UNIVERSITY OF AGDER

The Influence of Board Diversity on Financial Performance

An Empirical Study of Asia-Pacific Companies

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This master's thesis is carried out as a part of the education at the University of Agder and is therefore approved as a part of this education. However, this does not imply that the University answers for the methods that are used or the conclusions that are drawn.

University of Agder, 2014
School of Business and Law

Declaration

I hereby declare that this master thesis is my own work and that, to the best of my knowledge, it contains no material previously published by another person nor material which has been accepted for the award of any other degree than the master thesis at the University of Agder, except where due acknowledgement has been made in the text.

Acknowledgements

This master thesis marks an end to my study at the University of Agder. The completion of this cannot be done without due acknowledgement of inputs made by some important people.

Firstly, I would like to express my sincere gratitude to my supervisor, Professor Trond Randøy, for all valuable advices and academic insights in assisting me to have this work accomplished to this end.

Secondly, I am grateful to Mrs. Grahita Chandrarin and Mrs. Yasmin for helping in proofreading. I would like also to thank my parents, my families and friends for their support and encouragement.

Finally, I would like to express my appreciation to all parties in the University of Agder, Gadjah Mada University and Lånekassen for their support during these two years of my study.

List of Acronyms and Abbreviations

ANOVA	- Analysis of Variance
CEO	- Chief Executive Officer
EPS	- Earnings Per Share
NACD	- National Association of Corporate Director
NGO	- Non-Governmental Organization
OECD	- Organization for Economic Cooperation and Development
OLS	- Ordinary Least Square
PSPD	- People's Solidarity for Participatory Democracy
RDT	- Resource Dependence Theory
ROA	- Return on Assets
ROI	- Return on Investment
SPSS	- Statistical Package for the Social Scientists
UK	- United Kingdom
US	- United States
VIF	- Variance Inflation Factor
2SLS	- Two-stage Least Square

ABSTRACT

This study investigates board diversity and its influence on financial performance. The main purpose of the study is to examine whether nationality and gender diversity influence financial performance as measured by Tobin's Q. The study examines the biggest 50 Asia-Pacific companies according to Forbes Magazine. Data analysis is performed using Ordinary Least Square (OLS) and Two-Stage Least Square (2SLS) regressions analysis. The results show that gender diversity of board member has a positive influence on financial performance. However, nationality of board member contributes no significant influence on financial performance. In addition to the empirical findings supporting board diversity, I also emphasize that an economic objective should not be the only reason for increasing board diversity.

Keyword: financial performance, board diversity, board composition, corporate governance, board of director.

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Chapter 1

Introduction

This opening section consists of background and rationale of the study; research questions; objective or purpose to be achieved in this study; and significance or importance of the study. In the last part of this section, the structure of this thesis also will be presented.

1.1. Background and Rationale of the Study

This study investigates the influence of board diversity on financial performance. This empirical research is conducted in Asia-Pacific regional companies, by using Forbes Asia-Pacific's 50 biggest listed companies. Financial performance research is an important topic to be observed for all time, because financial performance is a report of management responsibility which is done annually to the public; especially for companies listed in stock exchange. Every company has an obligation to make a financial report/statement to show its financial performance. There are so many factors influencing financial performance of a company, for instance, corporate governance mechanism, board size, and board independence (Bozec, Dia, & Bozec, 2010; De Andres, Azofra, & Lopez, 2005; Kiel & Nicholson, 2003). However, this study focuses on nationality and gender diversity of board composition.

In recent years, board diversity has become an emerging issue within corporate governance practice and research. There has been an increasing focus on studies about board composition such as board size, board diversity and board independence (Carter, Simkins, & Simpson, 2003; De Andres et al., 2005; Erhardt, Werbel, & Shrader, 2003). Several studies tried to relate board diversity with organizational performance. Carter, D'Souza, Simkins, and Simpson (2010) indicate that gender and ethnic diversity in board of director could lead to better corporate governance which leads to the more profitable business.

Some countries already set the rules for board composition. Norway, for instance, has implemented gender quota in the board of publicly listed firms in order to improve equal opportunities. Norway is also the first country in the world implementing this regulation since 2006. Norwegian government has decided a minimum 40 percent of the board members must

be women (Smith, Smith, & Verner, 2006). Similar to the Scandinavian countries, Spain, Iceland and France also passed regulation to require a quota for the number of female board member (Adams & Ferreira, 2009; Ahern & Dittmar, 2012). In Asia, gender quota also has been introduced. Malaysia has imposed a 30 percent quota for women on board by 2016 (The Economist, 2014) and Singapore has considered to increase gender diversity in board of director (www.staffingindustry.com).

In addition to the study of women on boards, the role of foreign board member is also widely discussed. For example, Choi, Park, and Yoo (2007) examine that foreign investor participation on board enhances firm performance in Korea. Then, Ruigrok, Peck, and Tacheva (2007) indicate foreign directors in Swiss corporations tend to be more independent. Richard (2000) also reports that racial or ethnic diversity in board of director increases value and finally contribute to company performance and competitive advantage.

As a matter of fact, most countries in Asia do not have gender quota regulation. However, Asian companies have a significant number of female board members and this number is increasing. Besides, Asia-Pacific economy is emerging and involving huge amount of foreign direct investment. Therefore, foreign board members are demanded by international business environment as representatives of international stakeholders.

Nevertheless, addressing board diversity especially quota requirement, both for female and foreign directors is arguable. Pro and contra appear not only from academic researcher but also business practitioner. Bloomberg Businessweek (2011) indicates that quota system is effective (pro: Toegel, 2011). The evidence shows that Norway, after implementing quota, climbing up from 11^{th} position in 2007 to 7^{th} in 2010 for The World Competitiveness Yearbook ranking. However, the same article suggests: it is not that simple to reach quota objective (contra: Barsoux, 2011). The lack of women on boards is a consequent of their underrepresentation on top executives from where boards are normally recruited. Quota system is deemed as coercion causing risk of alienating the quota-driven female directors, nicknamed as golden skirts, in the boardroom (Barsoux, 2011). Further, when corporate governance focus on women on board is increasing, attention to board internationalization is less discussed. The Australian Institute of Company Directors sentiment index reveals while 40% of boards increase their gender diversity, only 21% seek increase in ethnic diversity (Durkin, 2013).

Furthermore, some previous studies prove clearly that board diversity is positively associated with firm financial performance (Carter et al., 2003; Erhardt et al., 2003; Kiel & Nicholson, 2003). On the contrary, the other studies show the opposite result: there is no significant relationship between board diversity and financial performance (Adams & Ferreira, 2009; Carter et al., 2010; De Andres et al., 2005; Rose, 2007). Despite there has been mixed evidence regarding the effect of board diversity on performance, diversity in board composition is still considered favorable based on these two important reasons (Kang, Cheng, & Gray, 2007). Firstly, diversity increases discussion, exchange of ideas and group performance. A more diverse board provides different insights and perspectives in facing problem and finding solution. This eventually will improve organizational value and performance through better decision making. Secondly, the function of corporate boards is to protect stakeholders' interest. As a consequence, the board should comprise members that are representative of company's stakeholders. Having a more diverse board can be seen as a good way to be more 'representative'.

Henceforth, board diversity, specifically in gender and nationality, will be the main focus in this research whereby their influence on firm financial performance will be examined further. Study will be conducted on the 50 best of Asia-Pacific's biggest listed companies according to Forbes magazine. These companies have more than $3 billion in their revenue or market capitalization. They are selected based on solid financial track combined with great management and entrepreneurial skill.

Based on the data from those top Asia-Pacific companies, hypothesis test is conducted using multiple regression analysis. The finding of this study indicates that gender diversity in board composition have a positive effect on firm financial performance. However, having foreign board member shows no significant influence on firm performance. Deeper insight for discussing both nationality and gender diversity of board composition express the problem of endogeneity. The relationship of board diversity and firm financial performance is not unidirectional causality (Oxelheim, Gregoric, Randoy, & Thomsen, 2013). It is difficult to isolate whether board diversity drives or is driven by firm performance. I will try to discuss endogenous issues in relation to this research, however, this challenge is virtually impossible to completely eliminated (Oxelheim et al., 2013).

1.2. Research questions

Research questions express research objectives in terms of questions which can be addressed by research (Zikmund, Babin, Carr, & Griffin, 2013). Research question is also known as problem statement; a clear, precise and succinct statement related to a specific issue of which researcher want to investigate (Sekaran & Bougie, 2010). Sekaran and Bougie (2010) also explain that a well-defined research question should meet three criteria: relevant, feasible and interesting. A research question is relevant when it is useful for managerial or (and) academic perspectives (Sekaran & Bougie, 2010). It is feasible if solvable within project restrictions. Then, it is interesting enough to motivate researcher staying throughout the whole research process.

Based on the background and rationale of this study, there are two research questions that will be discussed:

RQ1: Does nationality of board member influence financial performance?

RQ2: Does gender diversity of board member influence financial performance?

1.3. Objective of the study

This research is a purposive process. Research objective or research purpose is the goal to be achieved in doing research (Zikmund et al., 2013). The objective of this study is to examine whether nationality and gender diversity of board member influence financial performance of companies. Nationality and gender diversity will be the main variables analyzed in this research through hypothesis testing. This objective/purpose is important because the result of this study will contribute as new evidence from Asia-Pacific for the influence of board diversity on company performance.

1.4. Significance of the study

In managing diversity on board of director, it is important to consider local circumstances as well instead of relying only on research from other countries (Ruigrok et al., 2007). Majority of research conducted on corporate board topic use US or European corporations as sample. Presenting another geographical point of view, this study will be conducted in Asia-Pacific firms. The result of the study hopefully could contribute more for academics and business practice and present additional evidence of nationality and gender diversity effects on firm financial performance, particularly in Asia.

1.5. Presentation of the study

The arrangement of presenting a research report is very important. A systematic structure is necessary to be considered. This master thesis is divided into six chapters. The first part is introduction, followed by theoretical frameworks and research methods. Then, data analysis and results are presented and after that findings and discussions. Finally, conclusion will be the closing chapter. The systematic organization of this master thesis will be presented as follows.

Chapter 1: Introduction

The first chapter briefly explains about background and rationale of the study; research questions; objective of the study; significance of the study; and presentation of the study.

Chapter 2: Theoretical Framework

In this chapter, theoretical framework based on literature study will be presented then followed by hypothesis formulation and research model.

Chapter 3: Research Methods

This chapter consists of research design, data collection, sample, and research method employed in this study.

Chapter 4: Data Analysis and Results

Various tests conducted for data analysis will be explained in this chapter. Then, the result will be presented and examined.

Chapter 5: Findings and Discussions

The fifth chapter summarizes research findings and discusses the implication of those findings.

Chapter 6: Conclusions

Finally, after analyzing the data and discussing the findings, the last chapter consists of conclusions, limitations, and recommendation for future studies.

Chapter 2

Theoretical Framework

The second section of this master thesis is a literature review. Relevant theories and former studies are presented and elaborated with respect to the topic of this research. Theory is a formal and logical explanation of phenomena that includes explanation of how things are related each other (Zikmund et al., 2013). The discussion is started with financial performance explanation and followed by some reviews of corporate governance as the general topic of the research. Then, it is continued with more specific theories about corporate governance, especially regarding board diversity. Thereafter, based on the theory, the research hypothesis will be formulated in the end of this section followed by the research model.

2.1. Financial Performance

Financial performance is related to firm's ability to generate profit or income. It is often used as a general measure of business results; how well company doing its business activities. It can also be used to compare among companies within an industry. There is a wide range of financial performance measures. However, financial performance is basically divided into three general categories: investor returns, accounting returns and perceptual (Cochran & Wood, 1984; Orlitzky, Schmidt, & Rynes, 2003).

Firstly, investor returns are measured based on shareholders perspectives (Cochran & Wood, 1984). These are market based measures of financial performance, for instance, share prices or share price appreciation. They are related with stock market process, which relies on stock return and risk, to determine stock price and also market value (Orlitzky et al., 2003).

Secondly, another alternative for measuring financial performance is accounting returns. The examples are earning per share (EPS), price to earnings ratio, return on investment (ROI), return on asset (ROA), and any other traditional accounting ratios. These measures are related to managerial policies: how management allocates funds to different projects. Therefore, they express internal managerial performance and decision making capability, rather than external market response (Orlitzky et al., 2003).

Lastly, perceptual measure of financial performance is related to survey. The survey aims to obtain respondent estimation of company financial performance, for example, company 'wise use of assets', 'soundness of financial position', or 'financial achievement compared with competitors' (Conine and Madden 1987; Reimann 1975; Wartick 1988 in Orlitzky et al., 2003). However, compared to the two measures mentioned earlier, this measure seems to be the most subjective.

2.2. Corporate Governance

As for corporate governance theory, Thomsen and Conyon (2012) define corporate governance as the control and direction of companies by ownership, board, company law, incentive, and other mechanisms. Charkham (1994) in Thomsen and Conyon (2012) proposes a broader definition: "the way companies are run". Furthermore, Monks and Minow (2008) mention that corporate governance is a mechanism that focuses on the balance relationship of the three actors: management, board of director and owner. Supporting their definition, Moffett, Stonehill, and Eiteman (2006) indicate the relationship among those actors determines and controls the strategic direction and performance of an organization.

According to Thomsen and Conyon (2012), there are several mechanisms of corporate governance in which some are more important than others. Those mechanisms are informal governance, regulation, ownership, boards, incentive systems, and stakeholder pressure. Each mechanism has its own cost and benefits. However, most of them are needed to improve company economic performance.

Further, corporate governance is important to ensure good management system which is essential for good economic performance. The scandals in the past such as Enron (US), WorldCom (US), Olympus (Japan), Satyam (India) etc. have shown that the role of corporate governance becomes dramatically clear. It is therefore very important to establish a governance structure, which on one side allows management and entrepreneur to do their best, and on the other side holds them accountable to investor if they also use other people's money in their business (Thomsen, 2008). As a matter of fact, the main objective of corporate governance in shareholder wealth model is optimizing returns to shareholders or investors. In order to achieve this objective, practice of good corporate governance should focus on board of director to develop and implement strategy to ensure corporate growth and value

improvement as well as to assure other stakeholder's interest to be accommodated (Moffett et al., 2006).

