AN ECONOMETRIC ANALYSIS OF FEMALE DIRECTORS ON COMPANY PERFORMANCE: THE NONLINEAR EFFECTS

CHEN MING

MASTER OF SCIENCE (FINANCE)
UNIVERSITI UTARA MALAYSIA
(2012)
AN ECONOMETRIC ANALYSIS OF COMPANY PERFORMANCE:
THE NONLINEAR EFFECTS

A Dissertation Submitted to Othman Yeop Abdullah Graduate School
of Business in Partial Fulfillment Of the Requirements
for the Degree of Master of Science (Finance)
Universiti Utara Malaysia

By
Chen Ming
810019

© Chen Ming, 2012. All rights reserved
PERAKUAN KERJA KERTAS PROJEK
(Certification of Project Paper)

Saya, mengakui bertandatangan, memperakuan bahawa
(I, the undersigned, certified that)
CHEN MING (B10019)

Calon untuk Ijazah Sarjana
(Candidate for the degree of) MASTER OF SCIENCE (FINANCE)

telah mengemukakan kertas projek yang bertajuk
(has presented his/her project paper of the following title)

AN ECONOMETRIC ANALYSIS OF FEMALE DIRECTOR ON COMPANY
PERFORMANCE THE NON LINER EFFECTS

Seperti yang tercatat di muka surat tajuk dan kulit kertas projek
(as it appears on the title page and front cover of the project paper)

Bahawa kertas projek tersebut boleh diterima dari segi bentuk serta kandungan dan meliputi bidang ilmu dengan
memuaskan.
(that the project paper acceptable in the form and content and that a satisfactory knowledge of the field is covered by
the project paper).

Nama Penyelidik
(Name of Supervisor) : DR. LIM HOCK EAM

Tandatangan
(Signature) : 

Tarih
(Date) : 16 DECEMBER 2012
PERMISSION

In representing this dissertation in partial fulfillment of the post graduate degree from Universiti Utara Malaysia, I agree that the University Library make it freely available for inspection. I further agree that permission of copying of this dissertation in any manner, in whole or in part, for scholarly purposes may be granted by my supervisor or, in her absence, by the Dean of Othman Yeop Abdullah Graduate School of Business. It is understood that any copying or publication or use of this dissertation or parts thereof for financial gain shall not be allowed without my written permission. It is also understood that due recognition shall be given to me and to Universiti Utara Malaysia for any scholarly use which may be made of any material from my dissertation.

Requests for permission to copy or to make other use of materials in this dissertation, in whole or in part shall be addressed to:

Dean of Research & Postgraduate Studies
Othman Yeop Abdullah Graduate School of Business
Universiti Utara Malaysia
006010 Sintok
Kedah Darul Aman
ABSTRACT

The aim of this paper is to investigate an econometric analysis of nonlinear effects of gender composition of the board of directors on company performance using Malaysian initial public offering (IPO) companies. It also examines other factors of board composition which are independent directors and non-executive director. This study finds that gender diversity on board does not affect the company financial performance based on return on assets, return on equity and Tobin’s Q using a sample of 123 IPO companies from the total population of 230 IPO companies which were listed during the period of 2005 to 2012. Results reveal that there is no significant relationship between the percentage of independent and non-executive directors on board and company financial performance, either linearly or nonlinearly, except at upper 80th percentiles of return on equity, this study covers strong evidence that more female directors on board are associated with significantly high return. This research contributes to the existing literature on gender especially in the context of IPO companies using econometric analysis. This is one of the rare comprehensive study uses multiple statistics tools to examine the factors of board composition using recent Malaysian IPOs data.

Keywords: Nonlinear analysis, Quantile regression, Female directors, Board composition, Corporate governance, Financial Performance, IPO, Malaysia.
ACKNOWLEDGEMENTS

I would like to extend my gratitude to my dissertation supervisor, Dr. Lim Hock Eam for his valuable support, contribution and guidance.

Special thanks are also extended to all lecturers in the Master of Science (Finance) program, and the Othman Yeop Abdullah Graduate School of Business, Universiti Utara Malaysia who had helped me in getting through the hard time, also for their useful knowledge and information.

I also wish to acknowledge the support of my respected parents. Their continuous support, unconditional love, encouragement, and sacrifice, has been extraordinary and has contributed to the success of my study.

