

Copyright is owned by the Author of the thesis. Permission is given for a copy to be downloaded by an individual for the purpose of research and private study only. The thesis may not be reproduced elsewhere without the permission of the Author.

**SUBSIDIARY CLASSIFICATION, AND CONFIGURATION WITH
A DEVELOPMENTAL CONTEXT: EVIDENCE FROM FOREIGN
MULTINATIONAL ENTERPRISES IN NEW ZEALAND**

A thesis presented in partial fulfilment of the
requirements for the degree of

Doctor of Philosophy

in

Strategic Management

at

Massey University, New Zealand.

Muhammad Mustafa Raziq

2015

ABSTRACT

Research has produced a range of subsidiary classifications indicating various ways in which subsidiaries can be distinguished. There are, however, still concerns that many of the critical contingencies remain unexplored. It is, for example, argued that the existing subsidiary types are either multinational enterprise (MNE) strategy-based or process-based, rather than based on the subsidiary's own strategy. The frameworks are: two-dimensional (Enright & Subramanian, 2007; Morschett, Schramm-Klein, & Zentes, 2015); lack theoretical basis; and, their dimensions are arbitrary (Schmid, 2004; Schmid, Dzedek, & Lehrer, 2014). They are also disconnected to the previous frameworks (Hoffman, 1994). MNE management structure is one such contingency. Subsidiary studies mostly focus on the corporate headquarters (CHQ) as the subsidiary developmental driver, but ignore the varying developmental influences. Namely, the structures (i.e., lateral or formal) placed on subsidiaries. Most of the ignored contingencies are contextual (Enright & Subramanian, 2007; Meyer, Mudambi, & Narula, 2011). Little is known about how various subsidiaries configure with these contexts. Putting subsidiary development to the fore, these issues are integrated and two research objectives are set. One issue concerns developing a subsidiary classification, and the other concerns subsidiary and context configuration. This thesis's empirical context is foreign subsidiaries in New Zealand. Data from 429 subsidiaries are obtained. Cluster analysis and variance analysis are the key techniques used.

Grounded in the resource-based view, resource dependence theory, and network theory, an overarching subsidiary classification framework is produced. The framework follows a contingency approach and draws on critical dimensions from the various subsidiary literature streams. From this framework a new three-part subsidiary developmental classification (entrepreneurial, constrained autonomous, constrained) is

produced. By applying a configurational approach, various linkages are explored between the three subsidiary types and their developmental contexts. A number of developmental contingencies are identified; such as MNE management structures, expatriation, internationalisation motives, and internal isolation. Key findings include the lateral structure as the one under which subsidiaries develop the most, and the CHQ, the least. Individual developmental paths for the three subsidiary types are proposed. Theoretical implications are subsequently made, mainly identifying factors through which subsidiaries can develop resources and form internal resource dependencies. The novelty of the findings is discussed and subsidiary management and public policy implications are made.

Keywords: *MNE Strategy, Subsidiary Strategy, Subsidiary Development, Subsidiary Classification, Developmental Context, MNE Management Structure.*

ACKNOWLEDGEMENTS

Life involves taking journeys. Often the routes are long and difficult. A Ph.D. study is one such journey. I took this journey and eventually reached my destination - I did it and I am very much thankful to Allah for helping me reach such a major milestone of my life.

Throughout my education, from my study in Pakistan to higher education from Sweden, I have had many people who were there to help me achieve my goals. For my Ph.D. study in New Zealand, the support was even greater. With me, I had my supervisors, the Massey University as a whole, Ph.D. scholar friends, a network of academics from both within and outside New Zealand, my wife and my kids, and the prayers of my parents and siblings back home. It is fair to say that without their support, I am not sure if I would be able to reach my destination. I am thankful to all.

Now I acknowledge the support of all the people who were directly or indirectly involved in my Ph.D. Foremost, I would like to thank Martin Perry for supervising me for the most part of the study; Antonios Vitalis for being with me till the confirmation exam, and John Monin and David Pauleen for a couple of weeks. Thanks to Yuanfei Kang, Paul Toulson, Martina Battisti and especially to Gabriel R. G. Benito (BI Norwegian Business School) for supervising me, and leading me to Ph.D. completion. I am thankful to my examiners: Susan Freeman (University of South Australia), David Crick (University of Ottawa, Canada), and James Lockhart (Massey University, New Zealand) for their constructive feedbacks.

Thanks to Sarah Leberman, and Tracy Riley for levelling my path towards a successful Ph.D. completion. Thanks to the overall Massey University's staff for their various supports. Thanks to Lynn Jeffery for the research course – this course advanced my understanding of research methods. Thanks to HEC-Pakistan, MFAT-New Zealand,

and Massey University for their financial supports. Thanks to the respondents of my surveys (i.e., the CEOs and top managers of the multinational enterprises operating in New Zealand) for taking out time from their busy routines and helping me complete my research. Thanks to LINZ New Zealand, and MBIE New Zealand for the data they provided.

Special thanks to Felipe Mendes Borini (ESPM, São Paulo), Joanna Scott-Kennel and Michele Akoorie (University of Waikato), David Brock (Ben-Gurion University of the Negev), Jens Gammelgaard (Copenhagen Business School), Julian Birkinshaw (London Business School), Craig Prichard (Massey University), André Everett (University of Otago), and Frank McDonald (University of Liverpool), for their valuable tips and support. Thanks to Alan Rugman and an anonymous reviewer from the 'Journal of World Business' for their valuable comments on my manuscripts.

Thanks to all my Massey University colleagues, and the Pakistani HEC scholars and their families, in particular Mahmood Ghaznavi, Faisal Boota, Aymen Shahzad, and Tariq Mahmood. The time spent with these people is priceless. I wish them all the best in their endeavours.

Lastly, I would like to dedicate this thesis to my wife and my kids. My wife and my kids accompanied me throughout the study period. The role of my wife in this journey is extraordinary and difficult to quantify. The cute little mischeifs of my kids always kept me energetic and happy. I am very happy that I am able to enjoy and celebrate my success with my family.

Muhammad Mustafa Raziq

2015

Yesterday I was clever, so I wanted to change the world. Today I am wise, so I am changing myself.
-----**RUMI**

TABLE OF CONTENTS

ABSTRACT.....	ii
ACKNOWLEDGEMENTS.....	iv
TABLE OF CONTENTS.....	vii
LIST OF TABLES.....	xv
LIST OF FIGURES.....	xviii
LIST OF APPENDICES.....	xix
LIST OF ABBREVIATIONS.....	xxi
CHAPTER 1 - INTRODUCTION.....	01
Background of the research.....	01
Subsidiary strategy and management.....	02
The theoretical context.....	07
The empirical context.....	12
Empirical relevance.....	12
Theoretical relevance.....	14
The industry.....	14
Remoteness, small size and FDI.....	15
MNE strategy and structure.....	17
Subsidiary power.....	18
Research objectives, approach, and questions.....	19
Research objectives and the approach.....	20
Research objective 1.....	20
The approach.....	20
Research objective 2.....	21
The approach.....	21