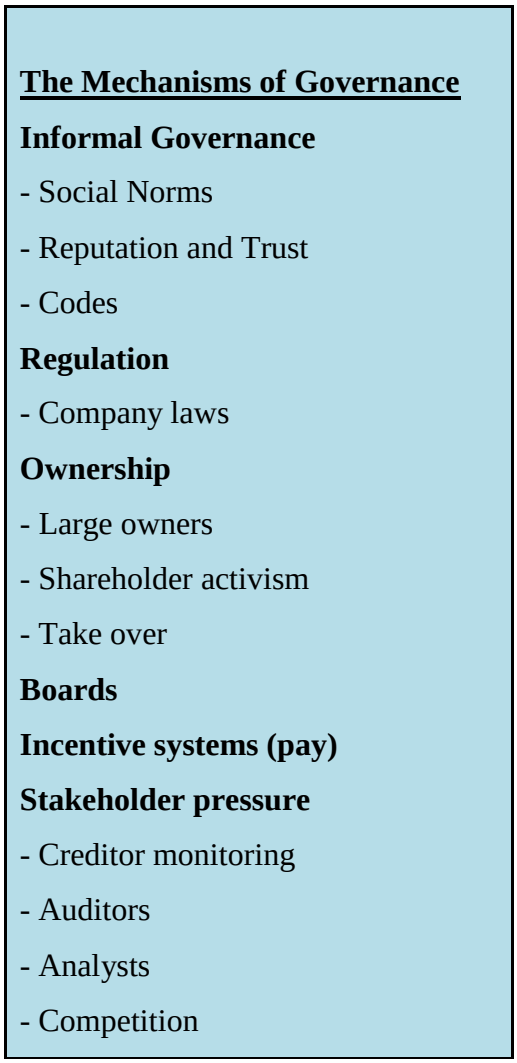

Figure 2.1: Corporate Governance Mechanisms

Source: Thomsen and Conyon (2012)

One of the most widely accepted practices of good corporate governance is the Organization for Economic Cooperation and Development (OECD) principles of corporate governance. It was established in 1999 and revised in 2004. The OECD realizes that 'one size does not fit all'. Hence, these principles represent only common characteristics that are fundamental in corporate governance (Mallin, 2010). The revised principles are as follows.

	OECD Principles of Corporate Governance
I.	Ensuring the basis for an effective corporate governance framework
II.	The rights of the shareholders and key ownership functions
III.	The equitable treatment of shareholders
IV.	The role of stakeholders in corporate governance
V.	Disclosure and transparency
VI.	The responsibilities of the board

Figure 2.2: The OECD Principles

Source: http://www.oecd.org/

Among those principles of OECD, the most relevant to this study is the sixth principle: The Responsibilities of the Board. As stated in OECD (2004), corporate governance framework should ensure firms' strategic guidance, effective monitoring of management by the board, and board's accountability to company and shareholders. This means board function, as one of the main mechanisms of corporate governance, should work well and accountable in monitoring management. Boards should work in the best interest of company and shareholders, be fully informed basis, should treat all stakeholders' interest fairly and apply high ethical standards. Further elaboration about board of director will be discussed in the next section.

2.2. Board of Director

According to Kang et al. (2007), board of directors is one of a number of internal governance mechanisms which are intended to ensure that the interests of shareholders and managers are closely aligned. Other researchers, Thomsen and Conyon (2012), support that board is a generic corporate governance mechanism that are elected by shareholder to monitor the company. As a control mechanism, boards play an important role in corporate governance. Board provides useful function as an intermediary between owner and management. When other corporate governance mechanisms are weak, board inefficiency could be costly to the company and even to the society as a whole (De Andres et al., 2005). In consonance with the principles made by OECD (2004), board of director should fulfill certain key functions as follows.

1. Board of director should guide and review corporate strategy, risk policy, major plan of action, annual budget and business plan; set performance objective; monitor implementation and corporate performance; and oversee major capital expenditure, acquisition and divestiture.
2. Board of director should monitor the effectiveness of company's governance practice and change if needed.
3. Board of director should select, monitor and compensate, or if necessary, replace key executive and oversee succession planning.
4. Board of director should align key executive and board remuneration with the longer term interests of the company and its shareholders.
5. Board of director should ensure a formal and transparent board nomination and election process.
6. Board of director should manage and monitor potential conflict of interest of management, board member and shareholder, including misuse of corporate assets and abuse in related party transactions.
7. Board of director should ensure the integrity of corporate accounting and financial reporting systems, including independent audit, and that appropriate control systems are in place, particularly, risk management system, operational and financial control system, and compliance with the law and relevant standard.
8. Board of director should oversee the process of communication and disclosure.

In addition to board function, there are three basic roles of board of director according to Oxelheim et al. (2013): monitoring role, advisory role and resource provision role. Monitoring is the process of hiring, promoting and assessing management while advisory role is about directors' involvement in firms' strategy (Adams et al., 2010 in Oxelheim et al., 2013). Then, resource provision role refers to how directors can provide access to key resources for company (Pearce & Zahra, 1992; Pfeffer & Salancik, 1978 in Oxelheim et al., 2013).

Furthermore, board system is divided into one-tier (or unitary) board and two-tier (or dual) board system. One-tier board system is characterized by one single board in which consists of executive and non-executive directors. Directors in one-tier board are elected by shareholders and responsible for all aspects of company activities. Meanwhile, two-tier board system consists of executive or management board and supervisory board. Management board runs the business whilst supervisory board oversees the direction of business and supervises management board. In this case, there is a clear separation of management and control: a

member of one board cannot be member of another board. Supervisory board is elected by shareholder while management board is appointed by supervisory board (Kim, Nofsinger, & Mohr, 2010; Mallin, 2010). The examples of countries with one-tier board system are India, Singapore, and Malaysia while China, Indonesia and Taiwan are the examples of countries that have two-tier board system.

There are some implications of the different board systems. For example, one-tier board allows closer relationship and better information flow because all directors are in the same level. On the other hand, two-tier board system is more distinct and formal. However, both systems have many similarities. Corporate governance codes also have common approach to both practices in terms of function, committees, independence, etc.

Discussing about codes related to board of director, there is one which has great influence in corporate governance practice; that is Cadbury Code of Best Practice. The Combined Code Section A: Director is presented in the following figure. Every point in the codes emphasize central role of board of director. The second point, for instance, addresses CEO duality. Several companies nowadays have CEO who in the same time also becomes a member of the board, or even chairman of the board. In this case, there should be a clear separation between both roles so that abuse of power can be avoided. The third point in the codes is related to board independence and will be explained in another section. In regard to the sixth point, board of directors also should be evaluated regarding their performance. Performance can be measured based on several criteria such as shareholder return, share price, earning per share, profit-based measures, return on capital employed, or other individual performance measures. Measuring board performance is very important especially to determine their compensations. Board compensation can encompass salary, bonus, stock option, share plan, pension and other benefits (Mallin, 2010). Finally, the other points of the codes are also equally important.

The Combined Code

Section 1 Companies

A. Directors

The Board

1. Every company should be headed by an effective board, which is responsible collectively for the success of the company.

Chairman and chief executive

2. There should be a clear division of responsibilities between the running board and the executive responsibility for the running of the company's business. No one individual should have unfettered powers of decision.

Board balance and independence

3. The board should include a balance of executive and non-executive directors (and in particular independent non-executive directors). No individual or small group of individuals can dominate board's decision making.

Appointments to the Board

4. There should be a formal, transparent and rigorous procedure for the appointment of new directors to the board

Information and professional development

5. The board should be supplied with information in a timely manner and in an appropriate quality to enable it to discharge its duties. All directors should receive induction on joining the board and should regularly update their skills and knowledge.

Performance evaluation

6. The board should undertake a formal and rigorous annual evaluation of its own performance, its committees and its individual directors.

Re-election

7. All directors should be submitted for re-election at regular intervals, subject to continued satisfactory performance. The board should ensure planned and progressive refreshing of the board.

Figure 2.3: The Cadbury Code

Source: Mallin (2010)

Additionally, The National Association of Corporate Director (NACD) also published a report on the performance evaluation of CEOs, boards, and directors. Their subsequent reports on director professionalism, strategic planning and audit committee have been influential in promoting policies such as director stock ownership, special meeting only for outsider director, ensuring director independency, and so on (Monks & Minow, 2008).

2.2.1. Board Size

Another important issue in board structure is board size, which might be varied from one company to others. Ten members are considered to be typical for medium to large company (Thomsen & Conyon, 2012). However, this can vary and not every company has a board system. Having board of director is not mandatory. To some extent, this depends on the size of the firm. Under these circumstances, a number of small-medium enterprise or microfinance organization often has relatively smaller board size. Furthermore, larger firms normally require greater number of board member to monitor larger firm activities. The ability of the board to monitor can increase as more directors added. However, this benefit can be outweighed by the costs in terms of the poorer communication and decision-making within larger group (Lipton and Lorsch, 1992; Jensen, 1993 in De Andres et al., 2005; Kiel and Nicholson, 2003).

Studies show an inverse relationship between firm value and board size (Yermack, 1996; Eisenberg et al., 1998 in De Andres et al., 2005). Small board size is more effective. In other words, oversized board of director might lead to worse performance. For instance, the case of free-rider might appear and reduce board effectiveness. Moreover, financial market shows positive reaction toward board downsizing announcement. However, empirical evidence to board size and its influence now is getting ambiguous because some other studies find conflicting evidences (Dalton et al., 1998; Coles et al., 2008 in Thomsen & Conyon, 2012). Thus, it is difficult to draw the robust conclusion and still there is no consensus here. One reason of this inaccurate causal interpretation could be that board size is endogenous (Thomsen & Conyon, 2012).

2.2.2. Board Independence

Equally important as board size, company should also focus on board independence. The board is composed of both employee of the organization (executive or insider) and senior or influential nonemployee (non-executive or outsider) (Moffett et al., 2006). At least one-third of the board should be nonexecutive director, a majority of whom should be independent (McGee, 2010). Being independent in this case is they are not currently non-executive; they were not employee of the company in the past years; they do not have current business relationship with the company; they are not an immediate family of an executive officer of the firm and so on. Thus, being non-executive only is not independent enough. Company then should also disclose biographies of its board members and make a statement to define their independence.

Further, directors are elected by shareholder's vote and their appointment should be made by a nomination committee, in which independent director supposed to play a key role (OECD, 2004). Most of companies also have risk committee; ethics committee; executive committee; finance committee; etc. This might be different; it depends on the company but the most important committees are nomination committee, audit committee and remuneration committee (Kim et al., 2010; Mallin, 2010). Normally in large companies, they should meet every quarter for 3-4 hours up to the whole day (McGee, 2010; Thomsen & Conyon, 2012). Discussing further about this matter, specific board committees are best served by independent director, for instance, audit committee or committee that determine CEO compensation. However, for committees making decision about financing and long term investment are best served by insiders (Kim et al., 2010). Overall, studies and expert reports on corporate governance suggest balance proportion of inside and outside directors on board since both skills and functions are essential (Kiel & Nicholson, 2003).

2.3. Corporate Governance and Board of Director in Asia

After generally discussing about board of director, this section gives an overview about corporate governance and board of director particularly in Asia. Corporate governance practice in Asia is to large extent influenced by ownership structure. For instance, dominant shareholders in Japan are typically banks or industrial groups (*keiretsu*) while in South Korea

are often family groups or conglomerates (*chaebol*). In Malaysia, families are also often being dominant shareholders whereas in Chinese companies, state government still has the biggest influence (Mallin, 2010). As one of corporate governance mechanisms, board of directors might also vary in Asia.

2.3.1. Japan

In Japan, main business form is public limited company which is predominantly owned by *keiretsu*, a very strong interfirm network (Mallin, 2010). The legal system is based on civil law, which is similar to Germany. Besides, Japan is a country with predominantly bank-based rather than equity or market based financial system (Aguilera & Jackson, 2003). In this case, banks are the key financial institutions financing the firms. Bankers also monitor companies, sometimes even more than shareholders. However, banks shareholdings have been reduced since Japan financial deregulation (Ahmadjian and Okumura, 2010 in Thomsen and Conyon 2012).

According to Thomsen and Conyon (2012), Japan applies one tier board system although it use element of a two-tier system with a statutory board of auditors. The board of auditors mainly focuses on auditing and does not ratify strategic decisions. The board normally also forms various committees such as compensation or nominating committees in which outside director is appointed as chairman for each committees (Mallin, 2010). Historically, in the past board size is large up to 30-40 members but it has been shrinking over the years. Boards are also comprised primarily by inside directors. Kaplan and Minton (1994) in Thomsen and Conyon (2012) explain that in case of poor performance, there is a higher probability shareholder will appoint outside director in replacement of incumbent executives. This is because corporate shareholders play important monitoring and disciplinary roles in Japan.

2.3.2. South Korea

Public limited company with family or corporate cross-holding (*chaebols*) as shareholders is the major business form in Korea (Mallin, 2010). The company law is common law. In Korea, conglomeration is very powerful and often shows lack of transparency. However, lately a group of activist has established People's Solidarity for Participatory Democracy (PSPD)

which improves governance practice of Korean firms to protect minority shareholders (Mallin, 2010).

In South Korea, board system is one-tier or unitary system. Board activities include: setting corporate goals; approving business strategies; supervising and controlling management activities; and also ensuring information disclosure (Mallin, 2010). Internal committees might be set up such as audit, operation and remuneration committees. Independent directors should be minimum 25 percent of the board and 50 percent of the board for financial institutions or large public companies. Independent directors should be able to perform their duties independently from management, shareholder and corporation. It is also recommended to have regular meeting for independent directors only and management to enable fuller perspectives of management issues (Mallin, 2010).

2.3.3. China

Main business forms in China are state-owned enterprises and joint stocks companies (Mallin, 2010). China has a civil law system. This country seems to combine both Anglo-Saxon and Continental European model in its corporate governance pattern (Thomsen & Conyon, 2012). China promotes stock options to motivate executives similar to American model but adopts dual board system as in German model (Thomsen & Conyon, 2012).

According to Thomsen and Conyon (2012), Chinese government plays major role in controlling business. This leads to conflict of interests between controlling shareholders and minority shareholders. Fan, Wong and Zhang (2007) in Thomsen and Conyon (2012) reveal that one-quarter of the CEOs in a sample of 790 Chinese firms are bureaucrats or former government bureaucrats. Additionally, the firms with politically connection show worse performance than those without political connection. However, corporate governance innovations have been performed in recent years to increase transparency and protect minority investors, for instance, by adding independent directors or improving incentive arrangements (Thomsen & Conyon, 2012).

In China, board of directors operates two-tier board system consisting of a supervisory board and a main board of director (Thomsen & Conyon, 2012). However, the supervisory board is an auditor that can give recommendation but do not embark in day to day activities of the

main board. Board size consists of ten member or more. Traditionally, Chinese government has a great influence in board appointment but it is revealed that the appointed bureaucrats are often ineffective. Due to reformation and shareholder pressure, China increasingly adopts Anglo-Saxon governance practice which includes having key committees of audit, compensation and governance (Fan et al., 2007; Hu et al., 2010; Allen et al., 2005; Jingu, 2007; and Chen et al., 2010 in Thomsen and Conyon 2012). In that way, independency is improved. Then, Chinese board structure significantly increases the number of independent non-executive directors because non-executive only is not necessarily independent.

2.3.4. Australia

Located in Asia-Pacific, Australia seems to develop the Anglo-Saxon corporate governance model which is adopted from the United Kingdom. Australia has a common law system. The main business form is public corporations with predominant institutional, corporate or family ownerships (Mallin, 2010). The board structure is one-tier board system. Australia applies 'the essentials of corporate governance principles' which is not mandatory but helping as implementation guidance. There are five recommendations related to board of director as follows (Mallin, 2010).

