Portuguese companies to adopt IFRS and a number of survey studies done in EU and Canada (PwC, 2004 and CFERF, 2010). The extent of preparedness of companies to adopt IFRS was measured by nine measurement items and five-point Likert-type scale was used that range from '1' (Strongly Disagree) to '5' (Strongly Agree) shown in Section 1 of the questionnaire survey form.

3.4.2 Independent Variables

The independent variables consist of key drivers that influence the IFRS adoption. These variables were adapted according to coercive, mimetic and normative pressures that derived from institutional theory. These variables include internal barriers faced by companies to adopt IFRS. Items for key drives were designed for response using a five-point Likert-type scale, that was, '1'= Strongly Disagree to '5'= Strongly Agree. Meanwhile, internal barriers were measured by five-point scale from '1'= Not at all to '5'= Greater Extent (See Table 3.4 for the details of measurement items and questionnaire survey form in Appendix E).

3.4.3 Control Variables

Industry type is considered as one of the control variables in this study on the ground that plantation industry, real-estate industry and finance institutes are most likely to be

affected by the new IFRS standards effective in 2012 onwards. This variable equals 1 if the companies belong to plantation industry, real-estate industry and finance institutes and 0 otherwise. Lastly, for the types of auditor, the influence of auditor type is assessed by a dummy variable taking the value '1' when the company is audited by a Big 4 audit firm and '0' otherwise.

Table 3.4: *Literature Source of Measurement Instrument Adapted to this Study*

Construct / Dimension (from the Literature)	Measurement Items in Questionnaire (Appendix E) (Used in present study)
Coercive forces from stakeholders	
Regulatory Forces 1. Government or regulators actions encourage widespread diffusion of IFRS (Chua and Taylor, 2008) 2. Regulatory oversight bodies and enforcement mechanism promotes the adoption and compliance of IFRS (Brown and Tarca, 2005) 3. The majority of EU-listed companies would not adopt IFRS if not required by EU Regulation (Jermakowicz and Gornick-Tomaszewski, 2006) 4. Negative returns are associated with the restatement of financial statements (Palmrose et al., 2004) 5. IFRS convergence in the United Arab Emirates is the result of rules enforced in regulatory systems (Irvine, 2008)	1. To comply with all the reporting requirements set by regulatory bodies. 2. To prevent sanctions from regulatory bodies. 3. To prevent restatement of financial statements. 4. To prevent qualified audit opinion on financial statements.
Power of Stakeholders 6. Various stakeholders or financial reporting interest groups demand financial information from company (Chalmers and Godfrey, 2004) 7. Pressures from the need to provide credibility of information to international investors (Mir and Rahaman, 2005) 8. Adoption of US GAAP by French firms in 1970s was due to the domination of USA in the global economy (Touran, 2005).	5. To fulfill the needs of international investors for a prescribed single set of accounting standards. 6. To fulfill the needs of overseas business operations for a prescribed single set of accounting standards. 7. To enable overseas subsidiaries present their financial statements under a single set of accounting standards.

Table 3.4: *Literature Source of Measurement Instrument Adapted to this Study (continue)*

Construct / Dimension (from the Literature)	Measurement Items in Questionnaire (Appendix E) (Used in present study)
Imitation tendencies in organization field	
Inter-organizational imitation 1. Organization tends to follow practices that have already been adopted by large numbers of other organizations (Haunschild and Miner, 1997) 2. Organization imitates practices that used by organizations that stand out in terms of successfulness or size of other organizations (Haunschild and Miner, 1997) 3. Organization imitates practices that have previously produced positive outcomes (Haunschild and Miner, 1997)	1. It is good to follow practices and policies of the industry peers in implementing IFRS 2. My company refers to practices and policies of leading organizations in the industry for IFRS implementation 3. Adopting IFRS can give benefits to company
Imitation behaviors of multinational corporations 4. Successful multinational corporations have tendency to follow practices of multinational organizations to achieve the desirability of the global harmonization of financial reporting (Irvine, 2008) 5. Large French companies move away from their domestic accounting standards to US GAAP due to the influences of global market trend (Touran, 2005) 6. Mimetic pressures from import penetration exert strong positive pressure on IFRS adoption in some countries (Judge et al, 2010) 7. Malaysian government has focused on the internationalization of capital market in response to Capital Market Masterplan Two (CMP2) strategy (MASB, 2011a).	4. It is the practices of multinational corporations in implementing IFRS that is followed 5. The adoption of IFRS is important in order to fulfill the needs of international trading partners for a prescribed single set of accounting standards 6. Adoption of IFRS enables company to access to capital equity in the global capital market

