

University of Wollongong - Research Online

Thesis Collection

Title: Guanxi network and business performance of Sino-Thai SMEs

Author: Krittakorn Sahakijpicharn

Year: 2007

Repository DOI:

Copyright Warning

You may print or download ONE copy of this document for the purpose of your own research or study. The University does not authorise you to copy, communicate or otherwise make available electronically to any other person any copyright material contained on this site.

You are reminded of the following: This work is copyright. Apart from any use permitted under the Copyright Act 1968, no part of this work may be reproduced by any process, nor may any other exclusive right be exercised, without the permission of the author. Copyright owners are entitled to take legal action against persons who infringe their copyright. A reproduction of material that is protected by copyright may be a copyright infringement. A court may impose penalties and award damages in relation to offences and infringements relating to copyright material.

Higher penalties may apply, and higher damages may be awarded, for offences and infringements involving the conversion of material into digital or electronic form.

Unless otherwise indicated, the views expressed in this thesis are those of the author and do not necessarily represent the views of the University of Wollongong.

Research Online is the open access repository for the University of Wollongong. For further information contact the UOW Library: research-pubs@uow.edu.au

2007

Guanxi network and business performance of Sino-Thai SMEs

Krittakorn Sahakijpicharn
University of Wollongong

Follow this and additional works at: <https://ro.uow.edu.au/theses>

University of Wollongong

Copyright Warning

You may print or download ONE copy of this document for the purpose of your own research or study. The University does not authorise you to copy, communicate or otherwise make available electronically to any other person any copyright material contained on this site.

You are reminded of the following: This work is copyright. Apart from any use permitted under the Copyright Act 1968, no part of this work may be reproduced by any process, nor may any other exclusive right be exercised, without the permission of the author. Copyright owners are entitled to take legal action against persons who infringe their copyright. A reproduction of material that is protected by copyright may be a copyright infringement. A court may impose penalties and award damages in relation to offences and infringements relating to copyright material.

Higher penalties may apply, and higher damages may be awarded, for offences and infringements involving the conversion of material into digital or electronic form.

Unless otherwise indicated, the views expressed in this thesis are those of the author and do not necessarily represent the views of the University of Wollongong.

Recommended Citation

Sahakijpicharn, Krittakorn, Guanxi network and business performance of Sino-Thai SMEs, PhD thesis, School of Economics, University of Wollongong, 2007. <http://ro.uow.edu.au/theses/63>

NOTE

This online version of the thesis may have different page formatting and pagination from the paper copy held in the University of Wollongong Library.

UNIVERSITY OF WOLLONGONG

COPYRIGHT WARNING

You may print or download ONE copy of this document for the purpose of your own research or study. The University does not authorise you to copy, communicate or otherwise make available electronically to any other person any copyright material contained on this site. You are reminded of the following:

Copyright owners are entitled to take legal action against persons who infringe their copyright. A reproduction of material that is protected by copyright may be a copyright infringement. A court may impose penalties and award damages in relation to offences and infringements relating to copyright material. Higher penalties may apply, and higher damages may be awarded, for offences and infringements involving the conversion of material into digital or electronic form.

GUANXI NETWORK AND BUSINESS PERFORMANCE OF SINO-THAI SMEs

A thesis submitted in fulfillment of the
requirements for the award of the degree

DOCTOR OF PHILOSOPHY

from

UNIVERSITY OF WOLLONGONG

By

KRITTAKORN SAHAKIJPICHARN

BACHELOR OF COMMERCE (University of Wollongong, Australia)

MASTER OF ECONOMICS ADVANCED (University of Wollongong, Australia)

**SCHOOL OF ECONOMICS
FACULTY OF COMMERCE
UNIVERSITY OF WOLLONGONG, AUSTRALIA**

2007

THESIS CERTIFICATION

I, Krittakorn SAHAKJIPICHARN, declare that this thesis, submitted in fulfillment of the requirements for the award of Doctor of Philosophy, in the School of Economics, Faculty of Commerce, University of Wollongong, is wholly my own work unless otherwise referenced or acknowledged. The document has not been submitted for qualifications at any other academic institution.