Research Questions.....	22
Research question 1.....	22
Research question 2.....	22
Research methodology.....	22
Research contributions.....	25
Theoretical contribution.....	25
Subsidiary strategy and management.....	26
Empirical contributions and implications for policy and management.....	27
Structure of the thesis.....	28
CHAPTER 2 - LITERATURE REVIEW AND CONCEPTUAL DEVELOPMENT.....	30
Theoretical foundation.....	31
The resource-based view of the firm.....	31
The resource dependence theory.....	36
The network conceptualisation of the MNE.....	40
Conclusions (the theories).....	43
Subsidiary strategy and management	44
Subsidiary roles.....	44
The scope framework.....	46
The competence-strategic importance framework.....	50
The integration-responsiveness framework.....	53
The knowledge flows framework.....	56
A subsidiary typology by Birkinshaw and Morrison.....	59
The autonomy and procedural justice framework.....	62

An organizing framework by Enright and Subramanian.....	64
Conclusions (subsidiary roles).....	67
Evolution of subsidiary roles.....	69
Subsidiary evolution.....	70
Empirical evidence.....	73
Subsidiary evolution in context of the thesis’s research objectives.....	77
Subsidiary initiatives.....	79
Subsidiary autonomy.....	82
MNE management structures.....	87
External embeddedness.....	92
Contributory role.....	93
Subsidiary developmental context.....	95
Subsidiary strategy and manager.....	96
Communication.....	97
Internal networks and linkages.....	97
Subsidiary manager’s professional characteristics.....	97
MNE strategy, behaviour, and nationality.....	98
MNE-subsidiary transactions.....	100
Host country strategic importance.....	101
Subsidiary characteristics.....	101
Resources.....	102
Competence/Capability.....	102
Performance.....	102
Subsidiary isolation.....	103
Perceptions of autonomy.....	104

Conclusions (evolution of subsidiary roles).....	105
The conceptual development.....	106
Theoretical underpinnings.....	106
Towards an overarching subsidiary classification framework.....	111
Key concepts and their relationship to each other.....	111
Motives of developing a new framework.....	113
Concepts and their relevance to subsidiary roles and development.....	114
Geographical scope.....	115
Autonomy.....	115
Initiatives.....	116
Contributory role.....	116
External embeddedness.....	117
Management structures.....	117
The overarching subsidiary classification framework.....	117
Developed subsidiary.....	120
Moderately developed subsidiary.....	120
Under-developed subsidiary.....	121
In what ways is the framework different?.....	121
Research issues, objectives, and questions.....	123
Research issues 1 & 2.....	124
Research objective 1.....	124
The approach.....	124
Research question 1.....	125
Research issue 3.....	129
Research objective 2.....	129

The approach.....	129
Research question 2.....	131
Summary.....	131
CHAPTER 3 - RESEARCH METHODOLOGY.....	133
Research design.....	134
Sampling frame and sample size.....	140
Data collection.....	141
Questionnaire design.....	147
Research measurement.....	149
A 3-point scale.....	150
Subsidiary classification.....	152
Subsidiary configuration.....	155
Demographics and background.....	162
Data analysis techniques.....	163
Summary.....	168
CHAPTER 4 – DATA ANALYSIS, DISCUSSION, AND	
IMPLICATIONS.....	170
Survey responses.....	171
Data screening.....	173
Data screening.....	174
Surveys’ data analysis.....	179
Descriptive analysis.....	179
Demographics and background variables.....	179
Overarching subsidiary classification framework’s variables.....	180
MNE management structures.....	180

Geographical scope.....	182
Contributory role.....	183
Initiatives.....	184
Autonomy.....	185
External embeddedness.....	185
Subsidiary developmental context’s variables.....	186
Subsidiary strategy and manager.....	186
MNE strategy, behaviour, and nationality.....	190
MNE-subsidiary transactions.....	193
Host country strategic importance.....	194
Subsidiary characteristics.....	195
Inferential analysis.....	197
Demographics and background variables.....	197
Overarching subsidiary classification framework’s variables.....	200
Subsidiary developmental context’s variables.....	216
Implications for theory.....	245
Resource-based view.....	245
Resource dependence theory.....	247
Network conceptualisation of the MNE.....	248
Agency theory.....	249
Summary.....	249
CHAPTER 5 – SUBSIDIARY CLASSIFICATION AND	
CONFIGURATION.....	251
MNE management structures.....	254
Hierarchy versus heterarchy.....	254

Inter-hierarchical models' comparison.....	260
Subsidiary competence or the management structure?.....	262
Subsidiary classification.....	267
The overarching framework.....	270
A developmental classification.....	272
Entrepreneurial.....	275
Constrained autonomous.....	277
Constrained.....	279
Subsidiary developmental context.....	280
Subsidiary strategy and manager.....	280
MNE strategy, behaviour, and nationality.....	281
MNE-subsidiary transactions.....	281
Host country strategic importance.....	282
Subsidiary characteristics.....	282
Discussion.....	283
Classification and configuration.....	287
An alternate subsidiary typology.....	287
Alternate drivers of subsidiary development.....	289
Which dimensions are crucial?.....	290
Implications for theory.....	291
Summary.....	292
CHAPTER 6 – CONCLUSIONS.....	294
Research contributions.....	301
Research questions.....	301
Subsidiary strategy and management.....	306

MNE management structures.....	307
Subsidiary country manager.....	314
Implications for theory.....	317
Resource-based view.....	319
Resource dependence theory.....	321
Network conceptualisation of the MNE.....	323
Implications for management practice.....	324
Implications for policy.....	328
Limitations and future research.....	331
Summary.....	335
REFERENCES.....	337
APPENDICES.....	380

LIST OF TABLES

Table 2.1: Subsidiary Classification Frameworks.....	48
Table 2.2: Subsidiary Role Typologies (Birkinshaw and Morrison).....	60
Table 2.3: Examples of Different Types of Subsidiary Initiatives.....	80
Table 2.4: Delineation of the Concepts, Frameworks, a Prior Literature, Underpinning Theories and Links to Research Questions.....	126
Table 3.1: Overarching Classification Framework.....	152
Table 3.2: Subsidiary Developmental Context.....	156
Table 3.3: Demographics and Background.....	162
Table 4.1: Subsidiary Configuration Survey Sample Representativeness.....	172
Table 4.2: SSM and SC Survey Responses.....	173
Table 4.3: Managerial Experience Responses Representativeness.....	178
Table 4.4: MNE Management Structures.....	181
Table 4.5: Subsidiary Geographical Scope and Contributory Role.....	183
Table 4.6: Subsidiary Initiatives.....	184
Table 4.7: Subsidiary Autonomy.....	185
Table 4.8: External Embeddedness.....	185
Table 4.9: Subsidiary Credibility.....	187
Table 4.10: Subsidiary Product Scope and Communication with HQ.....	188
Table 4.11: Network and Relationship with HQ and the Subsidiary Track Record.....	189
Table 4.12: Scope-based Strategy across Various Markets.....	190
Table 4.13: MNE International Strategy.....	191
Table 4.14: Entrepreneurial Culture.....	191
Table 4.15: Openness towards Subsidiary Development.....	192