- Majority of the board should comprise independent directors
- Chairman of the board should be an independent director
- Roles of CEO and chairman of the board should not be exercised by the same person
- Board of director should form a nomination committee
- Various information about the board such as board experience or board meeting attendance should be presented in company's annual report

2.3.5. Malaysia

Next, we are going to discuss about Malaysian corporate governance practice. Malaysia has a lot of family-owned or family-controlled companies. This country uses common law system. Bumiputra (the Malaysian people) shareholders also have important influences in governance system as Malaysian government try to increase their involvement in corporate sector (Mallin, 2010).

Malaysia has one-tier board system. This country encourages its listed company to have an effective balanced board comprised of executive and non executives directors. At least one-third of the board should be independent non-executive directors (Mallin, 2010). These are some of responsibilities of the board: ensuring proper management and strategic direction of the company; ensuring appropriate risk management system; reviewing internal control system of the company; etc. Then, board should meet regularly and should have access to a company secretary who should ensure the board provides appropriate information for corporate and statutory requirements (Malin, 2010). They could also get access to independent professional advisor if it is needed (Malin, 2010).

2.3.6. Indonesia

The last country to discuss concerning with its board of director, is Indonesia. Similar with the other Asian countries, family ownership and conglomeration play important roles in this country. The company law is operated by using civil law system. Indonesia seems to develop its corporate governance system which is adopted from Continental European model as reflected in its board system.

Indonesia applies two-tier board systems consisting of board of commissioners and board of directors. Board of director is a part of management or executive while board of commissioners more or less plays the role of supervisory board. Each of them has a clear authority and responsibility based on their functions. Board of commissioners is responsible in advising board of director but not allowed to make operational decision. Committees are normally formed in Indonesian board of director, such as audit committee, nomination and remuneration committee, risk policy committee and corporate governance committee ("Indonesia's Code of Good Corporate Governance," 2006).

2.3.7. Asian Study on Corporate Governance

In the light of OECD (2004), McGee (2009) has conducted a comparative study about corporate governance in Asia. This study compares 10 Asian countries and the data was obtained from the World Bank. As presented below, this is the finding which is related to responsibilities of the board in Asia.

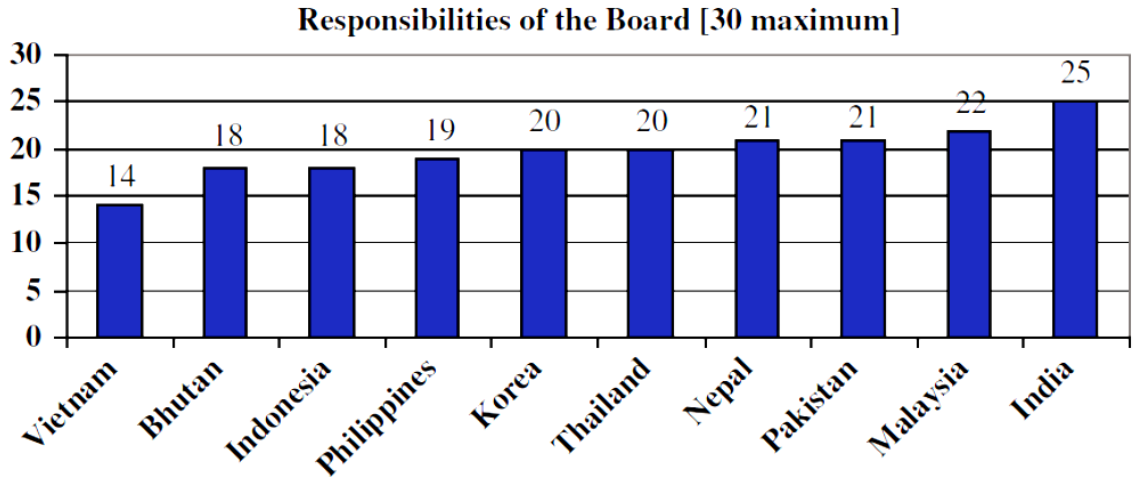

Figure 2.4: Responsibility of the board in Asia

Source: McGee (2009)

Higher score implies better responsibilities of the board on that particular country. India has the highest score which means that Indian board has the best responsibilities criteria. Meanwhile, Vietnam is in the low end. There are several criteria assessed for responsibilities of the board in McGee (2010): due diligence and care; fair treatment of shareholder; compliance with law; fulfillment of board functions; independence from management and access to accurate, relevant and timely information.

2.4. Board Diversity and Firm Performance

Among the most significant corporate governance issues faced by modern corporations are those related to diversity, such as gender, age, nationality and independence of directors. Board diversity is defined as variety in the composition of the board (Kang et al., 2007). This is divided into observable diversity and less visible diversity (Milliken and Martins, 1996 in Kang et al., 2007). Observable diversity consists of detectable attributes such as gender, ethnic or nationality and age. Meanwhile, less visible diversity is about background of the directors, for instances, education or previous experience. According to Erhardt et al. (2003), observable diversity is also called demographic diversity and less visible diversity is called called non-observable or cognitive diversity.

Presently, the majority of the board members in Western firms are white middle-aged males from the home country of the firm. This implies a limited degree of board diversity. As Hilb (2012) highlighted, board diversity is important to the creation of new idea , and the best way

to maximize differences is to mix ages, cultures, disciplines, genders, and so on. It should be noted that diversity can only become a competitive advantage when it is well managed. A diverse board should be created based on criteria relevant to strategy. There is no such thing as an ideal board composition. An optimal board composition depends on the nature of the firm and its context (Macus, 2002 in Hilb, 2012).

In the following figure, Hilb (2012) also proposes comparative strengths of board members of different gender and national culture. According to him, female or male board members might come from hard or soft culture as their national backgrounds. Among hard culture characteristics are assertive, competitive, focus on short-term results and task-oriented whilst soft culture characteristics are empathetic, cooperative, long-term and relationship oriented. A good example for hard culture is United States and for soft culture is Japan. In this case, nationality is regarded as a reflection of culture.

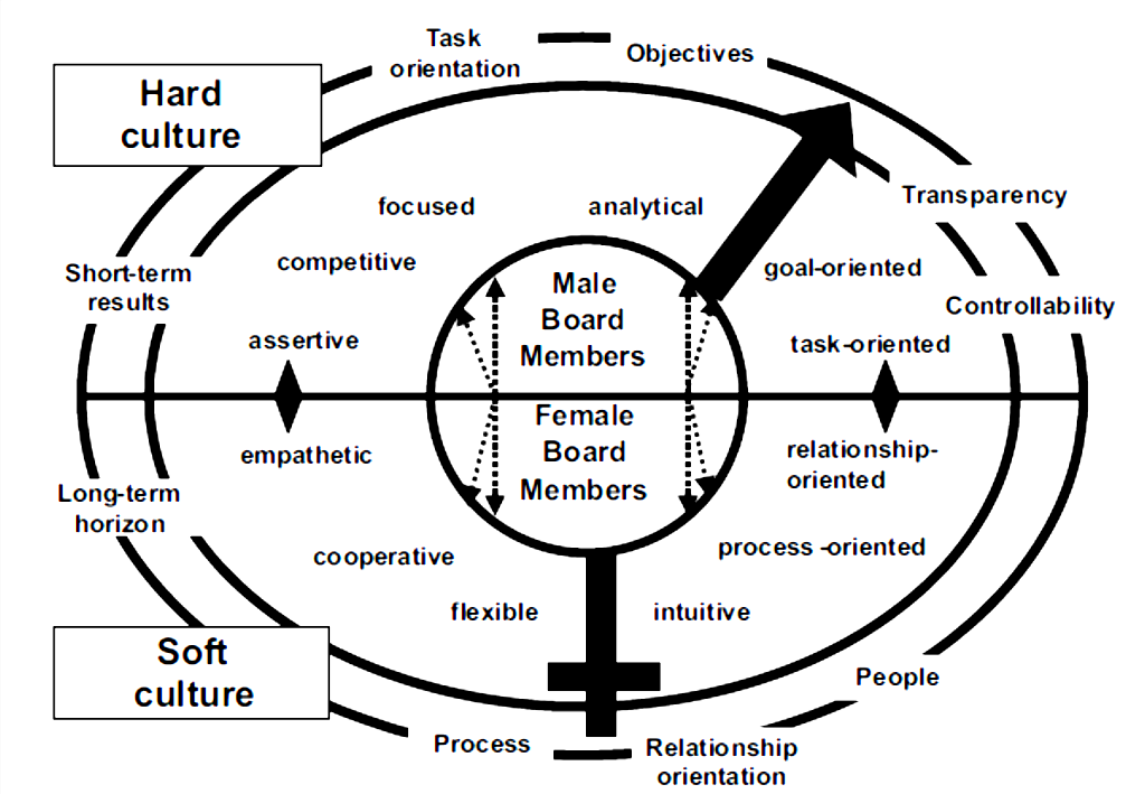

Figure 2.5: Comparative strengths of board members of different gender and national culture
Source: Hilb (2012)

As aforementioned, culture or nationality and gender as the components of board diversity should be well managed to be useful. Hilb (2012) also confirms that board diversity can be a competitive advantage or disadvantage depends on these statements:

a. Board diversity should never be more complex than the reality. If your company operates only in Japan for example, you might not need an American board member.
b. Board diversity only adds value if each board member knows their own identity and the identities the other members along with their strengths and weaknesses.

Henceforth, this research addresses nationality and gender diversity. Both can enable different perspectives given that men and women may approach issues from different point of view and has different behavioral pattern (Mallin, 2010). Moreover, individuals from different ethnic backgrounds may bring additional cultural insights to the board room.

Before presenting previous studies in board diversity and firm performance, a theoretical perspective will be presented in the following sections. Four main theories of corporate governance, namely agency theory; resource dependency theory; human capital theory; and stakeholder theory will be elaborated as they are relevant to this study.

2.4.1. Agency theory

The first theory is agency theory. It concerns with aligning the interest of owner and manager in which normally there is an inherent conflict between them (Fama and Jensen, 1983 in Nicholson and Kiel, 2007). In this case, the owner is the principal while the management is the agent. Agent is the party doing something for the principal. Whenever someone does something for somebody else, agency problem will manifest (Thomsen & Conyon, 2012). Due to separation of ownership and control between owner and manager, agency problem arise in this principal-agent relationship. Owner of companies have to make sure that managers do not behave or act opportunistically by using company resources for their own benefits. Hence, agency cost appears. Agency cost is the cost caused by manager misusing their position as well as the cost of monitoring them to prevent power abuse. In owner-manager relationships, this cost is inevitable (Blair, 1996 in Mallin 2010; Jensen and Mecking, 1976 in Nicholson and Kiel, 2007).

Agency theory addresses the relationship between owner and manager. Hence, the intervention of the board is needed to reduce the agency conflict between owners and managers. In a company, shareholders are unable to always monitor management due to limitations such as cost and capability. Minority shareholders, for instance, will be difficult to always monitor management performance of the company they invest their money to. Therefore, shareholders appointed board of directors to monitor management and ensure their interest. In the light of agency theory, scholars argue that board structure arises from choices taken by economic actors in response to governance issues face by the firm (Adams et al., 2010 in Oxelheim et al., 2013). Moreover, agency theory express that a greater proportion of independent directors will be more capable to monitor company because managers will have less opportunity to pursue self-interest (Nicholson & Kiel, 2007).

In another reference, Carter et al. (2003) highlight that a more diverse board might be better in monitoring management; because board diversity increases board independence. Board of directors with heterogeneity in gender, ethnicity or cultural backgrounds might bring issues or questions that would not come from directors with traditional characteristics. This leads to a more active board. In addition, high equity ownership by directors increases the willingness of directors to monitor management (Jensen, 1993; Monks Minow, 2004 in Carter et al., 2010). Dewatripont et al. (1999) and Westphal and Milton (2000) as cited in Francoeur Francoeur, Labelle, and Sinclair-Desgagné (2008) identify agency-theoretic rationale that women or foreigner often bring fresh perspectives on complex issues in the board room. Consequently, this might help to cope with informational bias or limitation faced by the board in decision making.

Furthermore, board diversity is associated with the effectiveness and quality of monitoring function of the boards. According to Erhardt et al. (2003) CEO may have influence on the board of directors. Consequently, agency theory suggests that CEO needs independent oversight. Hence, a diverse board and the subsequent conflict which is considered to occur commonly within a diverse group dynamics will provide better controlling function (Erhardt et al., 2003). This is eventually can also be used as a mechanism to minimize potential agency problem.

Nevertheless, agency theory is criticized to be too Anglo-Saxon specific (Phan & Yoshikawa, 2000). Discussing from Asia-Pacific point of view, ownerships in Asia-Pacific companies are rather different from companies in Anglo-Saxon countries. For example, conglomerations, government-owned enterprises, and business networks are commonly more important in Asia; with phenomena such as *keiretsu* in Japan and *chaebol* in Korea. In spite of this difference, we still argue that agency theory is relevant in Asia-Pacific setting. Although ownership characteristics are different, owners as the principal still need to ensure management behavior. Moreover, due to global market exposure, Asia-Pacific companies are demanded to increase their transparency. For instance, when an Asia-Pacific company is listed on US stock exchange, this company should provide sufficient disclosure as required. Phan and Yosikawa (2000) even find that managers who are exposed to financial market discipline make more efficient investment decisions compared to those who are protected from such discipline by being members of a *keiretsu*.

2.4.2. Resource dependence theory

The second theory, resource dependence theory (RDT) studies how external resources of company affect its behavior and strategy. Company should have control of its critical resources so that it is not dependent to other parties. This theory is related to the contact role of board of director in which companies seek to manage external dependency by forming ownership ties and board connections (Pfeffer and Salancik, 1978 in Nicolson and Kiel, 2007; Thomsen and Conyon, 2012). Pfeffer and Salancik (1978) in Hillman, Cannella, and Harris (2002) suggest four primary benefits for the external linkages such as board of directors:

- provision of specific resources such as expertise, information or advice from individuals with experience in a variety of areas;
- creation of channels of communication to the firm;
- provision of commitments of support from important organizations in external environment; and
- creation of legitimacy for the firm.

In Asia, the contact role of the board as emphasized in resource dependence theory is very important. Thomsen and Conyon (2012) state China is a good example for this matter. In China where political connection is extraordinary important, it will be a good idea to have board members with political background. Board ties and connections provide opportunities and access to valuable resources for Asia-Pacific companies. Hillman et al. (2000) in Carter et al. (2010) extend resource dependence theory and suggest that different types of directors provide different beneficial resources to the company, such as: advice, legitimacy, outside information, etc. Hence, a more diverse board will provide more variations and more valuable resources which lead to better firm performance.

Among other corporate governance theories, resource dependence theory provides the most convincing theoretical basis for board diversity and its effect on firm performance. Concerning with this, Carter et al. (2010) point out that gender and ethnic diversity in the board provide unique information sets for management to make better decision. Diverse directors give access to important constituencies in external environments. Moreover, board diversity sends positive signals to the market and diverse directors bring various perspectives and non-traditional approaches to problem solving. To support that, Ruigrok et al. (2007) add that the increasing internationalization of business leads to a higher demand for directors who possess necessary knowledge and contacts in foreign markets. In this case, foreign director might be qualified and be able to link the company to different contexts of the countries in which it operates. Likewise, with the increasing involvement of women in business world, the importance of female representation on corporate boards is also rising (Burke, 1997; Burke and Mattis, 2000; Carpenter *et al.*, 2001 in Ruigrok, 2007).