Krittakorn SAHAKJIPICHARN

December 2007

TABLE OF CONTENTS

Table of contents	i
List of tables	viii
List of figures	xii
Abbreviations	xiii
Abstract	xv
Acknowledgements	xvii
 Chapter	 Page
CHAPTER 1 Introduction	
1.1 Background	1
1.1.1 Background of the research	1
1.1.2 Background of Sino-Thais	3
1.2 Identification of the research problem	4
1.2.1 Links between the guanxi network and an organisational network in a Western context	5
1.2.2 Lack of a framework reflecting how social relationships can affect business performance	5
1.2.3 Measurement items for variables relating social relationships and Business networks	5
1.2.4 Appropriate quantitative methods and techniques linking social relationship with business performance	6
1.3 Research questions	6
1.3.1 Main research questions	6
1.3.2 Subsidiary research questions	7
1.4 Research objectives	7
1.5 Methodology	8

1.6	Organisation of the thesis	10
------------	-----------------------------------	-----------

CHAPTER 2 Background of SMEs and Overview of SMEs in Thailand

2.1	Introduction	13
2.2	Overview of small and medium enterprises	13
2.2.1	What are SMEs	14
2.2.2	Role and Importance of SMEs	15
2.2.2.1	Significant contribution to individual economies by number and output	16
2.2.2.2	Foundation of industrialisation	21
2.2.2.3	Job creation	22
2.2.2.4	Export promotion	24
2.2.2.5	Sales, output and value added	28
2.2.2.6	Contribution of SMEs to growth	28
2.2.2.7	Poverty alleviation	29
2.3	Overview of SMEs in Thailand	31
2.3.1	The definition of Thai SMEs	32
2.3.2	The number of SMEs in Thailand	33
2.3.3	Employment in SMEs	37
2.3.4	The contribution of SMEs towards Thailand's GDP	41
2.3.5	Thai SME weaknesses	44
2.3.6	The government's policy in promoting Thai SMEs	45
2.4	Summary	48

CHAPTER 3 Literature Review

3.1	Introduction	50
------------	---------------------	-----------

3.2	Guanxi Chinese network	51
3.2.1	Definition of guanxi	51
3.2.2	Guanxi bases	52
3.2.2.1	Blood bases	54
3.2.2.2	Social bases	54
3.2.3	Interpersonal relationship of guanxi	55
3.2.4	Instrument values of guanxi	57
3.2.4.1	Reciprocity	57
3.2.4.2	Role obligation	58
3.2.4.3	Particularism	58
3.2.5	Strength of ties in the guanxi network	59
3.2.5.1	Trust and credibility	59
3.2.5.2	Ganqing	60
3.2.5.3	Renqing	60
3.2.5.4	Long-term mutual benefit	61
3.2.6	Benefits of guanxi	61
3.2.6.1	Backdoor facilitation	61
3.2.6.2	Support and protection	62
3.2.6.3	Reputation and face enhancement	63
3.2.7	How to build and maintain guanxi	64
3.2.7.1	Building guanxi	64
3.2.7.2	Maintaining guanxi	64
3.2.8	Background of guanxi	67
3.2.8.1	Chinese philosophies and religion	67
3.2.8.2	Political and economic conditions	68
3.2.9	Guanxi and Market Failure	69
3.3	Organisational networks	71

3.3.1	Overview	71
3.3.2	Organisational networks	71
3.3.3	Theories that relate to organisation networks	76
3.3.3.1	Resource dependency	77
3.3.3.2	Transaction cost economics (TCE)	78
3.3.3.3	Social capital	80
3.3.4	Activities in networks that enhance the competitive advantage of firms	82
3.3.4.1	Information sharing	82
3.3.4.2	Trust	83
3.3.4.3	Repeat transactions	84
3.3.4.4	The relationship with government offices and financial institutions	85
3.3.5	Value differences between Western and guanxi business networks	86
3.3.6	Business network formation: differences between the Western and guanxi network	88
3.3.6.1	Network formation: guanxi vs. Western networks	88
3.3.6.2	Reasons for the differences	90
3.4	Summary	91

CHAPTER 4 Theoretical Framework

4.1	Introduction	94
4.2	Strength of ties in a network	96
4.2.1	Strength of ties	96
4.2.2	Measurement of strength of ties	98
4.3	Network embeddedness	100
4.3.1	Attributes of the partnership	101
4.3.2	Communication behaviour	104

4.3.3	Conflict resolution techniques	106
4.3.4	Hypotheses	107
4.4	Business performance	108
4.4.1	Overview of business performance	108
4.4.2	Measurement of business performance	109
4.5	Uncertainty in the economy	112
4.5.1	Overview of uncertainty in the economy	112
4.5.2	Measurement uncertainty	112
4.5.2.1	General environmental uncertainties	114
4.5.2.2	Industry uncertainties	116
4.5.2.3	Individual firm uncertainties	118
4.6	Summary	121

CHAPTER 5 Empirical Study

5.1	Introduction	124
5.2	Data collection and measurement	125
5.2.1	Data collection and sample characteristics	125
5.2.2	Measurements	133
5.2.3	Statistical Techniques	133
5.3	Empirical results from a study of the guanxi network, Strength of ties, and network embeddedness	136
5.3.1	The relationship between the guanxi network and strength of ties in the network	136
5.3.2	The relationship between the strength of ties in the network and network embeddedness	140
5.3.3	The relationship between the guanxi network and network embeddedness	143
5.4	Multiple discriminant analysis	146

5.4.1	Discriminant analysis of the strength of ties and the guanxi relationship	146
5.4.2	Discriminant analysis of network embeddedness and the guanxi relationship	152
5.5	The relationship between network embeddedness and business performance	158
5.6	Uncertainty, business performance and strength of ties	160
5.6.1	Factor analysis for business uncertainty	161
5.6.2	Multiple regressions between business uncertainty and business performance	167
5.6.3	The strength of ties and business uncertainty	173
5.4	Summary	175

CHAPTER 6 Structural equation modeling

6.1	Introduction	178
6.2	Introduction to structural equation modeling (SEM)	179
6.2.1	What is structural equation modeling?	179
6.2.2	Basic model	180
6.2.3	Standardised and unstandardised estimation	181
6.2.4	Model fit	181
6.3	SEM for a single group	184
6.3.1	Model development and model specification	185
6.3.2	Hypotheses	188
6.3.3	Results of SEM for a single group	191
6.3.4	Indirect effects	196
6.3.5	Model fit results	197
6.4	Invariance multigroup	198
6.4.1	The general procedure	200

6.4.2	Testing for invariance: the specification of equality constraints	201
6.4.3	Invariance for the two group model	203
6.5	Summary	208

CHAPTER 7 Conclusion and policy recommendations

7.1	Introduction	211
7.2	Summary of main findings	211
7.3	Policy implications	221
7.3.1	Implications relating to networking and business performance	222
7.3.2	Implications relating to the guanxi network	225
7.3.3	Implications relating to business uncertainty	227
7.4	Limitations of the study and future research possibilities	230
	References	233
	Appendix1	266
	Appendix2	273