Table 3.4: *Literature Source of Measurement Instrument Adapted to this Study (continue)*

Construct / Dimension (from the Literature)	Measurement Items in Questionnaire (Appendix E) (Used in present study)
Normative Isomorphism	
Professional Bodies 1. Two important aspects of professionalization results from formal education background and the growth of professional networks (DiMaggio and Powell ,1983) 2. Professional accounting associations exert normative pressures on US state governments' decision to switch from a cash flow accounting method to accounting method based on GAAP (Carpenter and Feroz, 2001). 3. Members of professional bodies are motivated to fulfill their professional obligation required by professional bodies (Carpenter and Feroz, 2001; Touron, 2005).	1. Professional accounting bodies provide sufficient training courses to help my company prepare for IFRS convergence 2. Technical updates or pronouncements issued by professional accounting bodies helps my company prepare for IFRS convergence 3. Staffs who are member of professional accounting bodies helps my company prepare for IFRS convergence 4. IFRS implementation guidelines issued by MASB helps my company prepare for IFRS convergence 5. My company actively participated in the MASB consultation process, for example: by giving feedback on the exposure drafts
External auditor 1. External auditor is the most important party involved in the IFRS implementation process (Jones and Higgins, 2006) 2. International accounting firms exert influence on the IFRS adoption (Hassan,2008; Irvine,2008)	6. External auditors provide assistances to my company in the transition process to adopt IFRS

Table 3.4: *Literature Source of Measurement Instrument Adapted to this Study (continue)*

Construct / Dimension (from the Literature)	Measurement Items in Questionnaire (Appendix E) (Used in present study)
Internal Barriers	
1. Lack of IFRS knowledge among staff (Jermakowicz and Gornick-Tomaszewski, 2006; Tan et al, 2006)	1. Inadequate knowledge and skills of my company staffs in applying IFRS
2. Training of staff to understand new standards and developing IFRS-based resources (Rezaee et al., 2010; Hail et al., 2010; Jermakowicz and Gornick-Tomaszewski, 2006; Tan et al, 2006; Tokar, 2005)	2. Lack of training courses provided to staffs in applying IFRS
3. Running of parallel accounting systems and change of information system structure (Hail et al., 2010; Jermakowicz and Gornick-Tomaszewski, 2006)	3. Lack of internal technological resources for reporting system
4. IFRS convergence requires extensive and possibly costly changes to the standard-setting infrastructure and proper training plans are required for management, auditor and investors (Rezaee et al., 2010).	4. Lack of support from top management or board
5. Inadequate time to understand new standards (Tan et al., 2006)	5. Inadequate time to understand implications of new and approved standards
6. IFRS convergence has cost impacts to companies (Garcia and Bastida, 2010; Hail et al.,2010; Jermakowicz and Gornick-Tomaszewski, 2006)	6. High costs involved in implementing IFRS
7. Lack of communication to staffs (Tan et al., 2006)	7. Lack of communication to management and staffs on the impacts of IFRS adoption

3.5 Sampling Design and Data Collection Procedures

This study uses questionnaire to collect the data. In general term, questionnaire includes all techniques of data collection in which each person is asked to respond to the same set of questions in a predetermined order (De Vaus., 2002). Further, questionnaire is essentially a measurement tool as well as an instrument to collect particular kinds of data (Oppenheim, 2004). For this study, mail questionnaire is used to collect data as it enables the survey reaches a large random sample of a population at a relatively low cost. It also provides the respondents with a feeling of anonymity and less pressure to answer the questionnaire (Cavana et al., 2001).

The sample size for this study comprises of all the companies totaling 859 companies that listed on the Main Market of Bursa Malaysia. The list of all the companies that listed on the Main Market of Bursa Malaysia was obtained from the Bursa Malaysia website on 1 July 2011 (Bursa Malaysia, 2011). All these selected companies come from various sectors, such as services, manufacturing, financial institutions and agriculture and they are located all over the West and East Malaysia.

3.6 Unit of Analysis

The unit of analysis is basically where information about the study is collected. It describes the characteristics of level of analysis of the study (De Vaus, 2002). The level of analysis can be organizations, departments, work groups, dyads, individuals or objects (Zinkmund, 2000).