Table 4.16: Industry Dynamism, and Growth and Export Opportunities.....	195
Table 4.17: Perceptions of Autonomy.....	197
Table 4.18: Intercorrelations: Demographics and Background Variables.....	198
Table 4.19: Intercorrelations: Geographical Scope.....	202
Table 4.20: Intercorrelations: Contributory Role.....	204
Table 4.21: Intercorrelations: Autonomy.....	206
Table 4.22: Intercorrelations: Initiatives.....	209
Table 4.23: Intercorrelations: External Embeddedness.....	214
Table 4.24: Subsidiaries with Country Manager versus Subsidiaries without Country Manager.....	216
Table 4.25: Locally-based Subsidiary Manager versus Overseas-based Subsidiary Manager.....	217
Table 4.26: Intercorrelations: Country Manager’s Prior Managerial Experience.....	219
Table 4.27: Intercorrelations: Subsidiary Credibility.....	220
Table 4.28: Intercorrelations: Subsidiary Track Record.....	221
Table 4.29: Intercorrelations: Network and Relationship with HQ.....	223
Table 4.30: Intercorrelations: Expatriation.....	226
Table 4.31: Intercorrelations: Corporate Immune System.....	230
Table 4.32: Analysis of Variance: MNE Nationality.....	233
Table 4.33: Intercorrelations: Knowledge Outflows to HQ.....	234
Table 4.34: Intercorrelations: MNE Motives of Subsidiary Operations.....	237
Table 4.35: Intercorrelations: Industry Dynamism.....	238
Table 4.36: Intercorrelations: Export and Growth Opportunities.....	240
Table 4.37: Intercorrelations: Knowledge Flows and Capability	242

Table 5.1: Contributions: Hierarchy versus Heterarchy.....	266
Table 5.2: Contributions: Inter-hierarchical Models' Comparison.....	267
Table 5.3: Clusters' Summary.....	268
Table 5.4: Clusters' Capacity Ranked.....	269
Table 6.1: Micro Contributions.....	312

LIST OF FIGURES

Figure 2.1: An Organizing Subsidiary Role Framework by Enright and Subramanian.....	64
Figure 2.2: Contributory Role.....	94
Figure 2.3: Subsidiary Developmental Context.....	96
Figure 2.4: An Overarching Subsidiary Classification Framework.....	118
Figure 2.5: Configuration of Subsidiaries and Developmental Context.....	130
Figure 3.1: Thesis's Research Process.....	133
Figure 3.2: 4-Point Scale to Interpret Mean Scores.....	151
Figure 3.3: 5-Point Scale to Interpret Mean Scores.....	151
Figure 3.4: 7-Point Scale to Interpret Mean Scores.....	151
Figure 5.1: The Overarching Framework (Complete)	275
Figure 5.2: Subsidiary Configuration with a Developmental Context.....	284

LIST OF APPENDICES

APPENDIX A.....	380
Table A1: Initiatives.....	380
Table A2: Autonomy.....	380
Table A3: Constructs.....	381
APPENDIX B.....	382
Table B1: Parent Company Home Country.....	382
Table B2: Subsidiary Legal Status.....	382
Table B3: Entry Mode.....	383
Table B4: Subsidiary Age.....	383
Table B5: Subsidiary Size.....	383
APPENDIX C.....	384
Table C1: Management Offices' Locations.....	384
APPENDIX D.....	384
Table D1: Country Manager.....	384
Table D2: Country Manager's Employment Term.....	384
Table D3: Country Manager's Prior Managerial Experience.....	385
Table D4: HQ Control.....	385
Table D4a: Informal Control.....	385
Table D4b: Formal Control.....	386
Table D4c: Expatriation.....	386
Table D5: Subsidiary Initiatives' Resource Support.....	387
Table D6a: Knowledge Flows (Product Design).....	387
Table D6b: Knowledge Flows (Marketing).....	388
Table D6c: Knowledge Flows (Distribution).....	388

Table D6d: Knowledge Flows (Management Systems and Practices).....	388
Table D7a: Inter-organisational Product Inflows.....	389
Table D7b: Inter-organisational Product Outflows.....	389
Table D8a: Current Motives of Operations.....	390
Table D8b: Other Motives.....	390
Table D9: Subsidiary Resources.....	391
Table D10: Subsidiary Capability.....	392
Table D11: Subsidiary Performance.....	392
Table D12: Isolation from MNE.....	393
Table D13: Isolation and Subsidiary Performance, Resources, and Capability.....	393
APPENDIX E	394
Table E1: Analysis of Variance across Industry.....	394
Table E2: Analysis of Variance across Hierarchy and Heterarchy.....	395
Table E3: Analysis of Variance across Hierarchical Structures.....	395
Table E4: Subsidiary Configuration.....	396
APPENDIX F: Subsidiary Strategy and Management Survey	398
APPENDIX G: Subsidiary Configuration Survey	406
APPENDIX H: Subsidiary Strategy and Management Survey Results – Raw Data	415
APPENDIX I: Subsidiary Configuration Survey Results – Raw Data	474

LIST OF ABBREVIATIONS

A-PJ / APJ	-	Autonomy and Procedural Justice
CEO	-	Chief Executive Officer
CHQ	-	Corporate Headquarters
CIS	-	Corporate Immune System
CME	-	Coordinated Market Economy
DHQ	-	Divisional Headquarters
e.g.	-	Exempli Gratia (for example)
etc.	-	Et Cetara
EU	-	European Union
HQ	-	Headquarters
i.e.	-	Id Est (that is)
I-R / IR	-	Integration Responsiveness
IT	-	Information Technology
LME	-	Liberal Market Economy
MNC	-	Multinational Corporation
MNE	-	Multinational Enterprise
NAFTA	-	North American Free Trade Agreement
NZ	-	New Zealand
PCN	-	Parent Country National
R&D	-	Research and Development
RBV	-	Resource Based View
RDT	-	Resource Dependence Theory
RHQ	-	Regional Headquarters

RQ	-	Research Question
SC	-	Subsidiary Configuration
SSM	-	Subsidiary Strategy and Management
Stats	-	Statistics
TCN	-	Third Country National
U.S. / US	-	United States
UK	-	United Kingdom

CHAPTER 1 - INTRODUCTION

How do the subsidiary roles and developmental levels vary according to the various MNE management structures? Which dimensions are critical for an overarching subsidiary classification framework? How do subsidiaries classify on a multidimensional framework? What are the key subsidiary developmental determinants? What are the appropriate developmental paths for the various subsidiaries? How do subsidiaries configure with a developmental context? This thesis broadly examines these questions.

This chapter provides an overview of the thesis. This chapter is structured as follows: first, the background of the research is provided in terms of the research issues, the theoretical and the empirical contexts. The research objectives, approach, and questions are then presented. Following that the research methodology section is presented. Sections on theoretical (macro and micro) contributions, and management and policy implications are then presented. In the end, the structure of the thesis is presented.

BACKGROUND OF THE RESEARCH

The thesis draws on the subsidiary strategy and management¹ literature. The subsidiary literature can be classified into seven streams. These are strategy-structure, headquarters-subsiary relationship, MNE process, subsidiary roles, subsidiary specialised roles, the evolution of subsidiary roles, and the subsidiary network streams (see Birkinshaw & Pedersen, 2010). Broadly interested in subsidiary roles and their evolution, this thesis draws on relevant subsidiary developmental dimensions from all the streams. The thesis also emphasizes the contextual issues in subsidiary development. The thesis: (i) identifies key contingencies for a subsidiary (developmental) classification; and, (ii) configures the subsidiaries with a broad (developmental) context. For

¹In short the 'subsidiary' literature.

classification, an overarching framework is developed, and, for configuration variations in the subsidiary developmental context are explored. The overall subsidiary development argument is grounded in three general theories: the resource-based view, the resource dependence theory, and the network conceptualisation of the MNE. The empirical context of the thesis is foreign-owned subsidiaries operating in New Zealand. The issues, theories, and the empirical context are discussed as follows.

