



UNIVERSITI PUTRA MALAYSIA

**LONG-TERM PERFORMANCE OF MALAYSIAN
HORIZONTAL MERGERS AND ACQUISITIONS**

AIK NAI CHIEK

GSM 2010 4

LONG-TERM PERFORMANCE OF MALAYSIAN HORIZONTAL MERGERS AND ACQUISITIONS

By

AIK NAI CHIEK

**Thesis Submitted to the Graduate School of Management,
Universiti Putra Malaysia, in Fulfilment of the
Requirement for the Degree of Doctor of Philosophy**

August 2010

DEDICATION

To my parents,
my wife, Yee Siew Fui and my son, Aik Zhu Ian

Abstract of thesis presented to the Senate of Universiti Putra Malaysia
in fulfilment of the requirement for the degree of Doctor of Philosophy

**LONG-TERM PERFORMANCE OF MALAYSIAN
HORIZONTAL MERGERS AND ACQUISITIONS**

By

AIK NAI CHIEK

August 2010

Chair: Professor Dr. Shamsheer Mohamad, PhD

Faculty: Graduate School of Management

This study examines the long-term performance of Malaysian horizontal M&A activities. Four different measures were applied to ascertain whether the expected long-term economic gains are actually realized following the M&As. The findings indicate that the effects of M&A on bidder firms are negative in the long run. In particular, the operating performance of bidder firms deteriorated in the period after merger, while that of non-merging rivals to bidder firms improved over the same period, suggesting a spillover effect. For target firms, the findings suggest no synergistic gains in operating performance after M&A activities. These findings are consistent with the findings of financial analysis for the same sample to ascertain results from the non-use of traditional method in M&A literature. The sub-period analysis however revealed that M&A activity improves the operating performance of matching firms only for a very short run specifically in a year after M&A. In fact, the operating performance of major competitors (both bidder and non-merging rival firms) deteriorates in the long run, most notably in all

years after year three of M&As. The findings on industry effect reveal that M&A activity diminishes operating performance of bidder firms in manufacturing industry and matching firms in construction industry, suggesting that horizontal M&A activity in these industries (which rely heavily on the manpower) is not advantageous to improve operating performance of bidder firms and non-merging rival firms in Malaysia.

Consistent with the literature, the findings showed no significant change in technical efficiency of the merging firms after M&As. Similar findings are documented for the matching firms despite the insignificant declines in technical efficiency of matching firms are lower compared to bidder firms. Bidder firms however show a significant decline in cost efficiency in the long run, particularly within two specific window periods of three years before and three years after, and three years before and all years after year three of M&As.

The findings show a significant improvement in productivity of merging firms and non-merging rival firms in the long run. Similar to the bidder firms, productivity growth of non-merging rival firms is mainly due to the technical change (frontier shift effect) despite their higher level of technological progress compared to the bidder firms. Productivity of target firms, on the other hand, is solely contributed by the efficiency change (catching up effect).

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia
sebagai memenuhi keperluan untuk ijazah Doktor Falsafah

**PRESTASI JANGKA PANJANG PENGGABUNGAN
DAN PENGAMBILALIHAN MELINTANG DI MALAYSIA**

Oleh

AIK NAI CHIEK

Ogos 2010

Pengerusi: Professor Dr. Shamsheer Mohamad, PhD

Fakulti: Sekolah Pengajian Siswazah Pengurusan

Objektif utama dalam kajian ini adalah untuk menyelidik prestasi jangka panjang bagi aktiviti penggabungan dan pengambilalihan (P&P) secara melintang di Malaysia. Pengajian ini menggunakan empat kaedah pengukuran yang berbeza untuk mengesahkan sama ada terdapatnya keuntungan ekonomi yang diharapkan selepas aktiviti P&P ini dalam jangka masa panjang. Hasil daripada pengajian ini menunjukkan bahawa kesan P&P ke atas firma penawar adalah negatif dalam jangka panjang. Khususnya, prestasi operasi syarikat penawar merosot selepas P&P, manakala prestasi syarikat saingan meningkat dalam tempoh yang sama menjelaskan terdapat kesan “spillover”. Untuk firma sasaran penemuan menunjukkan tidak ada bukti peningkatan prestasi operasi selepas aktiviti P&P ini. Hasil-hasil kajian ini agak konsisten dengan apa yang dihasilkan oleh kajian-kajian lain sebelum ini. Bagaimanapun, penemuan juga menunjukkan aktiviti P&P hanya meningkatkan prestasi operasi firma saingan untuk jangka yang pendek ia itu setahun selepas aktiviti P&P. Sebenarnya, kedua-dua pihak syarikat penawar dan pesaing

