



The UNIVERSITY
of NEWCASTLE
AUSTRALIA

**Key Determinants of Knowledge Sharing (KS)
and the Building of Competitiveness in Small and
Medium Sized Enterprises (SMEs) in Sabah,
Malaysia: A case study.**

Damian Lee That Min Dip. M, MBA (Strathclyde) UK

Student No: c3028819

Newcastle Graduate School of Business

Submission Date: May 15, 2006.

**A Dissertation submitted to the Faculty of Business and Law in Partial
fulfillment of the requirement of the degree of Doctor of Business
Administration (DBA)**

CERTIFICATE

I hereby certify that the work embodied in this dissertation project is the result of original research and has not been submitted for a higher degree to any university or institution.

Signed: _____

Date: _____

ACKNOWLEDGEMENTS

This research could not have been completed without the unfailing help, support and guidance from the following persons:

- First and foremost my most sincere thanks to my supervisor for this research dissertation, Dr. David Fox for his unwavering, consistent and ever ready support, encouragement and most valuable advice from the onset of this research.

- My extremely supportive, understanding and capable wife, Helen, beautiful daughter, Serita, most helpful and ICT supportive sons, Ezekiel and Gideon for providing me with the peace of mind, inspiration, unquestioning support, patience, and the sacrifices of quality family time during the whole duration of my DBA course. You know how grateful I am.

- A sincere thank you to the most helpful leading Sabah SME retailer who has so kindly agreed to participate and shared some most valuable knowledge in the in-depth interviews in order to facilitate this research. You know I am most thankful.

- My late learned grandfather, Thomas Lee, who had inspired me to initiate lifelong learning when he was still learning at the passing ripe age of 95. You know there is so much more to learning.

**My late beloved mother, Francisca,
who did not have an opportunity to go for a formal education
I dedicate this to you.**

Table of contents

PRELIMINARIES

Certificate.....	i
Acknowledgements.....	ii
Dedication.....	iii
Table of Contents.....	iv
List of tables.....	ix
List of figures.....	x
Abbreviations.....	xi
Abstract.....	xii

CHAPTER 1

INTRODUCTION TO THE RESEARCH

1.1	Introduction	1
1.2	Background for this research.....	2
1.3	Research problem and research questions.....	4
1.4	Justification for this research.....	5
1.4.1	Contribution to knowledge.....	5
1.4.2	Contribution to methodology.....	5
1.4.3	Contribution to practice.....	6
1.4.3.1	Policymakers.....	6
1.5	Methodology.....	7
1.5.1	Research plan.....	8
1.5.2	Data collection procedures.....	8
1.5.3	Analysis of data collected.....	8
1.6	Definitions.....	9
1.7	Limitations of this research.....	10
1.8	Outline of the research report.....	11
1.9	Conclusion.....	13

CHAPTER 2

LITERATURE REVIEW

2.1	Introduction.....	14
2.2	Background.....	17
2.3	Defining knowledge and knowledge sharing concepts.....	18
2.3.1	Defining sustainable competitive advantage (SCA).....	22
2.3.2	Sabah Small and Medium Sized Enterprises (SMEs) defined.....	23
2.4	Key determinants of knowledge sharing.....	25
2.4.1	Human pull factors.....	26
2.4.1.1	Leadership.....	26
2.4.1.2	Trust.....	27
2.4.1.3	Knowledge hoarding.....	28
2.4.2	Organizational pull factors.....	29
2.4.2.1	Corporate culture.....	29
2.4.2.2	Size of firm.....	31
2.4.2.3	Resource scarcity.....	32
2.4.2.4	Loss of knowledge.....	34
2.4.3	ICT pull factors.....	35
2.4.3.1	ICT infrastructure and technological advancement.....	35
2.5	Formal and informal methods of knowledge sharing for SMEs.....	36
2.5.1	Storytelling.....	36
2.5.2	Community of practice (CoP).....	37
2.5.3	Lessons learned method and on the job training.....	38
2.6	Effects of knowledge sharing for SMEs.....	39
2.6.1	Creation of sustainable competitive advantage (SCA) and Core Competencies (CC).....	39
2.6.2	Economic and survival weapon.....	41
2.6.3	Smarter working and cost savings.....	42
2.7	Risks of knowledge sharing in SMEs.....	42
2.7.1	Power equation and politics.....	43
2.7.2	Fear of exploitation and negative consequences.....	44

2.7.3	Fear of misuse of shared knowledge.....	45
2.8	Development of Sabah SMEs and knowledge sharing.....	45
2.8.1	Basic ICT infrastructure in Sabah.....	48
2.8.2	Sabah Information Technology Council (SITC).....	49
2.9	Research questions.....	51
2.10	Research Conceptual framework (RCF).....	51
2.11	Summary.....	53