Subsidiary Strategy and Management

This thesis is interested in three broad issues. The first issue concerns the limited nature of the existing subsidiary classifications. The second issue is about the MNE management structure and its relevance to the subsidiary development and classification. The third issue is about the subsidiary linkages with the various contexts in which they operate. The first and the second issues concern subsidiary developmental classification, and the third one subsidiary configuration. Background to these issues is provided as follows.

Research over the years has offered a number of subsidiary classifications (see Bartlett & Ghoshal, 1986; Birkinshaw & Morrison, 1995; Enright & Subramanian, 2007; Gupta & Govindarajan, 1991; Jarillo & Martínez, 1990; Taggart, 1997a; Wang, Liu, & Li, 2009; White & Poynter, 1984). The overall research approach, however, has been narrow (i.e., MNE-centric). The studies have either looked at the MNE strategy or the MNE process, and much of the contingencies have been rather easily ignored (Enright & Subramanian, 2007; Morschett et al., 2015). With this, the overall knowledge of subsidiaries is strictly about those which can be found in an MNE (Yip, 1995; Yip & Hult, 2012). Although useful, it is obvious that there are many alternates that are unidentified and unexplored. There is a recognition that the subsidiary strategy/roles are not just

assigned by the MNE, but can also be assumed by the subsidiary itself (see Birkinshaw, 2014; Birkinshaw & Hood, 1998). This view comes from the evolution of subsidiary roles stream (see Birkinshaw & Hood, 1998). Its application to other subsidiary literature streams, however, remains scant. Some recent studies, however, e.g. Cavanagh and Freeman (2012)² may be taken as exceptions.

There is a general tendency to focus only on the subsidiary corporate headquarters (CHQ) and ignore the possible intermediaries which lie in between the subsidiary and the CHQ. A subsidiary is, therefore, studied mainly in relation to the CHQ (for example see Ambos & Birkinshaw, 2010; Birkinshaw, 1997; Birkinshaw, Hood, & Jonsson, 1998; Gammelgaard, McDonald, Tüselmann, Dörrenbächer, & Stephan, 2011; Harzing & Noorderhaven, 2006a; Harzing, Pudelko, & Sebastian, 2015; Monteiro, 2015; Taggart, 1997a; Taggart & Hood, 1999; Wang et al., 2009). The term headquarters is used in general for the CHQ. However, at times it can be confusing as the CHQ is not the only controlling office between the subsidiary and the CHQ. There is, for example, a regional headquarter (RHQ) or a divisional headquarter (DHQ) between the CHQ and the focal subsidiary. These are formal intermediaries between the focal subsidiary and the CHQ and created for various purposes. For example, a DHQ (or a matrix structure) may be used where MNEs adopt a product diversification strategy (Chandler, 1962; Stopford & Wells, 1972). RHQs are established as an additional layer for the MNE-subsidary coordination and strategy formulation (Amann, Jaussaud, & Schaaper, 2014; Enright, 2005a). There are also informal (or lateral) structures. These are used where there is a need to implement a transnational strategy³ (Bartlett & Ghoshal, 1989).

² This study, however, is interested in a particular subsidiary (competence-creating) role rather than a general classification.

³ There is, however, little consensus.

The parental role of the intermediaries is much less recognised. The intermediaries possess various levels of power and influence within the MNE and may resolve various subsidiary specific issues on their own (Alfoldi, Clegg, & McGaughey, 2012; Enright, 2005b; Mahnke, Ambos, Nell, & Hobdari, 2012; Nell, Ambos, & Schlegelmilch, 2011a), rather than forwarding the subsidiary specific information to the CHQ. This is one major gap that needs to be addressed. Similarly, as the primary focus remains on the CHQ, the studies ignore the varying developmental influences the intermediaries or the lateral structures can put on the subsidiaries. As the roles of the various structures vary, it is, therefore, logical to assume that such variations would also variously influence the subsidiary roles. Under some structures subsidiaries may have more opportunities to develop, but under others, rather fewer opportunities to develop.

MNE management structure is a key contextual contingency to the subsidiary roles (Enright & Subramanian, 2007), but is much an ignored area as a whole. Due to this lack of focus, the overall knowledge and understanding of the area is rather poor (Alfoldi et al., 2012; Amann et al., 2014; Wolf & Egelhoff, 2010, 2012). Earlier studies have made some discussions on the structures in particular, the matrix and the lateral, in terms of which structure can more effectively handle the MNE coordination and heterogeneity than the other (Bartlett & Ghoshal, 1989, 1990; Donaldson, 2009; Hedlund, 1986, 1993, 1994a, 1994b; Wolf & Egelhoff, 2012). The discussions have been useful, however, mainly hypothetical, and made in isolation rather than with an actual comparison. There is thus, a need for a contingency model to understand what motivates the adoption of a particular structure (Wolf & Egelhoff, 2010). To advance the literature on management structures, considering a full range of MNE management options (e.g. CHQ, RHQ, mandates, matrix and lateral) is warranted.

As indicated earlier, the subsidiary literature is divided into different streams. There are, however, subsidiary development implications offered by almost all the streams. For example, the subsidiary network stream recognises that the environments in which subsidiaries operate influence the subsidiary roles and development (Birkinshaw, Hood, & Young, 2005). The subsidiary specialised roles stream draws on the competence-creating role, which is an explicit indicator of a subsidiary's high level of development (Frost, Birkinshaw, & Ensign, 2002). There is a recognition that subsidiaries interface with various environments simultaneously rather than in isolation, although the studies have mainly drawn on the research strands separately. There is, therefore, an opportunity to synthesise the key factors, particularly, ones which influence subsidiary development.

For a subsidiary classification framework, such a holistic approach is warranted. An overarching subsidiary classification framework is needed, which can offer a broad and an alternate subsidiary classification based on a range of issues. There are also some other reasons that call for an overarching framework. For example, previous frameworks are criticised as dichotomous (as they are based on only two dimensions), and disconnected from each other (Hoffman, 1994). They lack a theoretical basis, and their dimensions are often arbitrary (Schmid, 2004; Schmid et al., 2014). They are limited in establishing the importance of the dimensions they are based on (Morschett et al., 2015). These gaps can surely be overcome with a theoretically driven overarching framework.

It is important to take a caveat here. While a framework needs to be broad, practicability suggests that there should be a limit in that it should draw only on the relevant dimensions. The relevance of the dimensions is determined by the underlying theories. Context is important for a subsidiary classification, as the resultant classification may be dependent on the empirical context. The selection of a framework's dimensions

largely depends upon the theories which are relevant to address the study research issues. For example, MNE management structures and nationality are key contextual contingencies to subsidiary roles and development (Enright & Subramanian, 2007; Yip & Hult, 2012). Subsidiary roles and development involve the HQ and therefore, e.g. the principal-agent relationships or knowledge flows. MNE nationality, however, may not be easily grounded in the agency theory or the resource dependence theory, as the MNE management structures can be. Therefore, the dimensions selected should be relevant to the theory used rather than selected arbitrarily.