I am grateful for the encouragement that I received from all of my friends, and who have made my stay and study at this university a worthwhile and an enjoyable journey.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>PERMISSION</th>
<th>i</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABSTRACT</td>
<td>ii</td>
</tr>
<tr>
<td>ACKNOWLEDGEMENTS</td>
<td>iii</td>
</tr>
<tr>
<td>TABLE OF CONTENTS</td>
<td>iv</td>
</tr>
</tbody>
</table>

## CHAPTER ONE: INTRODUCTION
1.1 Background                           | 1 |
1.2 Problem Statement                     | 3 |
1.3 Research Objectives                   | 5 |
1.4 Research Questions                    | 6 |
1.5 Significance of the Study             | 7 |
1.6 Organization of the Dissertation      | 8 |

## CHAPTER TWO: LITERATURE REVIEW
2.1 Introduction                          | 10 |
2.2 Theoretical Reviews                   | 10 |
   2.2.1 Resource Dependence Theory        | 11 |
   2.2.2 Human Capital Theory              | 13 |
   2.2.3 Agency Theory                     | 13 |
   2.2.4 Diversity of Perspectives        | 14 |
   2.2.5 Social Identity Theory            | 15 |
2.3 Empirical Reviews: Gender Diversity   | 16 |
   2.3.1 Evidence from US                 | 17 |
   2.3.2 Evidence from Other Countries    | 21 |
   2.3.3 Evidence from Malaysia           | 23 |
   2.3.4 Summary of Literatures           | 23 |
2.4 Empirical Review: Board Compositions  | 26 |
   2.4.1 Evidence of Board Size           | 26 |
   2.4.2 Evidence of Non-Executive Directors | 28 |
   2.4.3 Evidence of Independent Directors | 29 |
2.5 Conclusion                            | 30 |

## CHAPTER THREE: METHODOLOGY
3.1 Introduction                          | 32 |
3.2 Data Sources                           | 32 |
   3.2.1 Data Collection                  | 33 |
3.3 Method                                | 34 |
   3.3.1 Multiple Regression Model Specification | 35 |
   3.3.2 Dependent Variables              | 36 |
   3.3.3 Independent Variables            | 37 |
3.4 Hypotheses                            | 39 |
3.5 Summary of Variables                  | 41 |
CHAPTER FOUR: RESULTS AND ANALYSIS

4.1 Introduction
4.2 Descriptive Statistics
4.3 The Trend of Financial Performance
4.4 Correlation and Regression Analysis
4.5 Nonlinear Regression Analysis
   4.5.1 Quantile Regression Analysis
   4.5.2 Simulation of Effect on Percentage of Female Directors
4.6 Conclusions of Hypotheses

CHAPTER FIVE: CONCLUSION, DISCUSSIONS AND RECOMMENDATIONS

5.1 Conclusion
5.2 Discussions and Recommendations

List of Figures
List of Tables
References
Appendices

List of Figure:
Figure 1.1: Statistics of Graduates in the Labour Force Malaysia
Figure 4.1: The Effects of Female Directors (%) on ROA
Figure 4.2: The Effects of Female Directors (%) on ROE
Figure 4.3: The Effects of Female Directors (%) on Tobin’s Q

List of Tables:
Table 2.1: Summary of Studies in the Literature Review
Table 3.1: Description of Variables
Table 4.1: Descriptive Statistics of Independent and Control Variables
Table 4.2: Mean and Median of ROA, ROE and Tobin’s Q
Table 4.3: Correlation Matrix without Winsorizing Data
Table 4.4: Correlation Matrix after Winsorizing Data
Table 4.5: Multiple Regression
Table 4.6: Nonlinear Regression Analysis
Table 4.7: Quantile Analysis
CHAPTER ONE: INTRODUCTION

1.1 Background

Diversity in the workforce has been an issue received a tremendous amount of attention both in academia and in the popular press. Much of the initial focus and research relates to impediments promotion of women at lower and middle management levels, often referred to as a glass ceiling effect (Farrell & Hersch, 2005). Demographic diversity is a fact of modern organizational life, and the challenge of managing a diverse workforce is widely recognized as a key issue facing today’s human resource managers and CEOs (Williams, Parker, & Turner, 2007).

Some studies explore the effect of gender diversity on board of directors of the organization on organizational performance (Adams & Ferreira, 2003, 2007, 2009; Erhardt, Werbel, & Shrader, 2003; Simith, Simith, & Verner, 2005). With corporate governance, the concept of diversity relates to board composition and the varied combination of attributes, characteristics and expertise contributed by individual board members in relation to board process and decision-making. In the widest sense, the various types of diversity that may be represented among directors in the boardroom include age, gender, ethnicity, culture, religion, constituency representation, independence, professional background, knowledge, technical skills and expertise, commercial and industry experience, career and life experience (Milliken and Martins, 1996). In particular, gender diversity refers to the proportion of males and females in the workplace, which can have an effect on how people interact.
The contents of the thesis is for internal user only
References:


