

**An Evaluation of Supply Chain Integration Across Multi-tier Supply
Chains of Manufacturing-based Small and Medium Enterprises in Malawi**

Kizito Elijah Kanyoma

**Bachelor of Business Administration (Malawi), M.Sc. Supply Chain
Management (Bolton)**

Submitted for the degree of Doctor of Philosophy

The University of Newcastle, Australia

December 2018

STATEMENT OF ORIGINALITY

I hereby certify that the work embodied in the thesis is my own work, conducted under normal supervision.

The thesis contains published scholarly work of which I am a co-author. For each such work a written statement endorsed by the other authors attesting to my contribution to the joint work has been included.

The thesis contains no material which has been accepted, or is being examined, for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. I give consent to the final version of my thesis being made available worldwide when deposited in the University's Digital Repository, subject to the provisions of the Copyright Act 1968

Kizito Elijah Kanyoma

ENDORSEMENT OF STUDENT'S CONTRIBUTION TO CO-AUTHORED WORK:
CHAPTER FIVE

This thesis contains published scholarly work (chapter five) of which I am a co-author. The work was done during the normal process of PhD supervision, and that I made a substantial contribution in the work as the student researcher. The work was co-authored by: Kizito Elijah Kanyoma (student researcher and first co-author), Associate Professor Frank Agbola (Principal PhD supervisor and second co-author), and Dr Richard Oloruntoba (co-PhD supervisor and third co-author).

Name

Signature

Date

Kizito Elijah Kanyoma
(PhD Candidate)

.....

27/08/18

Endorsed by:

Associate Professor Frank Agbola
(Principal Supervisor)

.....

27/08/18

Dr Richard Oloruntoba
(Co-Supervisor)

.....

.....

27/08/18

ENDORSEMENT OF STUDENT'S CONTRIBUTION TO CO-AUTHORED WORK;
CHAPTER SIX

The thesis contains scholarly work that is under review for publication (chapter six) of which I am a co-author. The work was done during the normal process of PhD supervision, and that I made a substantial contribution in the work as the student researcher. The work was co-authored by: Kizito Elijah Kanyoma (student researcher and first co-author), Associate Professor Frank Agbola (Principal PhD supervisor and second co-author), and Dr Richard Oloruntoba (co-PhD supervisor and third co-author).

Name

Signature

Date

Kizito Elijah Kanyoma
(PhD Candidate)

.....

27/08/18
.....

Endorsed by:

Associate Professor Frank Agbola
(Principal Supervisor)

.....

27/08/18
.....

Dr Richard Oloruntoba
Co-Supervisor)

.....

27/08/18
.....

Abstract

This thesis investigates the extent of supply chain integration (SCI) and its inhibitors across multi-tier supply chains (SCs) of manufacturing-based small and medium-sized enterprises (SMEs) in Malawi. SCI has increasingly been considered by scholars and practitioners as a core philosophy of supply chain management (SCM). SCI is an important competitiveness strategy that improves different aspects of firm performance. However, there have been several concerns regarding the low levels of adoption of SCI in practice among firms. Further, contemporary research into SCM has predominantly reflected a focal firm viewpoint, especially the perspective of large multinational manufacturers in developed economies. The perspectives of suppliers and retailers as well as of developing country and SME contexts are not adequately reflected in the literature. A review of the literature shows that capturing a wide range of perspectives and contexts across SC positions could improve SCI scholarship and practice.

To provide a wide range of perspectives regarding the extent of SCI and its inhibitors within a developing country context, two qualitative studies involving three SCs of manufacturing-based SMEs in Malawi were undertaken. Each SC comprised a focal manufacturer, a key supplier and a major retailer. Utilising the resource-based view, resource dependence and network theoretical frameworks, the first study evaluated the extent of SCI. The second study utilised transaction cost economics and relational view theories to examine the inhibitors and enablers of SCI. Data for both studies were jointly collected through semi-structured face-to-face interviews with managers across the participating SCs.

The analysis revealed that interpersonal relationships influenced the level of trust between SC partners and consequently inhibit SCI. Some employees were willing to sabotage the interests of their firms to benefit their personal connections. Further, firms with strategic intra-firm resources were less committed to external integration, deploying their resources as a source of power to dominate and exploit their dependent partners. SCI across multiple tiers was impaired by over-dependence on SC partners, which encouraged exploitation, but enhanced by interdependence between firms, which fostered the pursuit of mutual benefits.