mengalami kerugian operasi dalam jangka masa panjang terutamanya dalam semua tahun selepas tahun tiga dari aktiviti P&P. Di samping itu, hasil kajian berdasarkan industri menunjukkan bahawa aktiviti P&P merosotkan prestasi operasi firma penawar (saingan) dalam sektor perkilangan (pembinaan), oleh itu mencadangkan bahawa aktiviti P&P secara melintang di industri-industri yang sangat bergantung pada tenaga manusia tidak memperolehi manfaat peningkatan prestasi operasi syarikat-syarikat ini di Malaysia.

Hasil kajian membuktikan ketiadaan perubahan yang signifikan dalam kecekapan teknikal bagi syarikat-syarikat yang terlibat dalam P&P ini adalah konsisten dengan sebahagian besar penyelidikan yang dilaporkan oleh penyelidik antarabangsa terdahulu. Syarikat saingan juga mengalami kemerosotan dalam kecekapan teknikal yang tidak signifikan. Akan tetapi, kemerosotan ini lebih rendah berbanding dengan syarikat penawar. Analisis lebih lanjut menunjukkan bahawa syarikat penawar mengalami kemerosotan yang signifikan dari segi kecekapan kos dalam jangka masa panjang, khususnya dalam dua tempoh masa khas iaitu tiga tahun sebelum dan tiga tahun selepas P&P, dan tiga tahun sebelum dan semua tahun selepas tahun tiga dari aktiviti P&P.

Bagaimanapun, firma penawar (dan sasaran) dan saingan menunjukkan keseluruhan kenaikan produktiviti yang ketara dalam jangka masa panjang dimana kenaikan produktiviti syarikat penawar dan pesaing ini adalah disebabkan oleh peningkatan teknikal (kesan pergerakan hadapan). Bagi syarikat sasaran pula, kenaikan produktiviti adalah sumbangan daripada peningkatan kecekapan relatif.

ACKNOWLEDGEMENTS

This work would not have been successfully accomplished without guidance, help and support of many people. I wish to express my heartfelt gratitude to them for their willingness to contribute valuable information, opinions and time to help me in this long intellectual journey.

First of all, I would like to express my sincere appreciation and special thanks to my supervisory committee, Professor Dr. Shamsher Mohamad, chairperson, Professor Dr. Annuar Mohd. Nassir and Dr. Taufiq Hassan Shah Chowdury.

I am deeply grateful for the valuable advice and consistent guidance of Professor Dr. Shamsher Mohamad. His invaluable ideas, encouragement and positive attitude, have been of great value for me in all aspects throughout this work. Professor Dr. Annuar Mohd. Nassir deserves special thanks for his sincere support and continuous assistance throughout the study. Gratitude is also extended to Dr. Taufiq Hassan Shah Chowdury for his detailed and constructive comments. My many thanks to him for his important support and extensive discussions around this work.

I wish to express my appreciation to the Universiti Tunku Abdul Rahman (UTAR) for providing me the PhD scholarship. I am truly grateful for giving me this opportunity and their support. My warm thanks are due to the staff of Graduate School of Management for their kind support and readiness to help which made my work so much smoother.

I owe my loving thanks to my wife, Yee Siew Fui for constant encouragement and my son Aik Zhu Ian for giving me happiness and joy. They have lost a lot due to my research study. Without their encouragement and understanding it would have been impossible for me to finish this work. My special gratitude is due to my parents, my brother and his family, and my sister for their boundless love and support. My loving thanks are also due to my parents-in-law for being abundantly helpful to take care of my family.



I certify that an Examination Committee met on the 18th August 2010 to conduct the final examination of Aik Nai Chiek on his Doctor of Philosophy thesis entitled “Long-term Performance of Malaysian Horizontal Mergers and Acquisitions” in accordance with Universities and University Colleges Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U(A) 106] 15 March 1998. The Committee recommends that the student be awarded the degree of Doctor of Philosophy.