The next issue for this thesis following subsidiary classification is subsidiary configuration with a developmental context. This is to explore how various contextual factors influence subsidiary development. There is a recognition that subsidiaries are embedded in unique contexts, e.g. local, structural. Context, however, as indicated above is much an ignored area of the subsidiary research (Enright & Subramanian, 2007; Meyer & Estrin, 2014; Meyer et al., 2011; Yip, 1995; Yip & Hult, 2012). There is a lack of work that specifically addresses the linkages between the subsidiaries and their contexts (Birkinshaw & Morrison, 1995; Enright & Subramanian, 2007). There is little understanding as to how the subsidiary roles differ across contextual contingencies, e.g. the industry, internationalisation motives, nationality, subsidiary strategy or the subsidiary manager's characteristics (Enright & Subramanian, 2007; Schmid et al., 2014; Yip, 1995). The subsidiary roles and development are contingent upon some firm-specific, subsidiary-specific, and location-specific contextual factors (Enright & Subramanian, 2007; Yip, 1995; Yip & Hult, 2012). These factors variously form a subsidiary (developmental) context and directly or indirectly influence the subsidiary roles and development. These contextual contingencies are not isolated, but rather occur together. To better understand what drives or impedes the subsidiary development, there

is a need for studying the linkages between the various types of subsidiaries and the contexts under which the subsidiaries operate.

The Theoretical Context

The resource-based view (RBV) (see Barney, 1991; Wernerfelt, 1984), resource dependence theory (RDT) (see Pfeffer & Salancik, 1978, 2003), and the network conceptualisation of the MNE (see Andersson & Forsgren, 1996; Ghoshal & Bartlett, 1990; Nohria & Ghoshal, 1994, 1997) are the theoretical context of the thesis. The three theories are integrated to provide a basis for the thesis's conceptual model. The evolution of subsidiary roles literature is mainly grounded in the resource-based view and the network conceptualisation of the MNE (see Birkinshaw, 1997, 2014). Subsidiary roles literature is mainly empirical; but to a lesser degree, it is grounded in the network model of the MNE. Overall the subsidiary roles literature lacks a theoretical basis (see Schmid, 2004). The evolution of subsidiary roles literature does not sufficiently draw on the RDT, which is important to explain the subsidiary resource-based position in the internal network. An MNE network is complex where different units possess various levels of resources and capabilities. Based on the units' competencies various (resource) interdependencies are formed. Such have implications for subsidiary discretion, bargaining power, and the overall role development.

The environments in which businesses operate, particularly the MNEs, is complex. Research now increasingly gives MNEs a network view in that they can be both hierarchical and heterarchical in their relationships with their units (Birkinshaw & Morrison, 1995; Hedlund, 1986; Wolf & Egelhoff, 2012). MNEs are complex and differentiated (vertically and laterally) inter-organisational networks rather than monolith firms (Ghoshal & Bartlett, 1990; Nohria & Ghoshal, 1997), and embedded both internally

and externally in networks of relationships (Forsgren, 2008). Understanding the behaviour of multinationals and their subsidiaries with a single theoretical lens is, therefore, not sufficient. So multiple theoretical lenses offer better opportunities to look at the organisational issues in detail, depth and with multiple angles (Yin, 2008). Organisational and strategic management theories (such as the RBV, RDT, and network) are robust theories offering great potential in the MNE subsidiary research. However, to fulfil their potential, they need to be used in a precise, and a rather integrated way; since alone they may not be easily applied to the complex MNE (see Birkinshaw & Pedersen, 2010). This can be illustrated with the following example. O'Donnell (2000) studied HQ-subsubsidiary relationships using the agency theory and found that the theory alone was not sufficient to predict HQ-subsubsidiary relationships as there were interdependencies found within the MNE. Mudambi and Pedersen (2007) suggested a contingency with the HQ-subsubsidiary relationships as they can be better understood with two theories: agency, where the focal subsidiary is competence-exploiting, and RDT, where the subsidiary is competence-creating. The following discusses how these theories can be integrated.

The network model suggests that subsidiaries are interconnected (as nodes) in a network of relationships, which include the CHQ, the sister subsidiaries, and the external firms (Birkinshaw & Pedersen, 2010; Forsgren, 2008; Ghoshal & Bartlett, 1990; Ghoshal & Nohria, 1989; Nohria & Ghoshal, 1997). The CHQ is a node, but a major entity with which all the other nodes in the (internal) network link vertically. A subsidiary can be vertically (e.g. where there are intermediaries) or laterally connected to other subsidiaries. A subsidiary is also connected to some external actors such as customers and local firms. Overall, these relationships form a subsidiary 'business' network (Andersson, Forsgren, & Holm, 2007; Forsgren, 2008). As per the network model, subsidiaries through their interactions in the network can develop both capabilities and resources, and can assume

a strategy and role on their own (Andersson & Forsgren, 1996; Birkinshaw & Hood, 1998; Birkinshaw et al., 2005).

The principles of the network model of the MNE are consistent with the resource-based view of the firm. RBV assumes that subsidiaries possess various resources and capabilities through which they can achieve a competitive advantage (Barney, 1991; Barney, Wright, & Ketchen Jr, 2001; Wernerfelt, 1984). The network model of the MNE takes subsidiary relationships as key subsidiary resources (see Andersson, Forsgren, & Holm, 2002). The resource-based view also takes the organisational network and the MNE management structures as an MNE's key (intangible) resources (see Barney, 1991; Tomer, 1987). The network model suggests that subsidiaries in their network interface with three markets: local, internal and global. Subsidiaries making use of their valuable and specialized resources take entrepreneurial initiatives in the three markets (Birkinshaw, 1997, 2014). Such initiatives lead to further development of resources (Birkinshaw, 2014; Cavanagh & Freeman, 2012) and enhancement of subsidiary geographical mandates (Birkinshaw & Hood, 1997, 1998; Filippov & Duysters, 2014).

Both the resource-based view and the network model of the MNE link to the resource dependence theory. RBV is about firm's resources. Network model takes the firm's network relationships as its valuable resources. RDT is about resource-based dependence and power relationships, which again can be seen as a firm's valuable resources (Donaldson, 1995). RDT argues that the power of organisations relates to control over resources. For self-interest and survival, relationships between organisations are created (Pfeffer & Salancik, 1978, 2003). RDT suggests that organisations (based on their needs) seek resource-based relationships with other organisations (possessing resources) to gain resource access. This relationship of dependence leads the organisation possessing resources to exercise power and influence over the dependent (resource-

seeking) organisation (Boddy, 2011; Drees & Heugens, 2013; Hillman, Withers, & Collins, 2009; Nienhueser, 2008; Pfeffer & Salancik, 1978, 2003; Robbins & Judge, 2012).