The research further identified interpersonal relationships, supplier cost transparency and joint SCM investments as key enablers of SCI. With respect to the inhibitors of SCI, the

research found that a lack of external integration affected internal integration by acting as a source of disruption to intra-firm processes and relationships. Further, the research found higher levels of relationship intensity in upstream manufacturer–supplier dyads than in downstream manufacturer–retailer dyads, suggesting it was more difficult to achieve retailer integration than supplier integration. This constrained the ability to achieve multi-tier supplier–manufacturer–retailer integration. The research also revealed that resource and infrastructural deficiencies, intra-firm cross-functional disintegration, a culture of fear and intimidation within and between firms, rampant corruption in sourcing transactions and relational factors such as lack of trust hurt SCI.

The research provides evidence of differences in perspectives about SCI across SC positions and makes several contributions. First, it provides new evidence that a lack of external integration, especially regarding information sharing and communication processes, inhibits internal integration. Thus, a basic level of external integration is necessary to avoid disruptions to and maximise the benefits of internal integration. Second, the research extends network theory by showing that the external influences on dyadic relationships reach beyond the interactions of heterogeneous firms in the network to encompass interpersonal interactions across the network, where individuals may potentially prioritise personal connections and sabotage the interests of their firms. Third, the research shows the importance of contextual factors and that managers in developing countries must overcome a unique set of factors to integrate the SCs.

Acknowledgements

A PhD thesis is a long and lonely journey along an unpaved path that often appears to lead nowhere. However, I was fortunate to receive different forms of support. It is impossible for me to list in this acknowledgement everyone who supported me on this journey. Foremost, I thank God for providing the much-needed guidance, protection and good health during this project. I need you more going into the future.

I wish to express my greatest appreciation to Jessica, my wife, and to my daughters, Rita Kamihelha and Nthanda Ellena, for their love and support and for the immeasurable sacrifices they made keeping up with my absences in the course of my scholarly pursuits. I also wish to thank my mother, Mrs Ellena Eliya Kanyoma, and my late father, Mathias Antonio Kanyoma, who passed on in my absence while I was away fulfilling the demands of this project. I recall when I received the first communication that would set me on the path to this journey, I was alone with him that Thursday afternoon. Even in his death, he has continued to inspire me. I dedicate this thesis to him. I am also indebted to my brothers Edwin, Samson and Hubert, and my sisters Catherine, Grace and Theresa for their support.

In a very special way, I am grateful to my supervisors, Associate Professor Frank Wogbe Agbola and Dr Richard Oluseye Oloruntoba, without whose support and guidance it would have been impossible to complete this thesis. They believed in me even when I thought there were enough reasons to believe otherwise. I owe them so much gratitude.

I also thank Associate Professor Suzanne Ryan for introducing me to various professional networks. Further appreciation goes to the research office in the Faculty of Business and Law and to Newcastle Business School staff for the various types of support in facilitating easy access to resources. I would also like to thank Ms Janet Mandanda for ably and selflessly managing my private concerns in Malawi while I was busy working on this thesis. Her commitment spared me much anxiety and allowed me to focus my efforts on completing this thesis. I am greatly indebted to her assistance.

Lastly, I would like to thank the senior management of all the companies in Blantyre, Malawi, who willingly allowed their companies to participate in this research. Similarly, I am grateful to the individual participants across the case study companies for their commitment and willingness to provide information for the purposes of this project. Without them, it would have been impossible to complete this thesis.

Contents

STATEMENT OF ORIGINALITY	ii
Abstract	v
Acknowledgements	vii
Contents	viii
List of Appendices	xiv
List of Figures	xv
List of Tables	xvi
List of Abbreviations	xvii
CHAPTER 1	1
INTRODUCTION.....	1
1.1 Background of the thesis.....	1
1.2 Problem statement.....	4
1.3 Research questions and objectives.....	6
1.4 Research methodology	7
1.5 Contributions of the research	8
1.6 Organisation of the thesis.....	10
CHAPTER 2.....	11
LITERATURE REVIEW	11
2.1 Introduction.....	11
2.2 Definition of terms	11
2.2.1 Supply chain	11
2.2.2 Supply chain management	12
2.2.3 Supply chain integration	13
2.3 Theoretical perspectives on supply chain management and supply chain integration ..	14
2.3.1 Resource-based view	16