LIST OF TABLES

Table		Page
Table 1.1	Major research related to the guanxi network	2
Table 2.1	Summary of main definitions of SMEs in selected APEC economies	15
Table 2.2	Number of non agricultural SMEs in Southeast Asian countries	16
Table 2.3	Share of SMEs in manufacturing output in Southeast Asian countries	16
Table 2.4	SMEs and employment in East Asian countries (1998-1999)	23
Table 2.5	Structural contribution of SMEs in Southeast Asian countries to exports (1991-1992)	25
Table 2.6	SME Contribution to GDP, Output, Sales, and Value Added	28
Table 2.7	A summary profile of SMEs in East and South-East Asia	30
Table 2.8	Thai Ministry of Industry definition of SMEs	32
Table 2.9	The number and proportion of enterprises in Thailand by size (1994-2005)	33
Table 2.10	The number and proportion of SMEs in Thailand by industry (1994-2005)	35
Table 2.11	The number and proportion of SMEs by region (1994-2005)	36
Table 2.12	The number and proportion of SMEs in Bangkok and its vicinities by industry (1994-2005)	36
Table 2.13	The number and proportion of employed persons by firm size (various years)	37
Table 2.14	The number and proportion of employed persons by SMEs by industry (1994-2005)	39
Table 2.15	The distribution of employed persons by SMEs classified by region (various years)	40
Table 2.16	The number and proportion of employed by SMEs in Bangkok and its vicinities by industry (various years)	41
Table 2.17	Thailand's GDP 1999-2005 by size of enterprise	42

Table 2.18	GDP and GDP growth of enterprise by economic activity, (1999-2005)	43
Table 3.1	Guanxi, categories of relationship and modes of interactions	57
Table 4.1	Measurement items of network embeddedness	108
Table 4.2	Measurement items of business performance	111
Table 4.3	General environmental uncertainties	115
Table 4.4	Industry uncertainties	117
Table 4.5	Individual firm uncertainties	119
Table 5.1	Characteristics of the sample	129
Table 5.2	Strength of ties measurement variables	137
Table 5.3A	Ranks table	139
Table 5.3B	Test statistics	139
Table 5.4	Measurement items of network embeddedness	141
Table 5.5	Multiple regression between network embeddedness and Strength of ties	142
Table 5.6A	Ranks table	144
Table 5.6B	Test statistics	144
Table 5.7A	Group statistic	147
Table 5.7B	Tests of equality of group means	147
Table 5.7C	Test results	148
Table 5.7D	Eigenvalues	148
Table 5.7E	Wilks' Lambda	149
Table 5.7F	Canonical discriminant function coefficients	149
Table 5.7G	Standardized canonical discriminant function coefficients	149
Table 5.7H	Functions at group centroids	149
Table 5.7I	Classification results	150
Table 5.8A	Group statistic	152
Table 5.78B	Tests of equality of group means	153

Table 5.8C	Test results	153
Table 5.8D	Eigenvalues	154
Table 5.8E	Wilks' Lambda	154
Table 5.8F	Canonical discriminant function coefficients	154
Table 5.8G	Standardized canonical discriminant function coefficients	155
Table 5.8H	Functions at group centroids	156
Table 5.8I	Classification results	156
Table 5.9	Measurement items of business performance	158
Table 5.10	Multiple regression between network embeddedness and business performance	159
Table 5.11	Variables of business uncertainties	161
Table 5.12A	Descriptive statistics	162
Table 5.12B	KMO and Barlett's test	163
Table 5.12C	Communalities	164
Table 5.12D	Total variance explained	165
Table 5.12E	Rotated component matrix	166
Table 5.13	Multiple regression of general environmental uncertainties factor	169
Table 5.14	Multiple regression of individual firm uncertainties factor	170
Table 5.15	Multiple regression of industry uncertainties factor	172
Table 5.16	Multiple regression of strength of ties and business uncertainty	175
Table 6.1	Model fit criteria and acceptable fit level	184
Table 6.2	Variables of structural equation modeling	187
Table 6.3	Parameter estimates of the measurement model	193
Table 6.4	Parameter estimates of error and disturbance terms	194
Table 6.5	Parameter estimates of the structural model	195
Table 6.6	Parameter estimate of covariance	196
Table 6.7	Indirect effect of strength of ties to business performance	197

Table 6.8	Goodness of fit indices for final model of SEM	198
Table 6.9	Chi-square comparison between the two group model	202
Table 6.10	Noninvariance parameter for two group model	206

LIST OF FIGURES

Figure		Page
Figure 2.1	Trends and numbers of SMEs in Thailand (1994-2005)	34
Figure 3.1	Schematic diagram of the guanxi Chinese network	53
Figure 3.2	Schematic diagram of the Western network context	72
Figure 4.1	The framework of guanxi relationship, strength of ties, network embeddedness, business uncertainty, and business performance	95
Figure 4.2	Factors associated with the degree of network embeddedness	101
Figure 6.1	Initial model of SEM	186
Figure 6.2	Final model of SEM	192
Figure 6.3	Baseline model	199
Figure 6.4	Baseline model with equality constraints specified	201
Figure 6.5	Baseline model with equality constraints specified for all factor loadings	204
Figure 6.6	Baseline model with equality constraints specified for all factor loadings and <i>Tie-->Gener</i>	205

ABBREVIATIONS

ABS	Australian Bureau of Statistics
AMOS	Analysis of Moment Structures
ANOVA	Analysis of Variance
APEC	Asia-Pacific Economic Cooperation
ASEAN	Association of Southeast Asian Nations
ASEP	The Asian Society for Environmental Protection
BOI	The Office of the Board of Investments
CFA	Confirmatory Factor Analysis
CFI	Comparative fit index
CIEM	Central Institute for Economic Management
CR	Cultural Revolution
EAAU	East Asia Analytical Unit
EMS	Environmental Management Systems
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GFI	Goodness-of-fit
IDA	The Infocomm Development Authority of Singapore
IFI	Incremental fit index
ILO	International Labour Organization
IMF	International Monetary Fund
ISO	International Organization for Standardization
IT	Information Technology
KMO	Kaiser-Meyer-Olkin test
LE	Large enterprise
ME	Medium enterprise

NFI	Norm-fit-index
NPLs	Non-Performing Loans
OECD	Organisation of Economic Co-operation and Development
PNFI	Parsimonious norm fit index
R&D	Research and Development
RMR	Root-mean-square
RMSEA	Root mean square error of approximation
SE	Small enterprise
SBA	Small Business Administration
SEM	Structural Equation Modeling
SMEs	Small and Medium Enterprises
SMI	Small and Medium Industry
SMIDEC	Small and Medium Industries Development Corporation
SPSS	Statistical Package for the Social Sciences
TCCC	Thai-Chinese Chamber of Commerce
TCE	Transaction Cost Economics
TCOD	Thai-Chinese Organization and Enterprises Directory
THB	Thai Baht
UN	United Nations
US	United States
VIF	Variance Inflation Factor
WTO	World Trade Organisation

ABSTRACT

During the last few decades overseas Chinese business networks have been important for the local economies of many countries in Southeast Asia, including Thailand. Although only 14 percent of the Thai population is Sino-Thai, they still make a significant contribution to the Thai economy. Sino-Thais are estimated to control over 80 percent of listed companies by market capitalisation (Mackie, 1994). One of the key factors behind the success of overseas Chinese in Thailand, and in other countries, is strong social relationships and strong business networks between them. A number of studies have attempted to explain how these social relationships and business networks contribute to Chinese business success. A clear picture of such a connection has, however, still not been achieved. Thus, the main object of this thesis is to examine how social relationships can be used to improve business performance, in particular for the case of Sino-Thai SMEs.

To attain this objective, this thesis first reviews the literature relating to both *guanxi* and organisation networks. Evidence from the literature shows the importance and benefits that both *guanxi* and organisational networks can provide to its members. In addition, this thesis also reviews the literature relating to strength of ties, network embeddedness, business uncertainty and business performance. By reviewing the literature a theoretical framework, that links these factors together, can be established. From the framework a number of assumptions and hypotheses relating to relationships between the *guanxi* network, strength of ties, network embeddedness, business uncertainty, and business performance are identified. The Kruskal-Wallis Test, a multiple regression analysis, a multiple discriminant analysis, and factor analysis are all used to test these assumptions and hypotheses. Data from 298 Bangkok based Sino-Thai SMEs provide a number of interesting results. First, strength of ties in the network for the family relationship is stronger than the friend and stranger relationship, while the strength of ties in the network for the friend relationship is stronger than the stranger relationship. Second, strength of ties in the network has a positive impact on the level of network embeddedness. Third, the level of network embeddedness for the family relationship is stronger than that for the friend and stranger relationship, while the level of network embeddedness for the friend relationship is stronger than the stranger relationship. Fourth, network embeddedness has a positive impact on Sino-Thai SMEs'