Overall, full convergence with IFRS will have much impact on the publicly accountable entity in Malaysia. MASB ED 75 states that entities that meet the definition of publicly accountable entity are mandated to comply the IFRS-complaint FRS framework. Specific examples of publicly accountable entity are also provided. On the other hand, private entity that does not fulfill the meanings of a publicly accountable entity has the option to either apply PERS or the IFRS-complaint FRS framework. In this regards, companies listed on the Bursa Malaysia that meet the definition of publicly accountable entity are selected as the unit of analysis in this study.

The questionnaires were sent through postal mail, to the Financial Controllers, Chief Accountants or Head of Finance/Accounts Department as they are presumed to be directly involved with the adoption process of IFRS in their respective companies and have better understanding and wide knowledge on IFRS.

3.7 Measurement Development

This section covers questionnaire design, content and structure and sequencing of questionnaires as well as pre-testing.

3.7.1 Questionnaire Design

From the literature review, established measures from related theories were incorporated in the questionnaire. These measures represents constructs of the study that affect the preparedness of companies for full convergence with IFRS, such as coercive, mimetic and normative isomorphism that derived from institutional theory as well as internal

barriers faced by companies to implement IFRS from the resource-based view. The questions in the survey were adapted from previous empirical studies and mainly complemented by additional self-constructed items developed from literature review (See Table 3.4 for the details of measurement items).

The questionnaire consisted of seven pages and cover page with university letter head was allocated to explain the objectives of the study, contact details and assurance on the confidentiality of the information provided. All the questions were arranged neatly and enough space was provided to differentiate between them. Topics of questionnaire were divided into few sections and parts. The questionnaires were also pre-coded to enable non-respondents to be traced and followed-up subsequently. Please refer to Appendix E on the questionnaire of the study.

3.7.2 Pre testing

In order to minimize measurement error, pre-testing was carried out. Every effort was taken to produce an instrument that can help to meet the research objectives. According to Oppenheim (2004), questionnaires have to be developed, tested and improved several times before it can be sent out. One of the significant processes to refine the questionnaire is undertaking pilot works. Although piloting may be costly, it can help to improve the wording of questions, the sequencing of questions or even some procedural matters such as cover letter of introduction (Oppenheim, 2004).

For the purpose of this study, the pilot questionnaire was distributed through email to academics, audit practitioner and finance or account managers for comments on layout, wording and content. This is critical to make sure that the questions asked are understood and relevant to the Malaysian context. One academic from accounting field in university, two audit practitioners, four finance or account managers and one English lecturer responded in the pre testing.

Overall, from the feedback received, most of the respondents had a favorable response to the questions, structure and design of questionnaire. There were some suggestions for the wording and the scaling used. It also takes them between 15-20 minutes to respond to the questionnaire. Considering the respondents' views and comments, preliminary draft of the questionnaire was discussed and edited for its clarity, applicability and content validity. In addition, all unclear words and sentences highlighted during the pre-testing stage were also addressed accordingly

3.8 Questionnaire Administration

Questionnaire administration is important to gain access to sample and attempt to maximize response rate (Saunders et al., 2009). In order to increase the response rate, respondents' personal details had been identified specifically through phone call to all the 859 companies listed on Bursa Malaysia such as their full name and designation. In addition, the address of the companies was obtained from their respective annual report and web site. These steps are necessary to make sure that the questionnaire has a better

chance of being opened and read if it is addressed to the respondent personally (Oppenheim, 2004).

An official University of Malaya envelope was used in mail survey. It was anticipated that the emblem and official address would reassure respondents on the significant of study and looks more professional (Dillman, 1991; Oppenheim, 2004). A stamped and self-addressed returned envelope was also included with the questionnaire. Respondent's name and their respective department in the company were shown clearly on the envelope. This was done for the intention to minimize the respondents' effort in returning the questionnaire and encourage them to respond to the survey (De Vaus, 2002).

The questionnaires began to be posted in the last week of September 2011 in anticipation of the festive mood and the overload of mails at the post office because of the Hari Raya Aidil Fitri celebration in August 2011. Respondents were given two weeks to respond to the questionnaire. The timing of data collection process should be completed within acceptable time period because if too much time elapses in collecting data, much might change during the time interval (Sekaran, 2003). In order to encourage participation and increase the respond rate, a reminder letter together with the questionnaire survey form were posted to respondents who had not replied on the survey in the forth week of October 2011.

Of 859 questionnaires sent out, a total of 150 questionnaires were returned. After data cleaning and checking for outliers, no response was discarded in this study. Thus, the 150 responses were used in the data analysis of this study contributing a usable response rate of 17.46%. This response rate is low but common in Malaysia as managers are typically reluctant to participate in mail survey. This response rate is normal in the case of Malaysian environment and roughly comparable with those similar research surveys.