2.3.2 Relational view theory	19
2.3.3. Resource dependence theory.....	22
2.3.4 Transaction cost economics	24
2.3.5 Network theory	26
2.4 A review of supply chain management and supply chain integration literature	32
2.4.1 Understanding supply chains and supply chain management	32
2.4.2 Multiplicity of supply chain management perspectives.....	36
2.4.3 Underlying supply chain management philosophy: Supply chain integration	47
2.4.4 Benefits of supply chain integration: The relationship between supply chain integration and performance.....	55
2.4.5 The scope of supply chain integration in practice	61
2.4.6 Enablers of supply chain integration	63
2.4.7 Inhibitors of supply chain integration	68
2.5 Limitations of previous supply chain management and supply chain integration studies and research questions.....	75
2.6 Concluding remarks	81
CHAPTER 3	82
THE POLITICAL ECONOMY OF MALAWI.....	82
3.1 Introduction.....	82
3.2 Geography and population of Malawi	82
3.3 Historical overview of the Malawi economy.....	85
3.3.2 The economy under the democratic regime: 1994 to date (2017)	86
3.4 The structure of Malawi's economy	88
3.4.1 The manufacturing and mining sectors.....	90
3.4.2 Small and medium-sized enterprises in Malawi	90
3.5 The business environment and infrastructure in Malawi	93

3.5.1 Energy and water supply.....	94
3.5.2 Transport and communication infrastructure.....	96
3.5.3 Corruption and business in Malawi.....	97
3.6 Macro-economic policy frameworks in Malawi.....	98
3.6.1 Pre-2000 policy reforms	99
3.6.2 Post-2000 policy reforms.....	101
3.7 Concluding remarks.....	105
CHAPTER 4.....	106
RESEARCH METHODOLOGY	106
4.1 Introduction	106
4.2 Research approach and strategy.....	106
4.2.1 Research strategy.....	108
4.2.2 Selected research strategy: Case study	111
4.3 Case study design.....	112
4.3.1 Quality in case study design.....	116
4.4 Techniques and procedures	117
4.4.1 Study area and selection of cases	118
4.4.2 Selection of interviewees.....	120
4.4.3 Data collection techniques.....	121
4.4.4 Case study protocol	123
4.4.5 Ethical approval for the research.....	124
4.4.6 Unit of analysis.....	124
4.4.7 Data collection process	125
4.4.8 Data analysis and interpretation	126
4.5 Concluding remarks.....	127

CHAPTER 5.....	128
EMPIRICAL STUDY 1: AN EVALUATION OF SUPPLY CHAIN INTEGRATION.....	128
5.1 Introduction.....	128
5.2 Literature review	130
5.2.1 Supply chain integration: An overview	130
5.2.2 Information visibility, sharing and integration	132
5.2.3 Strategic intent and action: Dependence.....	134
5.3 Method.....	135
5.3.1 Sampling and case selection	135
5.3.2 Data collection: Interviews	137
5.3.3 Data analysis	138
5.4 Findings.....	141
5.4.1 Internal information sharing and integration	141
5.4.2 External information sharing and integration	142
5.4.3 Strategic intent and action: Dependence.....	150
5.5 Discussion and implications	151
5.5.1 Information sharing and integration	151
5.5.2 Dependence and supply chain integration	153
5.5.3 Implications	156
5.6 Concluding remarks	157
CHAPTER 6.....	159
EMPIRICAL STUDY 2: INHIBITORS AND ENABLERS OF SUPPLY CHAIN INTEGRATION.....	159
6.1 Introduction.....	159
6.2 Literature review: Theoretical and empirical considerations.....	161
6.2.1 Enablers of supply chain integration	163
6.2.2 Inhibitors of supply chain integration.....	164

6.3 Research methods	166
6.3.1 Sampling and case selection	166
6.3.2 Instrument development and data collection	169
6.3.3 Data analysis and reduction	169
6.4 Findings.....	172
6.4.1 Enablers of supply chain integration	172
6.4.2 Inhibitors of internal integration	173
6.4.3 Inhibitors of external integration: Relational factors	175
6.4.4 Differences in perspectives across supply chain positions	178
6.5 Discussion	179
6.5.1 Joint investments as an enabler of supply chain integration.....	179
6.5.2 On inhibitors of supply chain integration	180
6.6 Concluding remarks	183
CHAPTER 7	184
SUMMARY, CONCLUSIONS AND IMPLICATIONS	184
7.1 Summary of key findings.....	184
7.1.1 Intra-firm resources may inhibit supply chain integration.....	184
7.1.2 Joint relationship investments are a key antecedent of supply chain integration .	184
7.1.3 A lack of external integration affects internal integration	185
7.1.4 Dependence encourages opportunism and inhibits supply chain integration	185
7.1.5 There is a low relationship intensity in manufacturer–retailer dyads	186
7.1.6 Uncertainty may discourage collaborative behaviour and supply chain integration.....	187
7.1.7 Interpersonal connections supersede inter-firm connections	187
7.2 Conclusions.....	188