CHAPTER 3

RESEARCH METHODOLOGY

3.1	Introduction.....	54
3.1.2	Conducting research.....	56
3.2	The selection and justification of research methodology.....	60
3.2.1	Scientific paradigm.....	60
3.2.2	Justification for case study methodology.....	64
3.2.2.1	Case study methodology defined.....	65
3.2.2.2	Research emphasis on contemporary issue.....	66
3.2.2.3	Richer and deeper data.....	66
3.2.2.4	No control over events.....	66
3.2.2.5	Critical and revelatory case.....	67
3.3	The research plan.....	68
3.3.1	The prior theory development stage.....	68
3.3.2	The exploratory stage.....	69
3.4	Details of exploratory stage.....	70
3.4.1	Single case study.....	70
3.4.2	Case selection.....	71
3.4.3	Data collection.....	71
3.4.3.1	Case study protocol.....	72
3.4.3.2	Data sources.....	73
3.4.3.3	The in-depth interview process.....	73
3.4.3.4	The interview structure.....	74

3.4.3.5	The interview instrument.....	75
3.4.3.6	The case study report.....	76
3.4.3.7	Data analysis.....	77
3.5	Limitations of this case study research.....	78
3.5.1	The lack of generalizability and rigor.....	78
3.5.2	Too complex theory.....	79
3.5.3	Researcher state of commitment.....	79
3.6	Conclusion.....	80

CHAPTER 4

ANALYSIS OF DATA

4.1	Introduction.....	82
4.2	Case description and analysis.....	84
4.2.1	Leading Sabah SME (SME1) characteristics.....	86
4.2.2	Management staff interviewees.....	86
4.2.3	Clerical staff interviewees.....	91
4.2.4	Technician staff interviewees.....	98
4.3	Within-case cross-category analysis.....	105
4.3.1	RQ1 Dominant key determinants of knowledge sharing in Sabah SMEs.....	107
4.3.2	Summary of RQ1 findings.....	108
4.3.3	RQ2 Methods of knowledge sharing in Sabah SMEs.....	109
4.3.4	Summary of RQ2 findings.....	112
4.3.5	RQ3 Roles of knowledge sharing in Sabah SMEs.....	113
4.3.6	Summary of RQ3 findings.....	117
4.3.7	RQ4 Knowledge sharing and building competitiveness in Sabah SMEs.....	118
4.3.8	Summary of RQ4 findings.....	121
4.3.9	RQ5 Influence of key determinants of knowledge sharing on KS in Sabah SMEs.....	122
4.3.10	Summary of RQ5 findings.....	125

4.4	Summary of findings on RQ1 to RQ5	126
4.5	Conclusion.....	131

CHAPTER 5

CONCLUSIONS AND IMPLICATIONS

5.1	Introduction.....	133
5.2	Background to research	135
5.3	Research problem and research questions.....	137
5.4	Methodology.....	138
5.5	Conclusions on research questions.....	140
5.5.1	Conclusions contribution to knowledge.....	143
5.5.2	RQ1 conclusions - key determinants of KS in Sabah SMEs.....	148
5.5.3	Conclusions on methods of KS in Sabah SMEs. (RQ2).....	151
5.5.4	Conclusions on roles play by KS in Sabah SMEs (RQ3).....	154
5.5.5	Conclusions on KS building competitiveness in Sabah SMEs (RQ4)....	157
5.5.6	Conclusions on influence of key determinants of KS on KS (RQ5).....	158
5.6	Conclusions on research problem.....	160
5.7	Research implications for theory and practice	167
5.7.1	Theory	167
5.7.2	Practice.....	168
5.7.3	Policymakers.....	169
5.8	Limitations of research.....	170
5.9	Conclusion.....	172
6.	REFERENCES.....	174
7.	APPENDIX	
7.1	Appendix 1 Case study protocol and interview instrument.....	195

LIST OF TABLES

3.0	Case Study Tactics for Four Design Tests.....	57
3.1	Summary of three main research scientific paradigms.....	62
4.1	Interviewees – Research questions and related probing interview questions.....	85
4.2	MM and MF answers to research questions.....	87
4.3	CM and CF answers to research questions.....	92
4.4	TM answers to research questions.....	99
4.5	Within-case cross-category analysis of key determinants of KS (RQ1)...	106
4.6	Within-case cross-category analysis of methods of KS (RQ2).....	110
4.7	Within-case cross-category analysis of roles of KS (RQ3).....	114
4.8	Within-case cross analysis-KS building competitiveness (RQ4).....	119
4.9	Within-case cross-category analysis-KD influence on KS (RQ5).....	123
4.10	Summary of findings for RQ1 to RQ5.....	127
5.1	Conclusions on research questions.....	141
5.2	Summary of exploratory research findings.....	144
5.3	RQ1 conclusions.....	149
5.4	RQ2 conclusions.....	152
5.5	RQ3 conclusions.....	155
5.6	RQ4 conclusions.....	157
5.7	RQ5 conclusions.....	159
5.8	Contribution on theory from this research study findings.....	168