2.4.3. Human capital theory

The third is human capital theory. This theory is also relevant to explain the relationship between board diversity and firm performance. According to Becker (1964), human capital theory addresses to the role of a person's stock of education, experience, and skills that can be used for organization (Terjesen, Sealy, and Singh, 2009 in Carter 2010). Human capital characteristics are skills and experiences that individual director brings to decision-making process (Johnson, Schnatterly, & Hill, 2013). Director characters are unique resources and

these will affect what directors pay attention to as well as how they frame decisions. Human capital theorists suggest that individuals should be selected and promoted based on their quality of academic training and experience rather than gender and racial attributes (Peterson, Philpot, & O' Shaughnessy, 2007).

In 2012, Australia discussed quota requirement that one-third of the board member should have Asian experience but this is criticized (Hyland, 2012). Having a deep Asian experience would be very beneficial for Australian board member to be more competent in monitoring or dealing with Asian market. While the percentage of non-executive female directors has increased from 14.4% in 2012 to 17.8 in 2013, the percentage of Asia-born directors in Australian board still remains stagnant (Durkin, 2013). Another possible way to enhance board diversity is to have Asian board member in addition or in substitution to international experience of national director. Hence, it is obvious that enhancing board diversity as reflected in human capital theory is important.

According to Carter et al. (2010), human capital theory predicts board performance will be affected by board diversity as a result of unique human capital. Human capital theory complements the concept associated with board diversity as derived from resource dependence theory. In addition, Hillman et al. (2002) argue that company appoint women and foreign directors who have specialized skills or advanced educations to complement executive experience of business experts. In line with this, Peterson et al. (2007) state that African-American directors assume different roles on the board relative to the Caucasian directors which is possibly tied to their unique human capital.

2.4.4. Stakeholder theory

This theory, in juxtaposition to agency theory, takes into account the view of wider stakeholder groups instead of only shareholders (Mallin, 2010). Stakeholders who do business with companies can directly or indirectly influence corporate governance (Thomsen & Conyon, 2012). Company should not only maximize shareholder value but also accommodate others stakeholders' interest at once. These are examples of important stakeholders for a company: government; society; media; NGOs; creditors; employee; customers; suppliers; etc.

Mallin (2010) argues that stakeholders and shareholders may favor different corporate governance structures and monitoring mechanisms. Discussing further, companies with Anglo-American model, such as in UK and US, emphasize shareholder value and the boards comprise of executive and non-executive directors elected by shareholders. Meanwhile, the German model, for instance Scandinavian countries, focuses on certain stakeholder group such as employees, who has right to vote their representative to sit along with the board. In China, as aforementioned, government could be on top priority among other stakeholders so that companies tend to have director with political background. In Japan, a country with high degree of collectivism, long-term relationship between company and employee is more important than short-term financial goals. Overall across Asia-Pacific countries, the role of non- executive independent director is emphasized and almost every country requires a minimum proportion of it. Independent directors give a positive sign to stakeholders in which their interests are accommodated.

With respect to board diversity, it would be best if board of director could represent stakeholders of the company, for instance employee representative as mentioned before. Besides, regarding to internationalization, appointment of foreign board member could be a good way for multinational company to "represent" its stakeholders in international environment (Kang et al., 2007). In addition, Francoeur et al. (2008) explain that there is a pressure for companies to appoint women as directors from shareholder; large institutional investors; politicians; activists; consumer groups; or other stakeholders. Thence, stakeholder theory can be a useful grid to explain this phenomenon and its consequences.

2.4.5. Prior empirical studies

Significant numbers of prior empirical study have been already conducted to examine the relationship between board diversity and financial performance. Some of them address board size or board independent such as De Andres et al. (2005); Kiel and Nicholson (2003); and Nicholson and Kiel (2007). Besides, other researches as well as this research focus on demographic aspect, particularly in nationality and gender diversity. Hillman et al. (2002), for instance, examine how female and racial minority directors in the United States differ from white male directors. Using samples of Fortune 1000 firms, they infer that female and African-American directors more likely come from non-business background. In addition,

they are more likely to hold advanced educational degrees, and involved in multiple boards faster than white male directors.

Next, Ruigrok et al. (2007), using sample of 1678 directors in 210 Swiss publicly listed firms, find that foreign directors tend to be more independent while women directors are more likely to be affiliated to company by family ties. In addition, Erhardt et al. (2003) also investigate 127 large companies in the United States; addressing their board demographic diversity in gender and ethnicity. The result shows both gender and ethnic diversity is positively associated with company performance as measured with return on assets (ROA) and return on investment (ROI) as financial indicators.

A research on board diversity is also conducted by Ben-amar, Francoeur, Hafsi, and Labelle (2013). They study about board diversity configuration on merger and acquisition (M&A) performance in Canadian firms. The effect can be observed in the two following figures. The first figure indicates a negative effect at lower level and positive effect at higher level of board diversity on board strategic decision and eventually performance. Thus, it implies a threshold level beyond which demographic diversity gives positive effect on performance as presented in the second figure about the relationship between demographic diversity and performance.

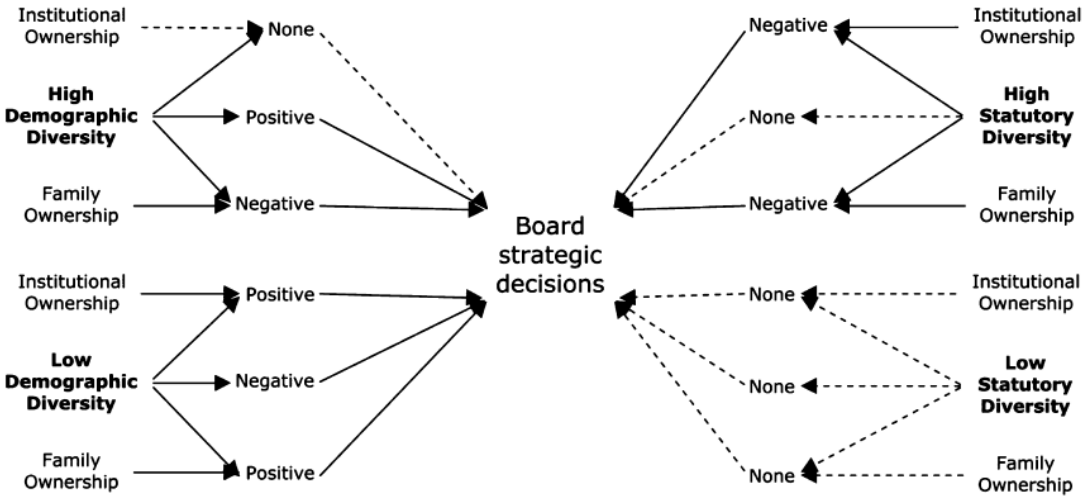

Figure 2.6: The path diagram of diversity and ownership influences on board strategic decisions

Source: Ben-amar et al. (2013)

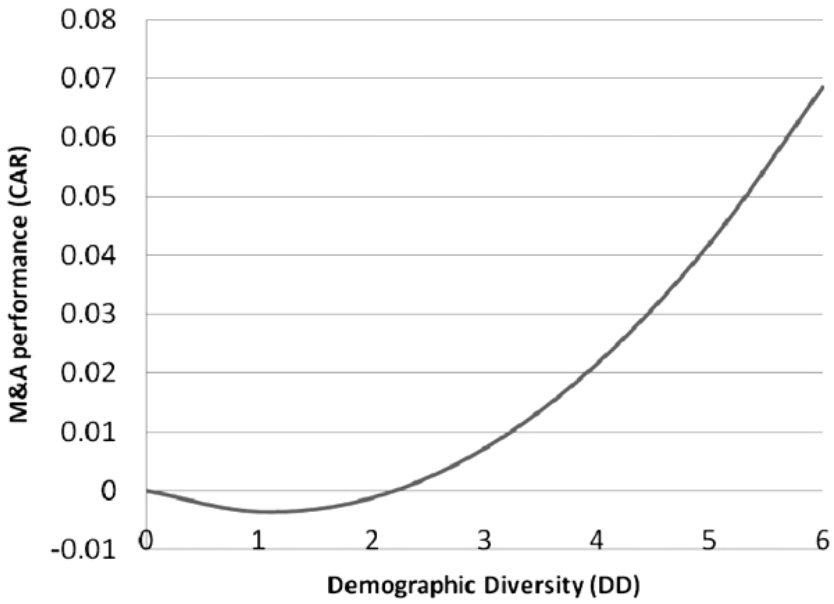

Figure 2.7: The relationship between board demographic diversity and performance
Source: Ben-amar et al. (2013)

Furthermore, Anderson, Reeb, Upadhyay, and Zhao (2011) study the potential cost and benefit of building diversity on board of director. They use Tobin's Q as a proxy of financial performance and measure board diversity with six dimensions included gender and nationality. The empirical result indicates that a heterogeneous pool of directors positively affects firm performance. This result implies that board diversity improves board efficiency and is considered by investors as protecting or benefiting their interests. Besides, board diversity is also related to operational complexity. When a company faces complex operations, a diverse board increases performance. Conversely, it exhibits a negative impact on performance in a company with less complex operating environments.

Additionally, Carter et al. (2003) examine board diversity-firm value relationship and demonstrate a significant positive relationship after controlling for size, industry and other corporate governance measures. Then, seven years later, Carter et al. (2010) claim another fact: no significant relationship between gender or ethnic diversity on board and firm financial performance. In the later research, Carter et al. also take into account important board committees. Both researches are conducted in American firms but use different sampling criteria: Fortune 1000 firms and S&P 500 firms. Moreover, they suggest that the effect of board diversity in gender and ethnicity on firm financial performance appears to be endogenous.

Other researchers, Kim et al. (2010), emphasize that academics research in this field echoes these dual sentiments and they are almost equally divided into whether or not board quality and firm performance are positively related. In this regard, decisions concerning the appointment of women or foreign director should not be based solely on future financial performance. The demands tend to come from internal or external calls for diversity rather than performance-based objectives (Carter et al., 2010; Farrell & Hersch, 2005; Francoeur et al., 2008).

Addressing endogeneity issue, several previous researches discuss about it. Borsch and Koke (2002) in Bozec et al. (2010) make the point that endogeneity is caused by structural reverse causality and spurious correlation. Structural reverse causality means that the influence of board diversity on firm performance is not necessarily to be ex ante (Bozec et al., 2010). It is plausible that better performing companies may enhance board diversity to address public concerns (Anderson et al., 2011). Therefore, it is difficult to distinguish whether a diverse board increases firm performance or high performance firms demand for board diversity (Ahern & Dittmar, 2012; Oxelheim et al., 2013). Spurious correlation refers to a condition when an unobserved variable determines corporate governance and performance relationship simultaneously. A positive correlation between them may occur whereas in reality the estimated coefficients are overestimated reflecting spurious correlation instead of a causal relationship (Bozec et al., 2010).

Furthermore, Ben-amar et al. (2013) suggest a balance board diversity to best serve firm's purpose. However, they argue that board diversity effect on firm performance is multi-factorial; it depends on contextual factors. Among those influential factors, there are corporate complexity and managerial control as stated in Anderson et al. (2011). In circumstances where complex business environment exists, it might be beneficial to have varying capabilities and talents in board diversity. However, the effect can be different when it comes to lower level of operation complexity (Anderson et al., 2011; Ben-amar et al., 2013). In this research, I attempt to reduce the endogeneity issue by using instrumental variable and two-stage least square regression as suggested by Oxelheim and Randøy (2003).

2.5. Hypothesis Formulation

This research proposes two hypotheses, in which financial performance is the dependent variable for both. Board diversity is divided into two independent variables. In the first hypothesis, gender diversity is the independent variable. This is measured by the number of female director. The second independent variable is nationality which is measured by the number of foreign director.

Involvement of women in business is increasing and followed by greater number of women assigned to the board. As cited from Nielsen and Huse (2010), ratio of women directors is positively associated with board strategic control and board effectiveness. The role of women on board can increase board development activities and decrease level of conflict. Women have different leadership styles compared to the opposite gender. In addition, Adams and Ferreira (2009) find that female directors have better performance and attendance than male directors. Female directors are also more likely to join monitoring committees and gender-diverse boards allocate more effort in monitoring.

Regarding to firm financial performance, as previously mentioned, Erhardt et al. (2003) found that the percentage of women in board of director is positively associated firm financial performance. Supporting this, Carter et al. (2003) also indicate a significant positive relationships between board diversity and Tobin's Q as the indicator of firm value. They also state that the proportion of female director increases with firm size and board size. However, this proportion decreases when the number of inside director increases.

In addition, Smith et al. (2006) do a panel study on 2500 largest Danish companies. This study investigates the role of women, both in top management and board of director, and its relationship with firm performance. The findings show that female members on board of directors, who are elected by the employee, have positive effects on firm financial performance.

Campbell and Mínguez-Vera (2008) also highlight the same evidence from Spain. They try to examine the link between gender diversity, which is measured by the percentage of female director, and firm financial performance. They mention that Spain has had very limited women participation on workforce, but now equality of opportunities has been improved.

Using panel data analysis, they affirm that gender diversity has a positive effect on firm value and this may generate economic gains. Hence, the first hypothesis can be formulated as follows.

Hypothesis 1 (H1): Gender diversity of board member has a positive influence on financial performance

Furthermore, another variable which can affect firm financial performance is nationality diversity in board of director. Regarding to this, Ruigrok et al. (2007) indicate that foreign board members are more likely to be independent and hold lower numbers of directorships in other companies. Peterson et al. (2007) also examine participation of African-Americans on board of director and board committees of the United States' Fortune 500. They find that ethnic plays a role in determining assignment to corporate board committees.

Then, Choi et al. (2007) investigate the valuation impact of outside independent director requirement in Korea after Asian financial crisis. One of the findings is a positive effect of foreign directors on firm financial performance. The foreign board members are normally foreign investors who participate in corporate boards of directors.

Additionally, Oxelheim and Randøy (2003) analyze the effect of foreign board member on corporate performance which is measured by Tobin's Q. Their samples are Norwegian and Swedish firms and their result shows a significant positive impact. They note that recruitment of an outsider Anglo-American director indicates a significantly higher firm value than Anglo-American director and this can be seen as an alternative to reduce cost of capital.

In the more recent studies, Oxelheim et al. (2013) expand their sample to Denmark, Finland, Norway and Sweden. The result shows that the percentage of foreign board member is related to financial internationalization rather than international sales. They also conclude some elements that should be considered in recruiting foreign directors:

1. Access benefit of larger pool of capital.
   For example, an Asian company can get access of capital market in another country such as United States.

2. Necessity of changing board language and internationalizing the board.
   Having a foreign board member may demand language change in a boardroom. A Japanese firm should change the board communication to English when an American director added, for instance.
3. The importance of signaling compliance with international governance standards.
   By recruiting an Anglo-Saxon board member, an Asian firm then will indirectly 'import' and adapt Anglo-Saxon corporate governance standards.