3.9 Data Analysis Procedures

In order to achieve the objectives of this study and test the hypotheses, Statistical Package for Social Science (SPSS) 16.0 was used to analyze the collected data. This study conducted the following data analysis.

3.9.1 Pre-Analysis Data Screening

Preliminary analyses were undertaken to ensure there is no violation of the assumptions of normality and regression test. Normality test was performed to determine whether the variables are normally distributed, to remove extreme outliers and also to determine whether parametric or non-parametric test can be used in this study. Such normality test normally includes Skewness and Kurtois, M-Estimators and Box-Plot analysis (Coakes et al., 2010).

In regard to regression test, testing of assumptions were performed to ensure that the data fit for regression analysis without any assumption violation. Those assumptions include the following (Coakes et al., 2010; Pallant, 2007):

1. Ratio of cases to independent variables - the number of cases needed for regression model should have desired level of 15 to 20 observations for each independent variable. A general rule is that the minimum ratio of observations to independent variables should never fall below of 5: 1 (Hair et al., 2010).

2. Normality, linearity and homoscedasticity - Residual scatter plot and residual normal plot were used to analyze these assumptions

3. Multicollinearity and auto-correlation - the assumptions here are the independent variables must not be highly correlated to avoid multicollinearity and there is no auto-correlation whereby the observations or values are independent.

4. Multivariate outlier - extreme cases that have impact on the regression solution should be deleted or modified to reduce their influence.

3.9.2 Descriptive Statistic Analysis

To better understand the characteristics of the sample profile of responding firms, descriptive statistics analysis is performed. In addition, descriptive statistic analysis illustrates the mean and standard deviation for each external drivers and internal barriers that impact the preparedness of companies for IFRS convergence.

3.9.3 Factor Analysis

The objective of factor analysis is to reduce the research data and recap essential information related to the variables (Hair et al., 2010). Factor analysis is commonly used by researchers as an exploratory technique to summarize the structure of a set of research variables (Coakes et al., 2010). Factor analysis has two common methods,

namely common factor analysis and principal components analysis (PCA). In this study, PCA was adopted. Factor analysis is performed separately according to the categories of dependent variable, independent variables and control variables. KMO value and Bartlett's test of Sphericity were first examined to ensure data sets are appropriate for factor analysis, and then follow by determining number of components extracted by using Kaisen's criterion that have an eigenvalue exceeding 1 or above.

3.9.4 Reliability Analysis

Reliability analysis is necessary in the measurement scales. Generally, reliability analysis is carried out to examine the extent to which the items in the questionnaire are correlated to each other and an overall index of internal consistency of the whole can be obtained, and item with low internal consistency should be deleted from the scale that could be identified (Cavana et al., 2001). This is frequently measured by Cronbach's coefficient alpha which is based on the average correlation of items within the test if the items are standardized. According to Pallat (2005, p.90), "ideally, the Cronbach's alpha coefficient of a scale should be above 0.7."

3.9.5 Hypothesis testing

Since all the hypotheses were formulated in the form of exploring relationships among variables, both correlation and multiple regression analyses were performed to test the hypotheses. Correlation analysis is used to describe the strength and direction of the linear relationship between two variables. Meanwhile, multiple regressions can establish that a set of independent variables explain a proportion of the variance in a dependent

variable at a significant level (significant test of R square), and can establish the relative predictive importance of the independent variables (comparing beta weights) (Cavana et al., 2001).

For this study, hierarchical multiple regression analysis is used to test the proposed hypotheses on the constructs of the influences of external drivers and internal barriers on the preparedness of companies for IFRS convergence whereas control variables were included. The regression analysis will determine which key drivers influencing the preparedness of companies for IFRS convergence and the impacts of internal barriers on the implementation of IFRS. Moreover, regression analysis will indicate the degree of impact of control variables on drivers and barriers that influence the adoption of IFRS.

3.10 Summary

This chapter presents the research methodology used in this study. First, research design was discussed and the research framework and hypotheses to be tested were showed accordingly. Secondly, the measurement of variables was explained in details. Thirdly, sampling design and collection procedures was summarized. Fourthly, measurement development of questionnaires that includes questionnaire design, pilot testing and questionnaire administration were presented accordingly. Lastly, the appropriate analyses techniques that include multiple regression analysis were identified. The following chapter will discuss the findings of the analyses of data.