RDT, RBV and the network model, can be easily integrated. The MNE-subsidary relationships today are viewed as less hierarchical and more of interdependence (Mudambi & Navarra, 2004; Mudambi & Pedersen, 2007; Mudambi, Pedersen, & Andersson, 2014; O'Donnell, 2000). Both the MNEs and their subsidiaries possess resources and capabilities (Birkinshaw & Pedersen, 2010). MNEs create subsidiaries with various internationalisation motives (Buckley & Casson, 1976, 1998; Dunning, 2009; Dunning & Lundan, 2008a), and assign the subsidiaries, roles for a market (White & Poynter, 1984). Subsidiaries draw some of their resources from the parent firm or other subsidiaries, some on their own, and some through external relationships (Andersson, Dellestrand, & Pedersen, 2014; Dunning, 2009; Rugman, Verbeke, & Nguyen, 2011). The overall MNE resources and capabilities become heterogeneous. Where a subsidiary has a dependency upon the MNE, the MNE exercises power and influence. Where the MNE is dependent on the subsidiary, the subsidiary uses influence in the MNE (Mudambi & Navarra, 2004; Mudambi & Pedersen, 2007; Mudambi, Pedersen, et al., 2014; Najafi-Tavani, Zaefarian, Naudé, & Giroud, 2015). Subsidiaries, being legally owned by the MNE rather than independent (Birkinshaw & Pedersen, 2010) should adopt a 'rent-seeking' behaviour, such as pursuing their ends (Mudambi & Navarra, 2004), rather than attempting at dictating the MNE. Such rent-seeking behaviour may help where the subsidiary bids (i.e., internal initiative) for transfer of a critical function of the MNE to the subsidiary location, or seeks investment support for initiatives in the local and global markets (Birkinshaw, 2014).

There is an important caveat in determining how subsidiaries may evolve. Whatever a subsidiary does needs a ‘tacit blessing’ (i.e., an informal or formal approval) of the CHQ (Birkinshaw & Hood, 1997). MNEs disaggregate their operations in terms of breaking down their management and governance functions to smaller or less influential units than the CHQs (Rugman, Verbeke, & Nguyen, 2011). MNEs make use of their organisational resources, e.g. various management structures for managing their subsidiaries. These structures, in addition, may also be embedded in the subsidiary’s local contexts (creating an embeddedness overlap) to balance the power of subsidiaries having valuable resources and capabilities (Nell, Ambos, & Schlegelmilch, 2011b). Much of what a subsidiary does is therefore influenced by the structure under which the subsidiary operates. Applying the network view, these managing units are usual nodes in the MNE network, but major in terms of their powers and responsibilities than the focal subsidiaries. Applying the RBV, the managing actors per se are the MNE resources (Barney, 1991; Tomer, 1987). At the firm level, these resources are used to coordinate effectively and integrate the MNE activity (Wolf & Egelhoff, 2012). At the subsidiary level, these resources help the subsidiaries develop through the transfer of innovations within the MNE (Dellestrand & Kappen, 2011). Applying RDT, the CHQ and intermediaries form a power and a hierarchical relationship with subsidiaries. In cases where there is an intermediary, there would be a dual boss/power relationship for the focal subsidiary. The intermediary also in most cases possesses a degree of influence over the MNE (Mahnke et al., 2012). Some argue that intermediaries may have negative implications for the subsidiary, as the subsidiary power may get diluted due to barriers (intermediaries) between the subsidiary and the CHQ (see Delany, 2000; Nell et al., 2011a). This, however, is likely to be contingent on the type of the structure as the HQ-

subsidiary relationships can vary according to the subsidiary competence, and various other factors, e.g. the host location.

The Empirical Context

The empirical context of this thesis is the foreign-owned subsidiaries operating in New Zealand. New Zealand is an attractive context for a subsidiary development study. The thesis is interested in a nation-wide study, including all the foreign-owned subsidiaries in New Zealand. This attractiveness and why a nation-wide study is explained below:

Empirical Relevance. The relevance of the empirical context in this thesis is twofold. This is discussed as follows:

1. **A Large Sample.** Studies on foreign subsidiaries in New Zealand are few, and are mainly drawn from large samples and offer a nation-wide experience (see Akoorie, 1996b; KPMG, 1995; Scott-Kennel, 2001). This thesis is also interested in offering a nation-wide experience. The rationale, however, of such is based much on a need. Large samples provide high levels of generalisability, reliability in findings, a holistic picture, and much to draw upon for future research (Biau, Kernéis, & Porcher, 2008; Creswell, 2008). Large samples are important for studies offering typologies and classifications to reflect significant variations among the types (Patel, Doku, & Tennakoon, 2003). Large samples are more appropriate for subsidiary classification studies that involve a multidimensional framework (Enright & Subramanian, 2007). A large

sample is, therefore, needed for this thesis, as this thesis takes a holistic picture in subsidiary development, offers a developmental typology, and draws on a multidimensional framework.

2. *Foreign Subsidiary Evolution in New Zealand.* Multinationals and their activities are important for New Zealand, which is a geographically isolated and small developed economy, that is heavily reliant on inward FDI and trade (Raziq & Perry, 2013; Scott-Kennel & Akoorie, 2013). The country over the years has attracted a considerable population of foreign-owned MNEs (Statistics-NZ, 2005-2011, 2014). Some of the MNEs have a history dating back to the 19th century (e.g. ANZ bank established in 1840 in Petone). The MNEs have played a vital role in the development of the New Zealand's economy and infrastructure. The foreign MNEs have laid the foundations of many industries, particularly the banking, meat processing and dairy (Scott-Kennel, 2001).

Previous studies on foreign subsidiaries in New Zealand are dated (see Akoorie, 1996b; KPMG, 1995; Scott-Kennel, 2001). They have used mainly the foreign direct investment (FDI) vehicle and examined the impact of FDI on industry and the economy. Therefore, only weak inferences could be made regarding roles and development of subsidiaries. For example, the studies indicated that the predominant motive of subsidiary creation in New Zealand was market-seeking. There is now recognition that motives change/enhance over time (Benito, 2015; Narula & Cuervo-Cazurra, 2015). From a developmental perspective (both at a subsidiary and domestic firms level), it is also relevant to study the current motives of subsidiary operations in New Zealand and how (if-at-all) the

motives have now changed. The studies also indicated that foreign subsidiaries were low in external embeddedness and were mainly reliant on the parent resources. Such is important from the resource-based and the network perspectives, as a high reliance on the parent and limited collaboration with local firms have implications for subsidiary development. For the New Zealand's economic success, local industry globalisation and competitiveness are critical (Scott-Kennel & Akoorie, 2013). Given that much of the earlier empirical evidence is dated and the business environments are changing, there is, therefore, scope for further exploration. From an MNE process, subsidiary strategy, and the subsidiary evolutionary perspective, it can be expected that many subsidiaries (or at least the ones created in the 20th century) would have evolved now. What are the evolutionary patterns, and the key developmental characteristics of the subsidiaries? This is what is interesting to explore.

Theoretical Relevance. The theoretical relevance of New Zealand for a subsidiary development study is manifold. The key aspects of such are discussed below.