Moreover, Carter et al. (2003) also conduct research on directors from ethnic minorities in United States' Fortune 100 firms. Members of the board considered as ethnic minorities are those African Americans, Asians, and Hispanics. They conclude a significant positive relationship between those ethnic minorities on board and firm value. Correspondingly, Erhardt et al. (2003) support that foreign or minority director positively influences ROA and ROI as financial indicators of firm performance. Thus, the second hypothesis is:

Hypothesis 2 (H2): Nationality of board member has a positive influence on financial performance

Additionally, prior researches identify several control variables that might also affect the relationship of board diversity and firm financial performance (Carter et al., 2003; Erhardt et al., 2003; Oxelheim & Randøy, 2003). There are three control variables used in this study, namely: board size, board independent and firm size. Oxelheim and Randøy (2003) include those control variable in their research on the impact of foreign board membership and firm value. Moreover, Carter et al. (2003) also find that the proportion of women and ethnic minorities on boards increases along with firm size and board size. As for Erhardt et al. (2003), they add firm size as a control variable when examining board diversity and firm performance. Firm size is a firm-specific control variable. Large firms are more likely to have international activities and complexity that calls for diversity (Oxelheim et al., 2013). Then, board size is included as larger boards are inherently more diverse (Anderson et al., 2011). Further, greater director independence from management potentially improves monitoring and controlling roles of the board and independent directors might be more heterogeneous (Anderson et al., 2011). Therefore, board independence is also added as control variable.

2.6. Research Model

Addressing all variables involved, the research model of this study can be presented as in this following figure.

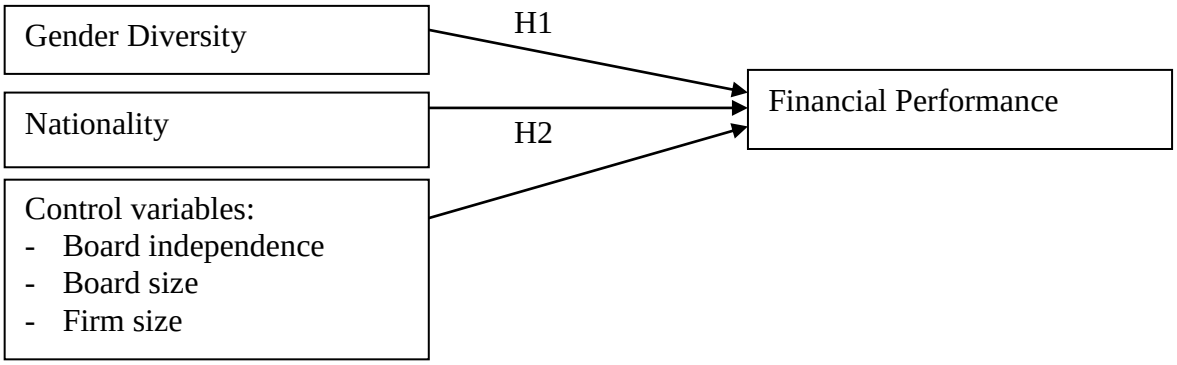

Figure 2.8: Research Model

Chapter 3

Research Methods

The third part of this thesis presents methodology employed in this research. This particularly discusses about data collection and sample selection; variables; and hypothesis test. The aim of research methods explanation is to answer the question about how the data are gathered; what sampling method is used; and how the variables are measured. The systematic procedure of hypothesis testing is also presented in this section.

3.1. Data Collection and Sample Selection

In this research, secondary data is employed. According to Hair, Money, Samouel, and Page (2007) secondary data is data that was not gathered directly and purposefully for the research project. In other words, the data are gathered from sources that already exist (Sekaran & Bougie, 2010). The following are several advantages of using secondary data (Hair et al., 2007):

- resource efficiency;
- evaluation capacity;
- potential for comparative analysis;
- avoid respondent fatigue;
- potential for triangulation; and
- potential for new insight

Meanwhile, some potential disadvantages of secondary data are: misalignment of purpose; access complication; quality concern; and age of data. The data in question are collected from Datastream and firm's annual reports.

As for this study, the unit of analysis is company or organization level. As mentioned previously, research geographical setting is in Asia. Unit of analysis is defined as what or who should provide the data and at what level of aggregation (Zikmund et al., 2013). Sekaran (2003) also explains about unit of analysis; it is the level of aggregation of the data collected during subsequent data analysis stage and this depends on the research questions. The level of

aggregation can be in individuals, dyads, groups, households, departments, organizations, or geographical area (Sekaran, 2003; Zikmund et al., 2013).

In relation to the time horizon, this is a longitudinal study in which the data on dependent variable are gathered at two or more points of time to answer the research question (Sekaran, 2003). Thus, this study combines cross sectional and time series data called pooled or longitudinal data. It is a study over time of a group of research subjects (Gujarati, 2003).

The observed data as population is all companies in Asia-Pacific. The sample for this study is Forbes Asia-Pacific's 50 biggest listed companies 2013. Those companies have been selected by Forbes Asia based on certain criteria such as minimum $3 billion of annual revenue or market capitalization. Each company's track record also has been reviewed for profits, revenue, returns on capital and share-price movements. Company with too much debt or owned by government at least half of the shares was eliminated. Finally, Forbes Asia selected the 50 biggest companies. As for this study, the analyzed data are those companies during five years (from 2008 up to 2012).

The sample member is selected based on purposive sampling method. It is a non-probability sampling technique in which sample members are selected based upon some appropriate characteristics (Zikmund et al., 2013). Non-probability sampling method means that the elements of population do not have any probability to be selected as sample subjects (Sekaran & Bougie, 2010). From the 50 companies examined in this research, only 37 of them could be processed in data analysis. The rest of the companies could not provide sufficient data needed. Hence, 37 companies multiplied by 5 years equals to 185 observations in total.

3.2. Variables

The dependent variable in this study is financial performance while the independent variables are nationality and gender diversity of board member. In addition, there are three control variables, namely board independence, board size and firm size. The following discussions elaborate those variables in this research.

Financial Performance

According to Zikmund et al. (2013), dependent variable is a process outcome that can be predicted or explained by other variables. Dependent variable, which is also known as criterion variable, is the primary interest of researchers who are willing to understand, describe, or explain its variability (Sekaran, 2003). Financial performance as the dependent variable of this research is related to how efficient company using its capital to generate profit (Van Horne, 1998) . It is measured by Tobin's Q in this research and the data are obtained from Datastream. The formula is as the following (Chen & Tan, 2012) in which annual market value is used for equity market value while common stock is used for equity book value.

$$\text{Tobin's Q} = \frac{\text{(Equity market value + Liabilities book value)}}{\text{(Equity book value + Liabilities book value)}}$$

Nationality and Gender Diversity

Meanwhile, independent variable refers to variable that is expected to influence the dependent variable (Zikmund et al., 2013). Independent variable, which is also known as predictor variable, influences the dependent variable in some way, either positive or negative (Sekaran, 2003). In relation to dependent variable, any changes in independent variable will affect the dependent variable.

The independent variables of this research are nationality and gender diversity. Gender diversity is measured by the number of female director while nationality is measured by the number of foreign director on board. For female and foreign director information, the data are obtained from the annual reports from each company. As we know, annual reports provide sufficient information related to gender. It is identified using photographs and biographical information of board of directors in the annual report for each company. About foreign director, if they are not stated in the annual report, names and biography information are used to identify their origin. Those sources are rechecked by using other web-based data such as company account in Forbes, Bloomberg's Executive Profile & Biography, local publication, etc. The aim of this verification is to secure validity (Oxelheim et al., 2013).

Board Independence, Board Size and Firm Size

In addition to the independent and dependent variables, control variable are also presented here. This control variable is used to minimize or reduce the mistakes that might happen in this research, for instance misspecification of model, misinterpretation and miscalculation data. There are three control variables used, namely board independence, board size, and firm size (Carter et al., 2003; Erhardt et al., 2003; Oxelheim & Randøy, 2003). Board size refers to the number of board member in total. Board independence is measured by the number of independent director on board. The data sources for independent director and board size are also firms' annual reports. Besides, natural logarithm of total assets is used as a proxy of firm size.

In summary, the variables can be presented as follows.

Variables	Measurements	Expected Relationship
Independent variables		
Gender	Number of female director	+
Nationality	Number of foreign director	+
Control variables		
Board Independence	Number of Independent director	+
Board Size	Total number of board member	+/-
Firm Size	Natural logarithm of total assets	+

Table 3.1: Variables

3.3. Hypothesis test

According to Sekaran and Bougie (2010), there are several steps in testing hypothesis.

1. Determine the null and alternate hypotheses
2. Select the appropriate statistical test
3. Determine the level of significance desired
4. See the result whether the level of significance is met

The null hypothesis is defined as hypothesis with samples taken from populations with equal means for dependent variable (Hair, Black, Babin, & Anderson, 2010). Then, this hypothesis can be rejected or accepted based on statistical test results. Null hypothesis is set up to be rejected in order to support the alternate hypothesis (Sekaran & Bougie, 2010). Alternate hypothesis is a statement that express a relationship between two variables or differences between two groups (Sekaran & Bougie, 2010).

If the null hypothesis is rejected, this implies that board diversity influences financial performance. Then, the relationship direction could be either positive (implying that board diversity enhances financial performance) or negative (suggesting that board diversity decreases financial performance). On the other hand, failure to reject the null hypothesis suggests that diversity in board of director does not add value. The null hypothesis in this research is as the following while the alternate hypothesis is H1 and H2 indicating a positive relationship as aforementioned.

$$H_0: \rho = 0$$
$$H_1: \rho > 0$$
$$H_2: \rho > 0$$

The statistical method used in hypothesis testing is multiple regression analysis that will be further discussed in the next section. The level of significance (p-value or alpha level) of 0.05 (5%) is determined. Significance level is a critical probability related to a statistical hypothesis test. That indicates how likely an inference supports a difference between an observed value and some statistical expectation is true (Zikmund et al., 2013).

Chapter 4

Data Analysis and Results

This part describes the method used in analyzing data. Several tests needed in this study are explained respectively. Then, the test results are presented using table to summary and explain better the important points. The main data analysis used is multiple regression. Additionally, the steps and tests within it such as assumption tests for linear regression are also elaborated.

4.1. Data Analysis

This is a quantitative research wherein the data are processed using multiple regression analysis. Multiple regression analysis is a statistical technique to analyze the relationship between a single dependent variable and several independent variables (Sekaran & Bougie, 2010). The independent variables are used to predict the dependent variable. Multiple regression analysis is an appropriate analysis to study research problems in this study. According to Hair et al. (2010), multiple regression analysis falls into two broad classes of research problems, namely prediction and explanation. Prediction indicates to which extent independent variable can explain dependent variable. Then, explanation involves the regression coefficient of each independent variable and attempts to develop a theoretical or a substantive reason for the effect of the independent variable (Hair et al., 2010).

A linear combination of independent variables that best predicts a dependent variable is called regression equation or regression model (Sekaran & Bougie, 2010). According to Zikmund et al. (2013, p. 587), a linear multiple regression equation is as follows.

$$\mathbf{Y = b_0 + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 X_4 + b_5 X_5 + } e$$

Y = dependent variable

X = independent variable

$\boldsymbol{b}_0$ = constant, which equals to the mean if slope coefficients are zero

$\boldsymbol{b}$ = slope coefficient associated with each independent variable

e = random error or residual

Based on the equation above, the regression equation for this study can be formulated as follows.

$$\text{Financial Performance} = \text{Constant} + b_1 \text{ Gender Diversity} + b_2 \text{ Nationality} + b_3 \text{ Board Independence} + b_4 \text{ Board Size} + b_5 \text{ Firm Size} + e$$

In multiple regression test, analysis of variance (ANOVA) is conducted. This is a hypothesis test to determine whether statistically significant differences in means occur between two or more groups; involving investigation of one treatment variable effects on an interval-scaled dependent variable (Zikmund et al., 2013). ANOVA examines one dependent variable and two or more independent variables as in this research.

Furthermore, Two-Stage Least Square (2SLS) regression is also used in addition to Ordinary Least Square (OLS) regression in order to mitigate possible endogeneity in this research. According to Zikmund et al. (2013), OLS regression is a technique that guarantees the resulting straight line in linear regression will produce the least total error in using independent variable as the predictor of dependent variable. This procedure generates a straight line which minimizes the sum of squared deviations of the actual values from the predicted regression line. The ordinary least square equation as cited from Zikmund et al. (2013, p. 571) is as follows.

$$\sum_{i=1}^{n} e_i^2 \ \ is\ minimum$$

$e_i = Y_i - \widehat{Y_i}$ (the residual)

Y_i = actual observed value of the dependent variable

$\widehat{Y_i}$ = estimated value of the dependent variable

n = number of observation

i = number of particular observation

Oxelheim and Randøy (2003) highlight that board composition might be endogenously determined. For instance, a higher firm performance could be a result of foreign directors' influence, but could also be a factor attracting potential foreign directors to serve that particular high-performing firm. As recommended by Oxelheim and Randøy (2003), we use a two-stage least square regression to address the possible endogeneity problem. Two-stage least square method is designed to replace endogenous explanatory variable by a linear combination of predetermined variables and use it instead of the original endogenous variable (Gujarati, 2003). Hence, the role of instrumental variable is needed as the predetermined variable, a proxy of endogenous variable. In this research, firm size is used as the instrumental variable to overcome endogeneity (Carter et al., 2003; Oxelheim & Randøy, 2003).

Zikmund et al. (2013) also propose the step by step of interpreting a multiple regression model.

1. Examine model (F-test)

   F-test is a procedure to determine whether more variability is explained or not explained by the regression. It is conducted to test the statistical significance of the model by comparing variations explained by regression equation to residual error variation. If the result is not significant, data analysis cannot be continued and the model is supposed to be dismissed because the regression equation cannot be used. This is the F-test equation as cited from Zikmund et al. (2013, p. 588).

$$F = \frac{(SSR)/\,k}{(SSE)/\,(n-k-1)} = \frac{MSR}{MSE}$$

   SSR = sum of squares for regression

   SSE = error sum of squares

   MSR = mean squared regression

   MSE = mean squared error

   k = number of independent variable

   n= sample size

2. Examine individual statistical test for each parameter estimation

   This point addresses the b_1, b_2 … b_n in regression equation which is also called regression coefficient. This coefficient is actually the slope of X on Y. A positive value of coefficient indicates a positive relationship of independent variable on dependent variable and vice versa.

3. Examine coefficient of determination (R-square)

   R-square is the correlation of coefficient squared or coefficient of determination. This means that the percentage of total variations of Y is explained by all independent variables in the regression model (Hair et al., 2010; Zikmund et al., 2013). It is obtained by squaring the proportion of total variance of a variable accounted for by another variable; as stated in Zikmund et al. (2013, p. 564) :

$$R^2 = \frac{Explained\ variance}{Total\ variance}$$

   Additionally, adjusted R-square is also an important point. It is a modified measure of R-square which takes into account sample size and the number of independent variables within regression (Hair et al., 2010).