business performance. Fifth, business uncertainties have a negative effect on Sino-Thai SMEs' business performance and sixth strength of ties in the network has a negative effect on business uncertainties.

This thesis also uses structural equation modeling (SEM) as a means to analyse all variables in the framework simultaneously, and to confirm results of hypotheses testing presented earlier. The result of SEM provides strong support for the empirical findings in this thesis and, also, suggests that network embeddedness is the most important factor that helps to improve business performance as a result of an increase in the strength of ties in the network. Finally, this thesis recommends that policy-makers should encourage SMEs to consider both formal and informal networks as presenting real opportunities to increase their business performance. In particular, policy-makers can encourage and help Sino-Thais SMEs to use the common characteristics of the *guanxi* network to establish strong business networks with other Chinese entrepreneurs in other countries such as Singapore, Malaysia, Hong Kong, and China. Furthermore, this thesis suggests financial risk management and changes in firm strategy as two major approaches that SEMs can use to reduce some business uncertainties.

ACKNOWLEDGEMENTS

This thesis would not have been completed without the assistance and support of many individuals and organisations. First of all, I am indebted to my initial supervisor Dr. Boon-Chye Lee who, after two and half years has been away for personal reason. I wish to express my appreciation to Dr. Boon Lee, to whom no acknowledgement can give full credit for his valuable guidance and support throughout my first two and half years of the doctoral program. For subsequent overall guidance, I am grateful to my subsequent supervisor Associate Professor Charles Harvie who, with his rich knowledge on a wide spectrum of topics, perceived my endeavour to capture a rather neglected aspect of economic theory as being worthy of effort.

My special debt is also owned to Dr. Nelson Perera, my co-supervisor for his tremendous help on statistic technique, supplied relevant text book, and his sustained encouragement. I am also especially grateful to Dr. Elias Sanidas for his constructive criticism and invaluable advice on the structural equation modeling and other issues relating to this thesis. I have also appreciated Dr. Guibin Zhang's comments on issues relating to the concept of the guanxi network; Associate Professor Ed Wilson's comments of several parts of chapters contained in this study.

The extremely difficult task of data collection process, especially at the firm level, would not have been successful without Ms. Saniporn Infahseng, Mr. Thanit Chalermchutidech and his teams, who extended their most generous and benevolent support. I also express my sincerest gratitude to the Thai-Chinese Chamber of Commerce (TCCC) for allowing me to accomplish a significant part of my research using the data on Thai-Chinese organisation and enterprise directory. Thanks are also due to Ms. Sutira Prangsengmas who help translate the questionnaire in to Thai.

I also wish to extend my thankfulness to Ms. Carol Borgatti, Administrative Assistant to Deputy, Head School of Economics, University of Wollongong, for her effective administrative support. The great research facilities provided by Faculty of Commerce, University of Wollongong and desktop and IT support from Mr. Laszlo Abel.

I am grateful to my father, mother, and my brother for their devotion patience and help during the long period of my study. Special appreciation is also given to all of my friends and colleagues: Mr. Surachai Chancharat, Mr. Are Suwanmanee, Ms. Nantika Prinyapol, and Ms. Chanitapat Tanawattanakorn for their comments and support.

Any appearing errors and omissions in this thesis are my own responsibility, and any suggestions from the readers, whom I thank in advance, for the future improvement of this study are appreciated.