The Industry. The industry is a key contextual contingent factor determining subsidiary roles and development (Enright & Subramanian, 2007). Much of the literature on subsidiary strategy and management uses the evidence from subsidiaries belonging to the manufacturing industry (Enright & Subramanian, 2007; Manolopoulos, 2008). This trend remains consistent (see for example Cavanagh & Freeman, 2012; Chen, Hsu, & Caskey, 2013; Filippov & Duysters, 2014). The subsidiary literature needs to be updated with multiple industry studies and, in particular, the services industry (Enright &

Subramanian, 2007; Manolopoulos, 2008). New Zealand has a large foreign-owned services sector (Hull, 2002; Rosenberg, 2002; Scott-Kennel, 2001). The services industry in New Zealand accounts for more than two-thirds of the gross domestic product (Statistics-NZ, 2011). The services industry gets considerable levels of foreign investments (Statistics-NZ, 2014). A diverse industry evidence (such as of New Zealand) provides an opportunity to update the subsidiary literature and identify unexplored contingencies associated with subsidiary development. Such is also important for a subsidiary classification study involving a multidimensional framework (Enright & Subramanian, 2007).

Remoteness, Small Size and FDI. New Zealand's openness to trade, its heavy reliance on inward FDI, and the level of development are similar to any other small developed economies like Iceland, Belgium, Denmark, Ireland, Switzerland, Austria or Finland. New Zealand, however, is unique in terms of its geographical location and isolation from the other major developed economies (Harzing & Noorderhaven, 2006a; OECD, 2011; Raziq & Perry, 2012). The small developed economies (mentioned above) benefit mostly from a developed neighbourhood and membership of regional blocs like NAFTA, EEA, Schengen and the EU. Integration in regional blocs can have implications for the FDI inflows (Buckley, Clegg, Forsans, & Reilly, 2001), and subsidiary development (Benito, Groggaard, & Narula, 2003; Birkinshaw & Hood, 1998; Egeraata & Breathnach, 2012). The internalisation theory of the MNE suggests that the size of the host-country matters in determining the FDI inflows because of the location advantages and the market size (Buckley & Casson, 1976, 1998, 2009). OECD (2009) suggests that economies with large domestic markets and near to international markets should gain more FDI than the small and distant economies. In this respect, it is argued that small size

and remoteness put New Zealand at a significant disadvantage over other developed economies in terms of trade and inward FDI opportunities (OECD, 2011). This contrasts with the high level of inward FDI that New Zealand receives for its small size (see Statistics-NZ, 2014). This suggests that it is not only just the country location or size, but also other compensating factors that determine FDI inflows. For example, it could be the local resources. New Zealand is mainly a land-based economy and attracts significant inward FDI in, e.g. the mining sector. It is also argued that small economies having valuable resources can equally attract FDI by providing advantages in terms of cost and quality (Gammelgaard, McDonald, Tüselmann, Dörrenbächer, & Stephan, 2009). In a developed economy (like New Zealand), however, quality may be more likely to be the determinant than the cost, which is more likely a factor for a developing economy (see Buckley & Casson, 2009; Dunning, 2009).

The evolution of subsidiary roles research greatly emphasizes the investment support from the parent MNE to the subsidiary (Birkinshaw, 2014; Birkinshaw & Hood, 1998). These investments are critical for subsidiary evolution. Much of the subsidiary roles and development research, however, draws from the evidence of peripheral economies. The strategies and characteristics of MNEs (and subsidiaries) as may be operating in other economies (e.g. New Zealand) are often ignored (Enright & Subramanian, 2007). MNEs based in various countries can have various needs for creating subsidiaries (Enright & Subramanian, 2007). For example, an MNE based in India may have different needs of establishing a subsidiary in the UK, than those of an MNE based in the USA. There is still much that needs to be explored in such regards. For example, what are the characteristics and strategies of subsidiaries in New Zealand? How developed they are? Are they alternate subsidiaries? In what ways the literature can be advanced using the New Zealand evidence? These are the questions that merit

investigation. Theoretically, there is great potential in advancing the subsidiary literature and the general theories using the evidence from the New Zealand's case.

MNE Strategy and Structure. A significant portion of the inward FDI to New Zealand comes from Australia, USA, UK and other European economies. In terms of the 'psychic distance' (i.e., language, culture, politics) (Johanson & Vahlne, 1977), some of the economies, e.g. the UK, and the USA are less distant from New Zealand, but the distance is higher in terms of the geography (Harzing & Noorderhaven, 2006a). Other European economies, e.g. Netherlands and Germany are both high in psychic as well as geographic distances (Chetty & Stangl, 2010). From a management perspective, this has implications (Raziq, Perry, & Battisti, 2014). While much of the issues of geographical distance today could have been (arguably) overcome with the use of technology, research suggests the technology has limitations too and, therefore, the negative influences still exist at large. The negative influences are seen in the MNE-subsidary knowledge transfers (see Ambos & Ambos, 2009). Geographical distance affects the subsidiary overall roles, leading them to a low order local rather than a broad global role (Harzing & Noorderhaven, 2006a). Geographical distance lowers the subsidiary autonomy levels (Jong, Dut, Jindra, & Marek, 2015). There is also evidence that geographical distance leads to management difficulties. Recent evidence suggests that MNEs are even disaggregating their CHQ's activity (see Baaij, Mom, Van, Frans, & Volberda, 2015; Baaij & Slangen, 2013). Due to New Zealand's geographical location, having many of the MNEs headquartered in the USA and the EU, it is logical to assume that much of the subsidiary management in New Zealand will be dispersed. This is a critical part of this thesis, as this thesis is interested in a diverse rather than a predominant management

pattern. The New Zealand evidence here has the potential to address one of the thesis's issues, such as the MNE management structures.

Subsidiary Power. Much of a subsidiary power is driven through its capability, which is recognised as valuable within an MNE (see Mudambi & Navarra, 2004; Mudambi & Pedersen, 2007; Mudambi, Pedersen, et al., 2014). There are other independent factors, which cause subsidiaries, gain mandates and powers within an MNE, e.g. size of operations, the market, and connectivity and proximity of subsidiaries to the major markets. According to the actor network theory, power in a network is derived from a firm's position which stems from their identities and experiences (Henderson, Dicken, Hess, Coe, & Yeung, 2002; Law, 1999; Parker, 2014). The empirical evidence suggests that the preferred choice of MNEs for creating managing units, e.g. headquarters are regions where there are large product and financial markets (see Amann et al., 2014; Birkinshaw, Braunerhjelm, Holm, & Terjesen, 2006; Borini, Junior, & Proenca, 2005; Dellestrand, 2011). In the context of New Zealand, it can be argued that where an MNE has operations in both Australia and New Zealand, it is more likely for the subsidiary in Australia to get (rather automatically) product and geographical mandates and so high-power positions than the subsidiary in New Zealand. This is because the MNE activity may be performed more effectively and efficiently from Australia, which has closer proximity to regional and global markets, and is larger and a more developed economy⁴ than New Zealand. Another aspect is the Australian inward FDI in New Zealand. Australia is a major investor in New Zealand. A great number of subsidiaries in New Zealand, therefore, are likely to have headquarters in Australia.

⁴ Based on figures of gross domestic product (purchasing power parity (PPP), and per capita PPP), and the gross national savings (CIA, 2014).

Clearly, subsidiaries in New Zealand will have to work harder as they are likely to have a low MNE centrality and power than their counterparts in Australia. Centrality and power are not ‘cast in stone’, but are contingent upon taking the right strategies (Bouquet & Birkinshaw, 2008). From a management perspective, New Zealand subsidiaries can equally increase their centrality, and legitimacy, through acquiring and making use of resources and capabilities, and taking proactive strategies. The New Zealand evidence offers opportunities for management and theoretical implications in terms of how low-power actors can potentially develop resources, and develop internal resource dependencies.