4. Examine collinearity diagnostic

   This part examines about multicollinearity and will be discussed more in the regression assumptions part.

Furthermore, there are several assumptions need to be achieved in multiple regression. Before performing regression analysis, several test are conducted in this research, namely: normality, multicollinearity, autocorrelation and heteroscedasticity (Gujarati, 2003; Hair et al., 2010). Regression test and regression assumption test are performed using IBM SPSS (Statistical Package for the Social Sciences) Statistics 21th version.

4.2. Results

4.2.1. Descriptive Statistics

Descriptive statistics describe basic characteristics and summarize data in a simple and understandable manner (Zikmund et al., 2013). Presenting this statistic, it will be easier to capture the whole portrait of the sample used to represent population. Among 37 companies as sample members, their countries of origin and board systems can be observed as in this following figure.

Country	Number of Companies
Australia	1
China	12
Hong Kong	3
India	11
Indonesia	1
Philippines	3
Singapore	1
South Korea	3
Thailand	2
Total	37

Table 4.1: Descriptive Statistics 1

Board System	Number of Companies
One-tier	24
Two-Tier	13

Table 4.2: Descriptive Statistics 2

As we can see, the sample members originate from nine Asian countries. These countries represent each region in Asia. East Asia is represented by China, Hong Kong and South Korea. South East Asia is represented by Indonesia, Philippines, Singapore and Thailand.

Meanwhile, India represents West Asia and Australia represents Oceania. For the board system of sample member, it is indicated that 24 companies of the sample are one-tier board system while the rest 13 companies use two-tier board system.

Further, the next figure presents the descriptive statistics table; in which we can see the mean value, minimum value, maximum value and standard deviation of each variable. There are 185 observations in total from 37 companies during five years. Mean is the arithmetic average, a measure of central tendency (Zikmund et al., 2013). Standard deviation is a quantitative index of variability or distribution spread (Zikmund et al., 2013). This is the square root of the distribution variance. Using mean and standard deviation helps to understand and interpret the data.

Variables	**Mean**	**Standard Deviation**	**Minimum**	**Maximum**
Firm Performance	0.54	0.18	0.10	0.93
Gender Diversity	0.96	0.89	0	5
Nationality Diversity	1.43	1.59	0	6
Board Independence	4.29	1.66	2	9
Board Size	10.50	2.59	7	16
Firm Size	18.23	2.32	13.26	26.81

Table 4.3: Descriptive Statistics 3

4.2.2. Normality

Normality refers to the shape of distribution for an individual metric variable and its correspondence to the normal distribution (Hair et al., 2010). If variation from the normal distribution is large, statistical test is invalid because normality is a requirement of F-test and t-test (Hair et al., 2010). In this research, normality test is performed using histogram of residuals and normal probability plots method. In histogram, data distribution should follow the normal distribution curve. In normal probability plot, residuals will be plotted. If they follow the straight diagonal line, the data are normally distributed and vice versa. According to Hair et al. (2010), normal probability plots method is better than histogram.

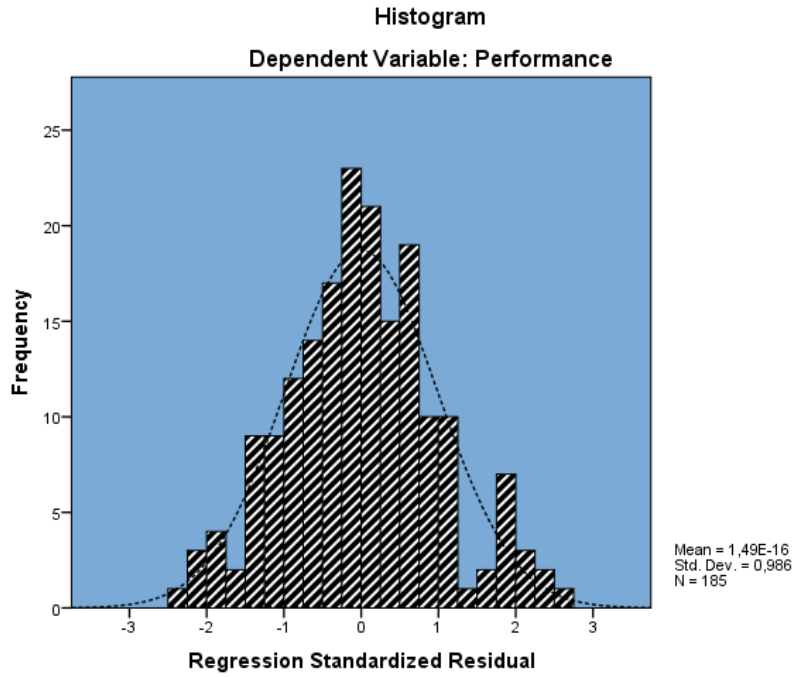

Figure 4.1: Histogram

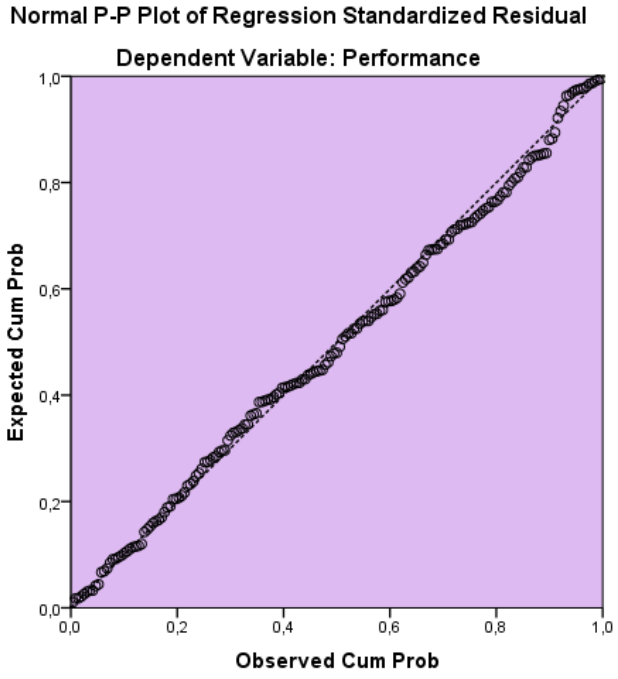

Figure 4.2: Normal Probability Plot

The result for normality test as shown in histogram shows that the histogram follows normal distribution curve. In normal probability plot, it is also indicated that the data follow the diagonal line. Hence, we can conclude that the data for this research is normally distributed.

4.2.3. Heteroscedasticity

According to Hair et al. (2010), the dispersion or variance of dependent variable value must be equal relatively to each value of independent variable. If the dispersion is not equal, the relationship is heteroscedastic. For heteroscedasticity, residual plot analysis is conducted. As presented in the following figure, the scatter plot does not show any specific pattern formed. As a consequent, the data in this research is free from heteroscedasticity.

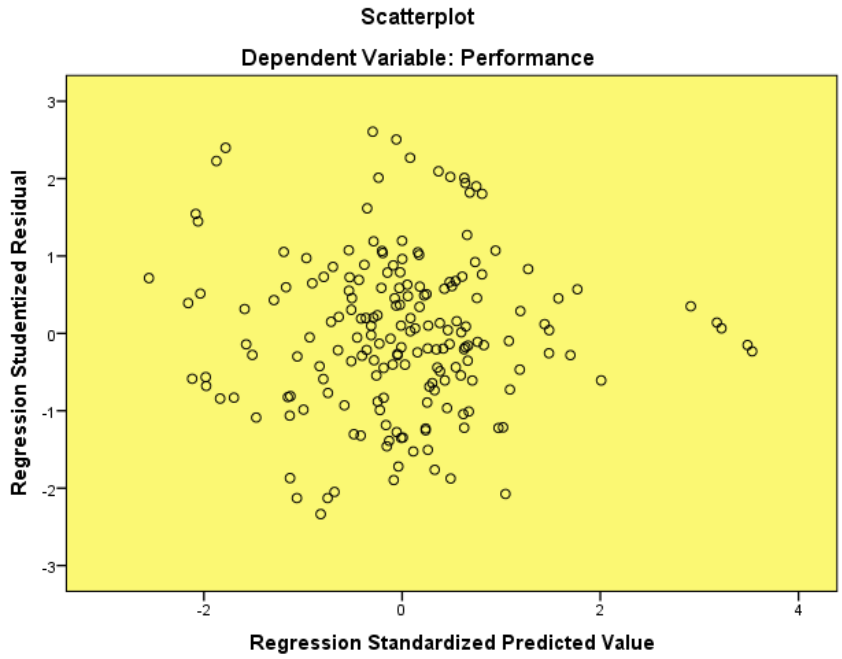

Figure 4.3: Scatter plot

4.2.4. Multicollinearity and Autocorrelation

Multicollinearity is defined as the extent to which variables in multiple regression analysis are related each other (Zikmund et al., 2013). High multicollinearity makes individual parameter estimation difficult or impossible (Zikmund et al., 2013). Multicollinearity is tested using tolerance and VIF (Variance Inflation Factor). Tolerance is the amount of selected independent variable which is not explained by the other independent variables; the value should approach 1 (Cooper & Schindler, 2008; Hair et al., 2010). The smaller the tolerance, the higher a variable is predicted by other independent variables. Besides, VIF is the inverse of tolerance value. It is an indicator of the other independent variables effect on the standard error of a regression coefficient in which high values of VIF express high degree of

collinearity (Hair et al., 2010). VIF in collinearity statistics should be < 10 (Cooper & Schindler, 2008).

In addition, autocorrelation refers to correlation between members of series of observations ordered in time (for time series data) or space (for cross-sectional data) (Gujarati, 2003). Autocorrelation test is conducted using Durbin-Watson method. According to Gujarati (2003), if the value of *d* approaches 0, it indicates positive autocorrelation. Meanwhile, if the value approaches 4, it indicates negative autocorrelation. The ideal value of *d* should be around 2 (Gujarati, 2003).

The result for multicollinearity and autocorrelation test is described in the table below. All tolerances values are approaching 1 and VIF values are less than 10. In conclusion, it appears to be no multicollinearity in the data. The Durbin-Watson test result shows possible positive autocorrelation. However, this issue appears not to be a major problem, as I inspect the results by using graphical method, and inspect residual values after further re-run of tests.

Variables	**Collinearity**		**Durbin-**
	Tolerance	**VIF**	**Watson**
Gender	0.812	1.231	0.609
Nationality	0.855	1.129	
Independence	0.774	1.293	
Board Size	0.710	1.408	
Firm Size	0.933	1.072	

Table 4.4: Multicollinearity and Autocorrelation

4.2.5. Multiple Regressions Analysis

This section presents the result of multiple regression analysis. As seen in the Table 4.5, the value of F is 16.265 and its significance is 0.000 ($p < 0.05$). This means that the regression model is significant; it explains a significant portion of variation in the dependent variable. From the same table, the result shows R-square value of 0.312 meaning that 31.2% of the variance in financial performance as the dependent variable is explained by the independent variables. Then, the value of adjusted R square is 0,293.

F	Significance	R Square	Adjusted R Square
16.265	0.000*	0.312	0.293

Table 4.5: R square and F-test
*statistically significant at alpha level 5%

Variables	Standardized Coefficients Beta	Std. Error	t- value	p- value
Gender	0.213	0.014	3.092	0.002*
Nationality	-0.047	0.008	-0.712	0.477
Independence	-0.380	0.008	-5.398	0.000*
Board Size	0.347	0.005	4.725	0.000*
Firm Size	0.301	0.005	4.965	0.000*

Table 4.6: Multiple Regression Analysis
*statistically significant at alpha level 5%

$$Y = b_0 + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 X_4 + b_5 X_5 + e$$

Based on the result presented in the table above, gender diversity of board member has a significant positive influence on financial performance. The value of t-statistic is 3,092 and its p-value is 0.002 ($p < 0.05$). The standardized coefficient beta is 0,213 with standard error of 0.014. This means that null hypothesis is rejected and H1 is supported. However, the result shows that nationality of board member does not have any significant influence on financial performance ($p = 0.477 > 0.05$). Since this result is not significant, the other values are ignored. In this case, H2 is not supported.

Then, all of the three control variables also have significant influence on financial performance. Firstly, board independence significantly influences financial performance. The t-value for is -5.398 with p-value 0.000 ($p<0.05$). The standardized coefficient beta is -0.380 with standard error 0.008. Secondly, board size also has a significant influence on financial

performance. The result indicates 4.725 for t-value, 0.000 for p-value ($p<0.05$), 0.347 for standardized coefficient beta and 0.005 for standard error. Lastly, firm size also shows a significant influence on financial performance with t-value 4.965 and p-values 0.000 ($p<0.05$). The standardized coefficient beta is 0.301 and standard error is 0.005.

As aforementioned, two-stage least square regression is also performed after ordinary least square regression to mitigate endogeneity by using firm size as instrumental variable. The result of both regression analyses is as follows.

Descriptions	**Ordinary Least Square (OLS)**	**Two-Stage Least Square (2SLS)**
n	185	185
R Square	0.312	0.228
Adjusted R square	0.293	0.211
F (significance)	16.265 (0.000)*	13.270 (0.000)*
Gender		
Standardized beta	0.213	0.166
t (significance)	3.092 (0.002)*	2.306 (0.022)*
Nationality		
Standardized beta	-0.047	-0.098
t (significance)	-0.712 (0.477)	-1.422 (0.157)
Independence		
Standardized beta	-0.380	-0.391
t (significance)	-5.398 (0.000)*	-5.246 (0.000)*
Board Size		
Standardized beta	0.347	0.421
t (significance)	4.725 (0.000)*	5.541 (0.000)*
Firm Size		
Standardized beta	0.301	
t (significance)	4.965 (0.000)*	

Table 4.7: OLS and 2SLS

*statistically significant at alpha level 5%

As presented above, the results for ordinary least square and two-stage least square regressions indicate similar results. This means that endogeneity is not a major problem in this research. For the F value, two-stage least square regression gets smaller than ordinary least square (13.270) but it is significant (p = 0.000). This implies that the model can be used. The R square for two-stage least square regression is 0.228 (adjusted R square 0.211) meaning that the independent variables explain 22.8% of the dependent variable.

In two-stage least square regression, gender diversity of board member also shows a significant positive influence. The t-value is 2.306 (p-value 0.022 < 0.05) and the standardized beta coefficient is 0.166. For nationality diversity of board member, the t-statistic result is still not significance (p-value 0.157 > 0.05). However, the p-value of 0.157 in two-stage least square regression is much smaller than 0.477 in ordinary least square regression. The control variables also indicate significant influences on financial performance; except for firm size which is used as the instrumental variable. For board independence, the t-value is -5.246 (p= 0.000 < 0.05) and standardized beta coefficient is -0.391. For board size, the t-value is 5.541 (p= 0.000 < 0.05) while the standardized beta coefficient is 0.421.

Chapter 5

Research Findings and Discussion

In the fifth chapter, the findings of this research will be reviewed in the light of theoretical framework and empirical result. Then, the implications of those findings, which are derived from the previous section, will be discussed as well.

5.1. Research Findings

5.1.1. The Influence of Gender Diversity of Board Member on Financial Performance

The first independent variable in this research is gender diversity. Previous studies show conflicting evidences of the relationship between gender diversity and firm performance (Ahern & Dittmar, 2012; Carter et al., 2003). Some studies prove that gender diversity in board composition has a positive relationship on financial performance (Campbell & Mínguez-Vera, 2008; Carter et al., 2003), whereas some other studies reveal that it does not contribute any significant effect (Ahern & Dittmar, 2012; Carter et al., 2010).

Based on the hypothesis test conducted earlier in this research, the result indicates a positive influence of gender diversity in board composition on firm financial performance. This implies that the presence of female director enhances financial performance of the company. Thus, having female board member could be an economic advantage. Consistency for this result will be elaborated in the next section.

5.1.2. The Influence of Nationality of Board Member on Financial Performance

The second independent variable is nationality of board member. Similar to gender diversity, former evidences also highlight that nationality diversity in board composition has a positive relationship on financial performance (Carter et al., 2003; Oxelheim & Randøy, 2003). However, another study indicates no significant effect (Carter et al., 2010).

The empirical result in this study highlights that nationality diversity in board of director has no significant influence on firm financial performance. In other words, appointing foreign director does not contribute significant value for company. Hence, this point will be discussed further in discussion.

5.1.3. The Influence of Board Independence on Financial Performance

The first control variable is board independence. The statistical result indicates that board independence has a negative influence on financial performance. This is inconsistence with the theory (Anderson et al., 2011). Assigning independent director provides greater board independency which leads to better monitoring role of the board. This is supposed to enhance firm performance. However, since board independence is only a control variable in this research and not as part of hypothesis, this result can be ignored.

5.1.4. The Influence of Board Size on Financial Performance

The statistical test result shows that board size, as the second control variable, has a significant positive impact on financial performance. This means that bigger board size increases firm performance. According to Thomsen and Conyon (2012), ability of the board to monitor can increase as more directors added. However, other studies show an inverse relationship between financial performance and board size because larger size of the board may cause poor communication among the members (De Andres et al., 2005; Kiel and Nicholson, 2003).

5.1.5. The Influence of Firm Size on Financial Performance

Based on the empirical result, firm size, as the third control variable, also has a significant positive influence on firm financial performance. This is consistent with the notion that large firms have better financial performance than small firms. In the two-stage least square analysis, this variable is used as instrumental variable as suggested by Oxelheim and Randøy (2003). The role of instrumental variable is needed as a proxy of endogenous variable.

5.2. Discussion

Several former studies of board diversity influence on financial performance show a positive result. First, Erhardt et al. (2003) indicate that board diversity is positively associated with financial indicators of firm performance. Second, Anderson et al. (2011) highlight that having a diverse pool of directors bears a positive relationship on financial performance meaning that greater board heterogeneity improves firm performance. Concerning endogeneity and reverse causality, their results provide fairly compelling evidence that board diversity influences firm performance, not the other way around. Next, Campbell and Mínguez-Vera (2008) also find that female directors have a positive effect on firm value. Likewise, their result of the opposite causal relationship is not significant. Finally, Carter et al. (2003) also highlight a significant positive relationship between women on board of director and financial performance.

In line with some previous evidences (Campbell & Mínguez-Vera, 2008; Carter et al., 2003; Erhardt et al., 2003), this study observes that gender diversity in board of director positively influences financial performance. According to Bilimoria and Wheeler (2000), Mattis (2000) and Selby (2000) in Erhardt et al. (2003), female directors reflects better diversity of firm's customer base and labor pool. Female directors establish a more diverse board which enables a broader range of perspectives and opinions to be considered, for instance, in case of conflict.

Addressing women participation on board, gender quota is not widely regulated in Asia. Compared to the other parts of the world, women presence in Asian top executives is still very limited. To large extent, this is influenced by culture. Asian women are demanded to take care of family more than men. Even though they are working, they should be able to play both roles as a mother or wife and a career woman. This leads to dramatically decrease of women participation in middle or top management from where future directors normally are recruited. In conclusion, insignificant number of women on board is not caused by men blocking their way but primarily due to the lack of candidates.

Hence, Asian firms are recommended to increase further the number of women on board since assigning female director is beneficial as proven in this research. However, this decision should not be based solely on future financial objective of the firm. Ahern and Dittmar (2012), examining the effect of Norwegian gender quota, highlight that it enforces younger and less experienced female board, nicknamed as golden skirt, added to the board room. This

sounds a bit risky from economic point of view but, on the other hand, it promotes gender equality.

In relation to level of nationality diversity in the board room, Oxelheim and Randøy (2003) obtain a significant positive impact on firm value as measured by Tobin's Q. Erhardt et al. (2003) and Carter et al. (2003) also find that foreign directors enhance financial performance. However, Carter et al. (2010) support the theoretical position of no significant effect, either positive or negative.

Similar to Carter et al. (2010), this research also finds no significance influence of foreign directors on financial performance. This might be explained by the reason that benefit of having foreign director is limited. It depends on operational complexity of the firm (Anderson et al., 2011). Complexity faced by firm in this case could be, for instance, having foreign sales; having international subsidiaries; or any other international activities.

Furthermore, Oxelheim et al. (2013), investigating to which extent foreign board member needed, find that not only international operation is related to board internationalization but also financial internationalization. Ownership structure determines the need of board internationalization (Oxelheim et al., 2013). Foreign shareholders are more confident when their interest accommodated by foreign board member; moreover when they are the same nationality (Oxelheim et al., 2013). In this case, the role of foreign director has a propensity for monitoring rather than advising.

Additionally, Aguilera and Jackson (2003) examine determinants for differences in corporate governance practice across the globe. Among the determinants they mentioned are predominant ownership structure; predominant financial system; and inter-firm networks (Aguilera & Jackson, 2003). In countries where market-based systems are dominant (such as US and UK), households invest in companies and minority shareholder interests are emphasized (Aguilera & Jackson, 2003). Market-based financial system demands for very strict corporate governance practices to satisfy its dispersed shareholders. The empirical evidences for those countries show that foreign directors increase firm performance (Carter et al., 2003; Oxelheim et al., 2013; Oxelheim & Randøy, 2003). Meanwhile in Asia, family ownership, bank-based financial system and strong inter-firm network are predominant. The demand of good corporate governance comes from more concentrated parties. The practice

does not seem as strict as in countries with market-based financial system. This can be a reason why board internationalization in Asia does not significantly contribute to enhance firm performance.

However, since both firm's operational internationalization and foreign investors in Asia are emerging, appointing foreign board member will still be an advantage. For instance, if a Chinese company has a significant number of European and Japanese shareholders, it is suggested to appoint foreign board member from Europe or Japan to represent those shareholders' interest. Having foreign directors is also a positive sign of firm internationalization that can attract more foreign investments.

Chapter 6

Conclusion

The closing chapter of this study summarizes and infers the overall research process. This part consist of conclusion; limitations of the study and recommendations for future research.

6.1. Conclusion

Despite there have been extensive studies on board of directors (Adams & Ferreira, 2009; Carter et al., 2010; Carter et al., 2003; Erhardt et al., 2003), the influence of board diversity on financial performance still presents contradictory evidences. This research aims to investigate the influence of board diversity on financial performance. More specifically, this research examines the influence of nationality and gender diversity in board of director on financial performance as measured by Tobin's Q. The sample applied in this study consists of 37 companies of Forbes Asia-Pacific 50 biggest listed companies. Pooled data is employed for the time period of 2008 to 2012. Then, I use multiple regressions for data analysis.

In analyzing board diversity influence on financial performance, endogeneity issues should be regarded. In this research design, endogeneity is mitigated by using instrumental variable and using two-stage least square regression. The result of two-stage least square regression shows no significant difference from the ordinary least square regression; suggesting that endogeneity is not a major problem.

Furthermore, the first research finding suggests that gender diversity has a positive influence on firm financial performance. This evidence is consistent with the notion that having female directors on the board can increase financial performance as highlighted by Erhardt et al. (2003). They argue that assigning women director explores beyond traditional talent pool; reflects diversity in firm's customer and employee based better; and thereby enhances firm performance. Similarly, Campbell and Mínguez-Vera (2008) also indicate a positive relationship of female director and financial performance. In addition, their result suggests that spurious correlation or structural reverse causality is not significant.

Next, the second finding implies that there is no significant influence contributed by nationality diversity of board member. In other words, foreign directors do not affect financial performance of the company they serve. This finding is consistent with the result obtained by Carter et al. (2010). They highlight a contingency explanation that the effect of nationality diversity in board of director on financial performance can be different under different circumstances at different times.

In conclusion, companies are recommended to enhance diversity in board of directors since it is beneficial for their performance and board effectiveness. However, establishing board diversity by assigning female and foreign directors should not be based only on economic reason, but also other reasons related to public policy, such as equality or board representativeness. Diversity in board of director will better represent company's stakeholders, such as customers, employees, and shareholders. With the breadth of perspectives, a diverse board also enables to bring various skills and deeper insight to the board room. Hence, it will lead the board process to be improved, both in decision making and problem solving.

6.2. Limitations

There are a number of limitations in this study which I will highlight three. Firstly, the sample of this study is relatively small, and with more time available one should have enlarged the sample. However, since this is a longitudinal study, the combination of data from 37 companies during five years (2008-2012) obtains a significant number of total observations, in which each firm-year observation would not be totally independent from other firm-year observation in the same company. Secondly, this study looks only into a few dimensions of diversity, as I do not address issues such as diversity of language and diversity of competencies. Thirdly, I only address structural diversity – not diversity of behavior. One would expect that structural diversity of boards, such as of gender and nationality, would be related to board behavior, but this is an assumption that is not tested within this research.

6.3. Recommendations for Future Research

Future studies are suggested to accommodate more measures of diversity, for instance, diversity in education, age, tenure and any other demographic measures of diversity. The sample, particularly in Asia, should be expanded and more variables should be included. In addition, determinants of diversity in board of director should also be examined further such as corporate complexity or dominant ownership structure since they are related to board diversity. Future research also can try to link board diversity and performance by using moderator variables, such as board effectiveness; or context-specific assessment such as board performance in crisis situation.

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Appendix

Ordinary Least Square Regression

Notes		
Output Created		
Comments		
Input	Data	
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	Filter	
	Weight	
	Split File	
	N of Rows in Working Data File	
Missing Value Handling	Definition of Missing	
	Cases Used	
Syntax		
Resources	Processor Time	
	Elapsed Time	
	Memory Required	
	Additional Memory Required for Residual Plots	

Notes		
Output Created		28-APR-2014 03:52:18
Comments		
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	N of Rows in Working Data File	186
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on cases with no missing values for any variable used.

Syntax		REGRESSION /DESCRIPTIVES MEAN STDDEV CORR SIG N /MISSING LISTWISE /STATISTICS COEFF OUTS BCOV R ANOVA COLLIN TOL /CRITERIA=PIN(.05) POUT(.10) /NOORIGIN /DEPENDENT Performance /METHOD=ENTER Female Foreign Independent Boardsize Firmsize /SCATTERPLOT=(*SRESID ,*ZPRED) /RESIDUALS DURBIN HISTOGRAM(ZRESID) NORMPROB(ZRESID).
Resources	Processor Time	00:00:05,48
	Elapsed Time	00:00:05,34
	Memory Required	2804 bytes
	Additional Memory Required for Residual Plots	880 bytes

Descriptive Statistics

	Mean	Std. Deviation	N
Performance	,5488564	,18673048	185
Female	,96	,890	185
Foreign	1,43	1,594	185
Independent	4,29	1,665	185
Boardsize	10,50	2,590	185
Firmsize	18,2286	2,32290	185

Correlations

		Performance	Female	Foreign	Independent
Pearson Correlation	Performance	1,000	,215	-,119	-,161
	Female	,215	1,000	-,251	,240
	Foreign	-,119	-,251	1,000	,037
	Independent	-,161	,240	,037	1,000
	Boardsize	,280	,281	,083	,460
	Firmsize	,341	-,053	-,110	,035
Sig. (1-tailed)	Performance	.	,002	,054	,014

	Female	,002	.	,000	,001
	Foreign	,054	,000	.	,310
	Independent	,014	,001	,310	.
	Boardsize	,000	,000	,130	,000
	Firmsize	,000	,238	,068	,319
N	Performance	185	185	185	185
	Female	185	185	185	185
	Foreign	185	185	185	185
	Independent	185	185	185	185
	Boardsize	185	185	185	185
	Firmsize	185	185	185	185

Correlations

		Boardsize	Firmsize
Pearson Correlation	Performance	,280	,341
	Female	,281	-,053
	Foreign	,083	-,110
	Independent	,460	,035
	Boardsize	1,000	,170
	Firmsize	,170	1,000
Sig. (1-tailed)	Performance	,000	,000
	Female	,000	,238
	Foreign	,130	,068
	Independent	,000	,319
	Boardsize	.	,010
	Firmsize	,010	.
N	Performance	185	185
	Female	185	185
	Foreign	185	185
	Independent	185	185
	Boardsize	185	185
	Firmsize	185	185

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Firmsize, Independent, Foreign, Female, Boardsize[b]	.	Enter

a. Dependent Variable: Performance

b. All requested variables entered.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,559[a]	,312	,293	,15698849	,609

a. Predictors: (Constant), Firmsize, Independent, Foreign, Female, Boardsize

b. Dependent Variable: Performance

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2,004	5	,401	16,265	,000[b]
	Residual	4,412	179	,025		
	Total	6,416	184			

a. Dependent Variable: Performance

b. Predictors: (Constant), Firmsize, Independent, Foreign, Female, Boardsize

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-,007	,100		-,075	,941
	Female	,045	,014	,213	3,092	,002
	Foreign	-,005	,008	-,047	-,712	,477
	Independent	-,043	,008	-,380	-5,398	,000
	Boardsize	,025	,005	,347	4,725	,000
	Firmsize	,024	,005	,301	4,695	,000

Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Female	,812	1,231
	Foreign	,885	1,129
	Independent	,774	1,293
	Boardsize	,710	1,408
	Firmsize	,933	1,072

a. Dependent Variable: Performance

Coefficient Correlations[a]

Model			Firmsize	Independent	Foreign	Female
1	Correlations	Firmsize	1,000	,031	,164	,145
		Independent	,031	1,000	-,032	-,129
		Foreign	,164	-,032	1,000	,306
		Female	,145	-,129	,306	1,000
		Boardsize	-,212	-,409	-,165	-,250
	Covariances	Firmsize	2,661E-005	1,247E-006	6,529E-006	1,080E-005
		Independent	1,247E-006	6,244E-005	-1,942E-006	-1,471E-005
		Foreign	6,529E-006	-1,942E-006	5,957E-005	3,413E-005
		Female	1,080E-005	-1,471E-005	3,413E-005	,000
		Boardsize	-5,811E-006	-1,713E-005	-6,769E-006	-1,914E-005

Coefficient Correlations[a]