Members of the Thesis Examination Committee were as follows:

FOONG SOON YAU, PhD

Professor
Graduate School of Management
Universiti Putra Malaysia
(Chairman)

ARIFF MOHAMED, PhD

Professor
School of Business
Bond University
(External Examiner)

AHMAD ZUBAIDI BAHARUMSHAH, PhD

Professor
Faculty of Economics and Management
Universiti Putra Malaysia
(Internal Examiner)

G. SIVALINGAM, PhD

Professor
School of Business
Monash University
(Internal Examiner)

TAUFIQ HASSAN SHAH CHOWDURY, PhD

Associate Professor
Faculty of Economics and Management
Universiti Putra Malaysia
(Representative of Supervisory Committee/Observer)

SHAMSER MOHAMAD, PhD

Professor/Deputy Dean
Graduate School of Management
Universiti Putra Malaysia

Date:

This thesis submitted to the Senate of Universiti Putra Malaysia has been accepted as fulfilment of the requirement for the degree of Doctor of Philosophy. The members of the Supervisory Committee are as follows:

SHAMSHER MOHAMAD, PhD

Professor
Faculty of Economics and Management
Universiti Putra Malaysia
(Chairman)

ANNUAR MD. NASSIR, PhD

Professor
Faculty of Economics and Management
Universiti Putra Malaysia
(Member)

TAUFIQ HASSAN SHAH CHOWDURY, PhD

Associate Professor
Faculty of Economics and Management
Universiti Putra Malaysia
(Member)

ARFAH SALLEH, PhD, FCPA (AUST)

Associate Professor/Dean
Graduate School of Management
Universiti Putra Malaysia

Date:

DECLARATION

I hereby declare that the thesis is based on my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at UPM or any other institutions.

Aik Nai Chiek

Date:

TABLE OF CONTENTS

	Page
DEDICATION	ii
ABSTRACT	iii
ABSTRAK	v
ACKNOWLEDGEMENTS	vii
APPROVAL	ix
DECLARATION	xi
LIST OF TABLES	xvi
LIST OF FIGURES	xx
LIST OF ABBREVIATIONS	xxi

CHAPTER

1	INTRODUCTION	
1.0	Introduction	1-1
1.1	Background of the Study	1-1
1.2	Problem Statement	1-6
1.3	Objectives of the Study	1-9
1.4	Significance of the Study	1-11
1.5	Organisation of the Study	1-12
2	MERGERS AND ACQUISITIONS: THE MALAYSIAN EXPERIENCE	
2.0	Introduction	2-1
2.1	Types of Mergers	2-2
2.1.1	Horizontal Mergers	2-2
2.1.2	Vertical Mergers	2-4
2.1.3	Conglomerate Mergers	2-5
2.2	The Need for Regulations in Mergers and Acquisitions	2-6
2.2.1	Regulators of Mergers and Acquisitions in Malaysia	2-7
2.3	Regulations of Mergers and Acquisitions in Malaysia	2-8
2.3.1	The Securities Commission Act 1993	2-9
2.3.2	The Malaysian Code on Takeovers and Mergers 1998	2-10
2.4	Mergers and Acquisitions Process in Malaysia	2-11
2.5	Mergers and Acquisitions Activity in Malaysia	2-15
2.6	Chapter Summary	2-19
3	THEORY AND EVIDENCE	
3.0	Introduction	3-1
3.1	Reasons for Mergers and Acquisitions	3-1
3.1.1	Efficiency Theories	3-5
3.1.1.1	Differential Managerial Efficiency	3-7
3.1.1.2	Inefficient Management	3-8

3.1.1.3	Synergies	3-9
3.1.1.3.1	Operating Synergies	3-10
3.1.1.3.2	Financial Synergies	3-10
3.1.1.4	Diversification	3-11
3.1.1.5	Information and Signaling	3-12
3.1.2	Agency Problem	3-13
3.1.2.1	Managerialism	3-15
3.1.2.2	Free Cash Flow Hypothesis	3-16
3.1.3	Hubris Hypothesis	3-17
3.2	Long-term Empirical Studies of Mergers and Acquisitions	3-18
3.2.1	Empirical Evidences of Postmerger Operating Performance	3-19
3.2.1.1	Operating Performance for Horizontal Mergers	3-20
3.2.1.2	Operating Performance for Vertical Mergers	3-22
3.2.1.3	Operating Performance for Conglomerate Mergers	3-22
3.2.2	Empirical Evidences on the Merger Efficiency	3-24
3.2.2.1	Efficiency for Horizontal Mergers	3-24
3.2.2.2	Efficiency for Vertical Mergers	3-30
3.2.2.3	Efficiency for Conglomerate Mergers	3-31
3.2.3	Empirical Evidences on the Merger Productivity	3-32
3.2.3.1	Productivity for Horizontal Mergers	3-33
3.2.3.2	Productivity for Vertical Mergers	3-35
3.2.3.3	Productivity for Conglomerate Mergers	3-36
3.3	Chapter Summary	3-37
4	DATA AND METHODOLOGY	
4.0	Introduction	4-1
4.1	Conceptual Framework	4-2
4.2	Sample Data	4-3
4.3	Variables	4-9
4.3.1	Variables for Calculation of Operating Performance	4-9
4.3.2	Variables Used for Technical Efficiency and Productivity	4-10
4.3.3	Variables Used for Cost Efficiency	4-10
4.4	Performance Measures of Mergers and Acquisitions	4-11
4.4.1	Empirical Development of Efficiency Measurement	4-13
4.4.1.1	Financial Ratios Approach	4-13
4.4.1.2	Efficiency Concepts	4-15
4.4.2	Operating Performance Analysis	4-20
4.4.3	Frontier Efficiency Analysis	4-22
4.4.3.1	Non-parametric Approach	4-26
4.4.3.1.1	Data Envelopment Analysis (DEA)	4-27
4.4.3.2	Parametric Approach	4-30
4.4.3.2.1	Stochastic Frontier Analysis (SFA)	4-31
4.5	Test Models	4-32
4.5.1	Economic Value Added (EVA) Analysis	4-33
4.5.2	Technical Efficiency	4-38
4.5.2.1	DEA Method	4-38