7.2.1 The extent of supply chain integration across multiple supply chain tiers in Malawi	188
7.2.2 Enablers and inhibitors of supply chain integration	189
7.2.3 The effect of differences in perspectives on supply chain integration.....	194
7.2.4 Mitigating the inhibitors of supply chain information.....	194
7.3 Research implications	196
7.3.1 Theoretical implications.....	196
7.3.2 Methodological implications	198
7.3.3 Managerial implications of the findings	199
7.3.4 Policy implications	201
7.4 Limitations of the research and recommendations for future research.....	201
Appendix A - Summary of sample SCI empirical studies	226
Appendix B - Organizational Participant Information Statement for the research project (focal manufacturers)	230
Appendix C - Organizational Participant Information Statement for the research project (for supply chain partners)	234
Appendix D - Organizational Consent Form	237
Appendix E - Participant Consent Form.....	238
Appendix F - Pre-interview questionnaire & Interview Protocol (focal manufacturer)	239
Appendix G: Pre-interview questionnaire and interview protocol (Suppliers)	244
Appendix H - Pre-interview questionnaire and Interview Protocol (Retailers).....	249

List of Appendices

Appendix A: Summary of sample SCI empirical studies

Appendix B: Organizational Participant Information Statement for the Research Project (for focal manufacturers)

Appendix C: Organisational Participant Information Statement for the Research Project (for supply chain partners)

Appendix D: Organizational Consent Form

Appendix E: Participant Consent Form

Appendix F: Pre-interview questionnaire & Interview Protocol (focal manufacturer)

Appendix G: Pre-interview questionnaire and interview protocol (Suppliers)

Appendix H: Pre-interview questionnaire and Interview Protocol (Retailers)

List of Figures

Figure 1.1 Thesis structure

Figure 2.1 The relationship between a firm's resources and performance

Figure 2.2 Triad with structural holes

Figure 2.3 Illustration of a supplier–buyer–buyer's customer triad

Figure 2.4 Distinction between SCs and supply networks

Figure 2.5 Major themes and sub-themes of a consensus SCM definition

Figure 2.6 Foundational disciplines of SCM

Figure 2.7 Classification of inhibitors of SCI

Figure 3.1 Map of Africa showing the geographical location of Malawi

Figure 3.2 Map of Malawi showing the three regions and the research area, Blantyre

Figure 3.3 GDP per capita in US\$ (2013)

Figure 3.4 Regional comparison of effects of electricity outages on sales

Figure 4.1 Basic types of case study design

Figure 4.2 The sampling plan for the research

Figure 6.1 Enablers of external integration

List of Tables

Table 2.1 Conceptualisation of SCs

Table 2.2 SCM perspectives

Table 2.3 The popularity of various scopes of SCI (arcs of integration) in practice

Table 2.4 Summary of sample SCI empirical studies

Table 3.1 Sectoral contributions to GDP (in percentages)

Table 3.2 Categorisation of enterprises in Malawi

Table 3.3 Basic macro-economic indicators

Table 4.1 Case study tactics for four design tests

Table 4.2 Selection criteria for firms in each SC

Table 5.1 Profiles of the case study SCs

Table 5.2 Extract from the coding process

Table 5.3 Summary of extent of internal integration

Table 5.4 Summary of dyadic interactions: First SC

Table 5.5 Summary of dyadic interactions: Second SC

Table 5.6 Summary of dyadic interactions: Third SC

Table 5.7 SCI maturity matrices across the SCs

Table 6.1 Profiles of case study firms and interviewees

Table 6.2 Extract from the coding process

List of Abbreviations

ACB	Anti-Corruption Bureau
AIDA	Accelerated Industrial Development of Africa
CAS	Complex adaptive system
CPA	Corrupt Practices Act
CRM	Customer relationship management
GDP	Gross domestic product
HREC	Human Research Ethics Committee
ICT	Information and communication technology
IMF	International Monetary Fund
KPI	Key performance indicator
MGDS	Malawi Growth and Development Strategy
MSME	Micro, small and medium-sized enterprises
MPRS	Malawi Poverty Reduction Strategy
NES	National Export Strategy
NIP	National Industrial Policy
PAP	Poverty Alleviation Program
PPA	Public Procurement Act
PPP	Public–Private Partnership
RBV	Resource-based view
RDT	Resource dependence theory
RQ	Research question
RV	Relational view
SADC	Southern African Development Community
SAP	Structural adjustment program
SC	Supply chain
SCA	Sustainable competitive advantage
SCI	Supply chain integration
SCM	Supply chain management
SMEs	Small and medium-sized enterprises
SN	Supply network
SNT	Supply network theory
SRM	Supplier relationship management

TCE	Transactional cost economics
UK	United Kingdom
USA	United States of America
VRIN	Valuable, rare, imperfectly imitable and non-substitutable