LIST OF FIGURES

1.1	Research structure.....	11
2.1	Chapter 2 structure.....	16
2.2	Nonaka (1991) SECI model of Knowledge Creation and Sharing.....	21
2.3	Research Conceptual Framework (RCF).....	52
3.1	Chapter 3 structure.....	55
3.2	Prior theory development and exploratory inductive stages.....	69
4.1	Chapter 4 structure.....	83
5.1	Chapter 5 structure.....	134
5.2	Findings on Research Conceptual Framework (RCF).....	165

ABBREVIATIONS

CC:	Core competencies
CoP:	Community of practice
ICT:	Information and communications technology
IP:	Intellectual property
IPICS:	Institute for Small and Medium Enterprises, Sabah
K-economy:	Knowledge-based economy
KM:	Knowledge management
KMS:	Knowledge management system
KS:	Knowledge sharing
MITI:	Ministry of international trade and industry
MNCs:	Multi national corporations
RCF:	Research Conceptual Framework
RQ:	Research question (1 to 5)
SCA:	Sustainable competitive advantage
SECI:	Socialization, externalization, combination and internalization model of knowledge creation and sharing (Nonaka, 1991).
SGA:	Sabah Government Approval
SITC:	Sabah Information Technology Council
SMEs:	Small and Medium Sized Enterprises
SMI:	Small and Medium scale Industry
SSL:	Sabah State Library

ABSTRACT

The notion of knowledge, its management, creation, effective sharing and utilization are increasingly recognized as a key source of competitive advantage. In the knowledge-based economy (K-economy), knowledge is reckoned as power and it is being propelled into the forefront to facilitate the creation of sustainable competitive advantage (SCA) for organizations of all sizes.

Embarking on the K-economy, Sabah small and medium enterprises (SMEs) as well as other SMEs in Malaysia are being pushed into the forefront to face up with intense competition from large organizations and multi national corporations (MNCs) driven by globalization. To compete and survive in the K-economy, Sabah SMEs have little option but to improve on their competitiveness. It is therefore pertinent for Sabah SMEs to initiate learning, cultivating, and practicing knowledge sharing (KS), in particular the sharing of tacit knowledge, local skills and expertise acquired to improve competitiveness and develop SCA in order to sustain their businesses.

A gap existed in the relevant extant literature on KS in SMEs as most research studies on knowledge, knowledge creation and KS emphasize and focus on large corporations only. Likewise, there are relatively limited research studies conducted in knowledge management (KM) and KS in SMEs Malaysia, in particular Sabah SMEs. As such this research sought to investigate KS issues confronting Sabah SMEs pertaining to sustainability of their businesses in the midst of intense competition in the K-economy. The specific research problem examined was:

‘How does knowledge sharing facilitate the competitiveness and develop sustainable competitive advantage (SCA) in Sabah SMEs? Perspective of a leading Sabah SME retailer’

To address this research problem a case study methodology under the interpretivist paradigm was adopted. A research conceptual framework (RCF) based on Nonaka’s (1991) *Socialization, Externalization, Combination and Internalization* (SECI) process

model of knowledge creation and sharing was employed to explore and investigate the KS issues focusing on key determinants of KS and KS influence in building competitiveness in Sabah SMEs from a leading Sabah SME retailer perspective.

Thirty interviewees were selected comprising three categories of management, clerical and technician staff from the leading Sabah SME to gather rich and deep primary data via in-depth interviews to illuminate the research problem. This case study research produced 18 new findings on KS issues in Sabah SMEs which supported the RCF in line with Nonaka's (1991) SECI model.

The findings of this research highlight key determinants of KS in Sabah SMEs primarily comprise of *work environment factor* such as '*job pressure and teamwork*' and *staff attitudinal factor* in the form of '*mutual respects and gain*' in addition to human, organizational and ICT factors as revealed by extant literature. This implies that *work environment* and *staff attitudinal factors* probably have more determining or pulling power of KS in Sabah SMEs than human, organizational and ICT factors. Research findings also feature very prominently work environment factor in the form of 'job pressure' as directly correlated to KS and had the most influence on KS in building competitiveness in Sabah SMEs.

Even though the findings are subject to limitations, this research provides significant implications for theory-generation, Sabah SMEs, other business communities, policymakers, the Sabah state government and society at large.

Future research on the emerging field of knowledge sharing in Sabah SMEs hold prospects to understand deeper the complexity of KS concept in order to improve the overall performance of Sabah SMEs which must survive the intensely competitive K-economy so as to contribute to the economy building of the State and country.