	4.5.2.2 SFA Method	4-41
	4.5.3 Cost Efficiency	4-43
	4.5.3.1 DEA Method	4-43
	4.5.3.2 SFA Method	4-44
	4.5.4 Total Factor Productivity	4-45
	4.5.4.1 DEA Method	4-47
	4.5.4.2 SFA Method	4-50
4.6	Hypothesis Generation	4-51
4.7	Chapter Summary	4-55
5	FINDINGS ON LONG-TERM PERFORMANCE OF MERGING FIRMS	
5.0	Introduction	5-1
5.1	Descriptive Statistics for the Merging Firms	5-2
5.2	Operating Performance of the Merging Firms Using EVA	5-4
	5.2.1 Sub-period Analysis for Operating Performance of Merging Firms	5-10
	5.2.2 Industry Analysis of Operating Performance on Merging Firms	5-11
5.3	Financial Analysis of the Merging Firms	5-13
5.4	Technical Efficiency of the Merging Firms	5-16
	5.4.1 Sub-period Analysis of Technical Efficiency on Merging Firms	5-19
	5.4.2 Industry Analysis of Technical Efficiency on Merging Firms	5-20
5.5	Cost Efficiency of the Merging Firms	5-22
	5.5.1 Sub-period Analysis of Cost Efficiency on Merging Firms	5-25
	5.5.2 Industry Analysis of Cost Efficiency on Merging Firms	5-26
5.6	Productivity Efficiency of the Merging Firms	5-27
	5.6.1 Sub-period Analysis of Productivity Efficiency on Merging Firms	5-31
	5.6.2 Industry Analysis of Productivity Efficiency on Merging Firms	5-34
5.7	Chapter Summary	5-36
6	FINDINGS ON RELATIVE PERFORMANCE OF RIVAL FIRMS	
6.0	Introduction	6-1
6.1	Descriptive Statistics for the Rival Firms	6-1
6.2	Operating Performance of the Rival Firms Using EVA	6-4
	6.2.1 Sub-period Analysis for Operating Performance of Rival Firms	6-7
	6.2.2 Industry Analysis of Operating Performance on Rival Firms	6-9
6.3	Financial Analysis of the Rival Firms	6-10
6.4	Technical Efficiency of the Rival Firms	6-13
	6.4.1 Sub-period Analysis of Technical Efficiency on Rival Firms	6-16

6.4.2	Industry Analysis of Technical Efficiency on Rival Firms	6-17
6.5	Cost Efficiency of the Rival Firms	6-18
6.5.1	Sub-period Analysis of Cost Efficiency on Rival Firms	6-20
6.5.2	Industry Analysis of Cost Efficiency on Rival Firms	6-22
6.6	Productivity Efficiency of the Rival Firms	6-23
6.6.1	Sub-period Analysis of Productivity Efficiency on Rival Firms	6-26
6.6.2	Industry Analysis of Productivity Efficiency on Rival Firms	6-28
6.7	Chapter Summary	6-30
7	CONCLUSIONS AND POLICY IMPLICATIONS	
7.0	Introduction	7-1
7.1	Summary and Conclusions	7-2
7.2	Policy Implications	7-6
7.3	Limitations of the Study	7-9
7.4	Suggestions for Future Research	7-10
	REFERENCES	R-1