Model			Boardsize
1	Correlations	Firmsize	-,212
		Independent	-,409
		Foreign	-,165
		Female	-,250
		Boardsize	1,000
	Covariances	Firmsize	-5,811E-006
		Independent	-1,713E-005
		Foreign	-6,769E-006
		Female	-1,914E-005
		Boardsize	2,811E-005

a. Dependent Variable: Performance

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions		
				(Constant)	Female	Foreign
1	1	4,953	1,000	,00	,01	,01
	2	,645	2,771	,00	,21	,49
	3	,274	4,253	,00	,70	,45
	4	,089	7,455	,02	,02	,00
	5	,031	12,557	,04	,04	,01
	6	,007	25,731	,94	,02	,04

Collinearity Diagnostics[a]

Model	Dimension	Variance Proportions		
		Independent	Boardsize	Firmsize
1	1	,00	,00	,00
	2	,00	,00	,00
	3	,01	,00	,01
	4	,82	,00	,03
	5	,16	,99	,04
	6	,01	,00	,93

a. Dependent Variable: Performance

Residuals Statistics[a]

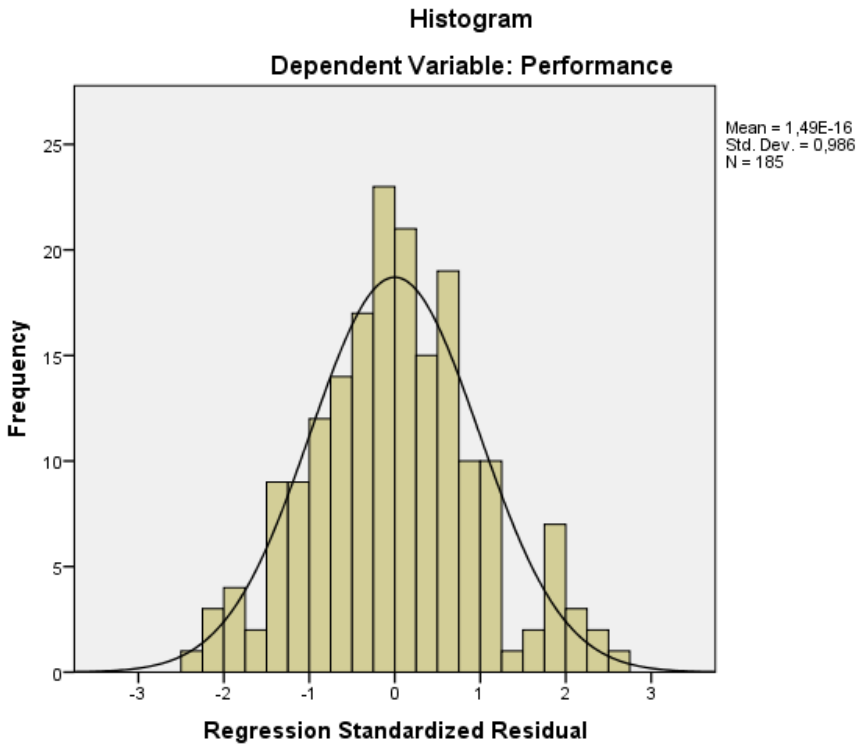
	Minimum	Maximum	Mean	Std. Deviation
Predicted Value	,2822051	,9174729	,5488564	,10436761
Std. Predicted Value	-2,555	3,532	,000	1,000
Standard Error of Predicted Value	,015	,055	,027	,007
Adjusted Predicted Value	,2733828	,9217387	,5489252	,10489198
Residual	-,36256143	,40234041	,00000000	,15484080
Std. Residual	-2,309	2,563	,000	,986
Stud. Residual	-2,335	2,607	,000	1,002
Deleted Residual	-,37076446	,41623577	-,00006877	,15976187
Stud. Deleted Residual	-2,365	2,650	,000	1,008
Mahal. Distance	,679	21,470	4,973	3,521
Cook's Distance	,000	,100	,005	,010
Centered Leverage Value	,004	,117	,027	,019

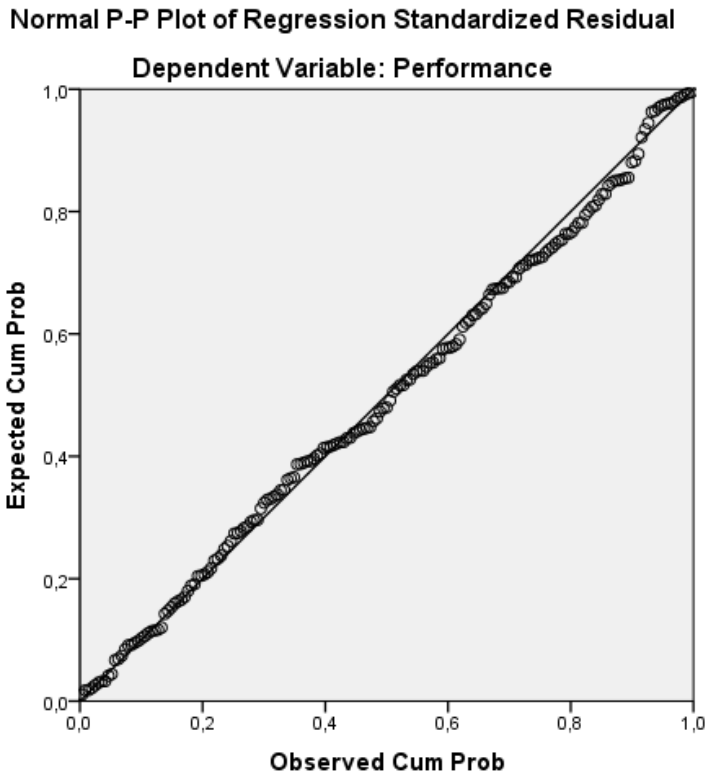
Residuals Statistics[a]

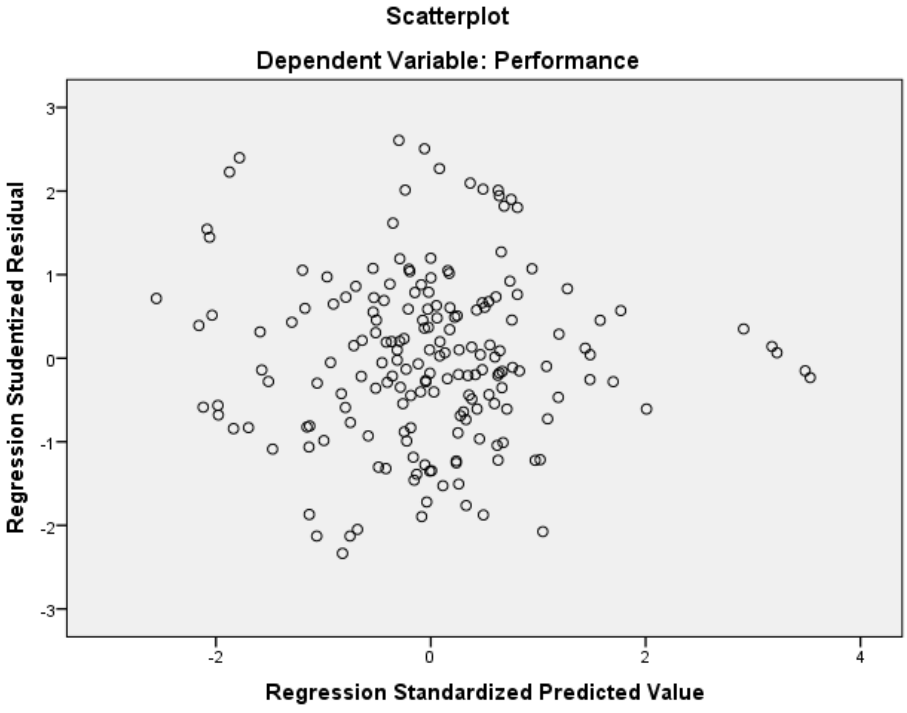
	N
Predicted Value	185
Std. Predicted Value	185
Standard Error of Predicted Value	185
Adjusted Predicted Value	185
Residual	185
Std. Residual	185
Stud. Residual	185
Deleted Residual	185
Stud. Deleted Residual	185
Mahal. Distance	185
Cook's Distance	185
Centered Leverage Value	185

a. Dependent Variable: Performance

Charts








```
NPAR TESTS
  /K-S(NORMAL)=Performance Female Foreign Independent Boardsize Firmsize
  /MISSING ANALYSIS.
```

NPar Tests

Notes

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	Cases Used	Statistics for each test are based on all cases with valid data for the variable(s) used in that test.
Syntax		NPAR TESTS /K-S(NORMAL)=Performance Female Foreign Independent Boardsize Firmsize /MISSING ANALYSIS.
Resources	Processor Time	00:00:00,03
	Elapsed Time	00:00:00,06
	Number of Cases Allowed[a]	87381

a. Based on availability of workspace memory.

One-Sample Kolmogorov-Smirnov Test

		Performance	Female	Foreign	Independent
N		185	185	185	185
Normal Parameters[a,b]	Mean	,5488564	,96	1,43	4,29
	Std. Deviation	,18673048	,890	1,594	1,665
Most Extreme Differences	Absolute	,044	,254	,247	,229
	Positive	,035	,254	,247	,229
	Negative	-,044	-,184	-,185	-,149
Kolmogorov-Smirnov Z		,604	3,449	3,362	3,115
Asymp. Sig. (2-tailed)		,859	,000	,000	,000

One-Sample Kolmogorov-Smirnov Test

		Boardsize	Firmsize
N		185	185
Normal Parameters[a,b]	Mean	10,50	18,2286
	Std. Deviation	2,590	2,32290
Most Extreme Differences	Absolute	,114	,113
	Positive	,114	,113
	Negative	-,108	-,089
Kolmogorov-Smirnov Z		1,552	1,537
Asymp. Sig. (2-tailed)		,016	,018

a. Test distribution is Normal.

b. Calculated from data.

```
REGRESSION
  /MISSING LISTWISE
  /STATISTICS COEFF OUTS R ANOVA
  /CRITERIA=PIN(.05) POUT(.10)
  /NOORIGIN
  /DEPENDENT RES_1
  /METHOD=ENTER Female Foreign Independent Boardsize Firmsize.
```

Regression

Notes	
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Comments	
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Missing Value Handling	Definition of Missing
	Cases Used
Syntax	
Resources	Processor Time
	Elapsed Time
	Memory Required
	Additional Memory Required for Residual Plots

Notes

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Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on cases with no missing values for any variable used.
Syntax		REGRESSION /MISSING LISTWISE /STATISTICS COEFF OUTS R ANOVA /CRITERIA=PIN(.05) POUT(.10) /NOORIGIN /DEPENDENT RES_1 /METHOD=ENTER Female Foreign Independent Boardsize Firmsize.
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Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Firmsize, Independent, Foreign, Female, Boardsize[b]	.	Enter

a. Dependent Variable: Unstandardized Residual

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,328[a]	,108	,083	,09223582

a. Predictors: (Constant), Firmsize, Independent, Foreign, Female, Boardsize

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	,184	5	,037	4,322	,001[b]
	Residual	1,523	179	,009		
	Total	1,707	184			

a. Dependent Variable: Unstandardized Residual

b. Predictors: (Constant), Firmsize, Independent, Foreign, Female, Boardsize

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	,102	,059		1,733	,085
	Female	-,008	,008	-,075	-,952	,342
	Foreign	-,007	,005	-,109	-1,450	,149
	Independent	,018	,005	,316	3,931	,000
	Boardsize	-,009	,003	-,252	-3,008	,003
	Firmsize	,003	,003	,074	1,015	,311

a. Dependent Variable: Unstandardized Residual

Appendix 2

Two-stage Least Squares Regression

Notes		
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Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables across all equations.
Syntax		2SLS Performance WITH Female Foreign Independent Boardsize /INSTRUMENTS Female Foreign Independent Boardsize Firmsize /CONSTANT.
Resources	Processor Time	00:00:00,06
	Elapsed Time	00:00:00,10
Time Series Settings (TSET)	Amount of Output	PRINT = DEFAULT
	Saving New Variables	NEWVAR = NONE
	Treatment of User-Missing Values	MISSING = EXCLUDE
	Equations Include	CONSTANT

Model Description		
		Type of Variable
Equation 1	Performance	dependent
	Female	predictor & instrumental
	Foreign	predictor & instrumental
	Independent	predictor & instrumental
	Boardsize	predictor & instrumental
	Firmsize	instrumental

Model Summary

Equation 1	Multiple R	,477
	R Square	,228
	Adjusted R Square	,211
	Std. Error of the Estimate	,166

ANOVA

		Sum of Squares	df	Mean Square	F
Equation 1	Regression	1,461	4	,365	13,270
	Residual	4,955	180	,028	
	Total	6,416	184		

ANOVA

		Sig.
Equation 1	Regression	,000
	Residual	
	Total	

Coefficients

		Unstandardized Coefficients		Beta	t
		B	Std. Error		
Equation 1	(Constant)	,401	,052		7,647
	Female	,035	,015	,166	2,306
	Foreign	-,011	,008	-,098	-1,422
	Independent	-,044	,008	-,391	-5,246
	Boardsize	,030	,005	,421	5,541

Coefficients

		Sig.
Equation 1	(Constant)	,000
	Female	,022
	Foreign	,157
	Independent	,000
	Boardsize	,000

Coefficient Correlations

			Female	Foreign	Independent
Equation 1	Correlations	Female	1,000	,290	-,135
		Foreign	,290	1,000	-,037
		Independent	-,135	-,037	1,000
		Boardsize	-,227	-,135	-,412

Coefficient Correlations

			Boardsize
Equation 1	Correlations	Female	-,227
		Foreign	-,135
		Independent	-,412
		Boardsize	1,000

Appendix 3

Forbes Asia's 50 Best Companies 2013

http://www.forbes.com/fab50/list/

1 Advanced Info Service
2 Alliance Global Group
3 Asian Paints
4 Axis Bank
5 Ayala Corp
6 Baidu
7 Bank Central Asia
8 Cheng Shin Rubber Industry
9 China Gas Holdings
10 China Hongqiao Group
11 China Vanke
12 China ZhengTong Auto Services
13 CP ALL
14 CSL
15 CWT
16 Dr. Reddy's Laboratories
17 ENN Energy Holdings
18 Galaxy Entertainment Group
19 Geely Automobile Holdings
20 Great Wall Motor
21 Gree Electric Appliances
22 HCL Technologies
23 HDFC Bank
24 Henan Shuanghui Investment & Development
25 Hengan International Group
26 Hisense Electric
27 Hyundai Glovis
28 Idea Cellular
29 ITC
30 Jollibee Foods
31 LG Household & Health Care
32 Longfor Properties
33 Lupin
34 Melco Crown Entertainment
35 Motherson Sumi Systems
36 Naver*
37 Pegatron
38 Poly Real Estate Group
39 Qingdao Haier

40 Sapura Kencana Petroleum
41 SJM Holdings
42 Skyworth Digital Holdings
43 Sun Pharmaceutical Industries
44 Suzhou Gold Mantis Construction Decoration
45 Tata Consultancy Services
46 Tencent Holdings
47 Tingyi Holding
48 Titan
49 Want Want China Holdings
50 Wharf (Holdings)