RESEARCH OBJECTIVES, APPROACH, AND QUESTIONS

The subsidiary strategy and management section identified three research issues of the thesis, which are briefly as follows:

1. There is a need for a multidimensional subsidiary classification framework, which is based on a range of issues and possibilities.
2. There is limited knowledge on the MNE management structures in general and particularly how these structures potentially influence subsidiary roles and development.
3. While there is a recognition that subsidiary roles are contingent on contexts, there is a lack of work that specifically addresses the linkage between the subsidiaries and the contexts under which they operate.

Based on these issues, this thesis develops research questions. As follows the research objectives, the approach followed in achieving the objectives, and the research questions are presented.

Research Objectives and the Approach

The thesis has two broad research objectives: (i) to develop an overarching subsidiary classification framework, (ii) to configure the subsidiaries with their developmental contexts. Each of the objectives and the approach adopted are briefly described as follows.

Research Objective 1: To achieve the research objective (i), an overarching subsidiary classification framework is developed, and a management perspective is applied to it. The framework is expected to produce an alternate subsidiary classification due to its breadth and uniqueness in terms of the conceptualisation.

The Approach. A contingency approach is applied to the framework in that it is assumed that variously managed subsidiaries (across various management structures) vary across their roles and development. The contingency approach (grounded in the strategy literature), suggests that there is no ideal organisational structure. It is rather what is appropriate that is contingent upon the appropriate organisational strategy (Clegg, Hardy, & Walter, 1996; Donaldson, 2001). Applying the approach to the overarching framework, it suggests that subsidiary roles and development will vary across the dimensions of the overarching framework. The overarching subsidiary classification framework draws on relevant elements from all the established streams of the subsidiary strategy and management literature. The framework is built on six broad dimensions:

MNE management structures, subsidiary autonomy, subsidiary initiatives, subsidiary contributory role, subsidiary external embeddedness, and the subsidiary geographical scope. All these factors interact together and influence the subsidiary overall role evolution. The overall argument and the dimensions are grounded in the RBV, the RDT, and the network theory.

Research Objective 2: To achieve the objective (ii), a configurational approach is applied to the subsidiary types and their contexts. Linkages between the subsidiary types and their developmental contexts are explored.

The Approach. Subsidiary roles and development are contingent upon their (developmental) contexts, and their contexts vary across the subsidiary types. The issue is ‘in what ways they vary’? A configurational approach is applied to explore this. The configurational approach (grounded in both the contingency approach and the organisational analysis), suggests that organisational forms are clusters of interconnected structures and practices rather than being isolated or loosely coupled (Fiss, 2007). Every strategy type/setting fits better with a particular organisational configuration (Miller, 1986; Ven & Drazin, 1985). Configuration takes a holistic approach in that it looks at alignment and interaction among broad and multidimensional conceptualisations as a whole (Reeves, Duncan, & Ginter, 2003). Applying the approach, it is implied that a particular developmental context would be appropriate or better fit with a particular subsidiary type.

Research Questions

Based on the issues of the thesis, the thesis's broad research question is stated as: *How can different foreign subsidiaries be classified on a multidimensional framework, and how does their evolution vary depending on the contexts they operate in?* The broad research question can be broken down into two research questions, as follows:

Research Question 1: *How can different foreign subsidiaries be classified on a multidimensional framework, particularly in terms of the way they are managed?*

Research Question 2: *How does subsidiaries' evolution vary depending on the contexts they operate in?*

RESEARCH METHODOLOGY

The thesis is exploratory and is focused on theory building/enrichment. The research questions are based on theoretical observations. To answer the research questions the thesis develops a new conceptual framework, gathers empirical data (through surveys), and tests/validates the framework. The empirical findings are compared with the existing literature, and then as a result of the empirical investigation, the framework's underlying theories (i.e., RBV, RDT, Network), and the subsidiary strategy and management literature are updated. The approach adopted here is 'inductive' as it involves developing a new model for theory building purposes. More specifically the approach is 'quantitatively inductive' as it gathers data through survey methods and applies mainly quantitative data analysis techniques. When an inductive approach is adopted to conduct quantitative research, an exploratory data analysis is appropriate (Dudovskiy, 2015). The thesis involves exploratory methods, such as cluster analysis,

used to produce classifications (see Enright & Subramanian, 2007), and variance analysis, used for the configuration exercise (see Birkinshaw & Morrison, 1995).

As the thesis draws on evidence collected through survey methods, the research paradigm is ‘positivism’, which is generally linked to deduction and theory testing (Bryman, 2012). There are, however, no hard-and-fast rules regarding that, as research frequently uses methods most appropriate for what is intended to be achieved (Bryman, 2012; Eldabi, Irani, Paul, & Love, 2002; Punch, 2003). It is argued that studies can hardly be purely inductive or deductive; in fact, the two approaches can be seen as two ends of a continuum (Gummesson, 2003; Perry, 1998, 2001). To build a theory, inductive and deductive approaches are inseparable (Miles & Huberman, 1994; Parkhe, 1993; Pettigrew, 1997), as the theory building requires the researcher to follow an iterative approach. That is to look and re-look at links between data and theory and move between induction and deduction. A similar iterative approach is applied here. A new framework is developed, but is also empirically validated, so there is both testing and theory building involved.

Generally, the method a researcher adopts is dictated by the research paradigm and the philosophical stance taken (Blumberg, Cooper, & Schindler, 2005). However, it is also a matter of what is appropriate or realistic towards achieving particular research objectives (Silverman, 2013). A number of factors influence a researcher towards a particular method. These include the *approach adopted in similar studies* (see Hurmerinta-Peltomäki & Nummela, 2004), the *research objectives* (see Silverman, 2013), and the *theory, practical considerations, values, epistemology, and ontology* (see Bell & Bryman, 2003). All these factors are discussed in detail in Chapter 3. Overall, based on literature, prior studies, and the thesis’s objectives, the methodology adopted is a good fit.

The thesis as discussed earlier takes an inductive approach and is interested in developing a new framework. The route it takes is theory building. Alternatively, a deductive (hypothesis testing) route could be adopted, where it is assumed that ‘much is known’ and there is a need for verification. Here it is important to acknowledge that neither route is superior to the other or a definite one for such an investigation that this thesis aims at undertaking. It is more a matter of appropriateness in terms of what is central to the research and what is the overall value of what is to be achieved. Some of the concepts central to this thesis, such as MNE management structures are seriously under-researched. The value of exploring these concepts is greater. Testing, for example, if two-dimensional role frameworks are sufficient to understand the broader subsidiary role or development is not of much value to the IB community, because such is an obvious limitation in the subsidiary research. Similarly, while it is valuable to test, for example if context matters for subsidiary development, more interesting would be to explore how (if at all) it links with the subsidiary, because context is also under-researched. As noted above, all research involves both theory testing and building. It is acknowledged here that testing could be an alternate route towards some theory building, what is deemed more appropriate in this thesis is the inductive approach.

The thesis targets a population comprising foreign-owned MNE subsidiaries in New Zealand. Various potential providers of company databases are contacted. A sampling frame of 1,037 foreign-owned firms is compiled. The primary source of this data is a commercial database provider, Kompas New Zealand. The data are screened for accuracy and telephone calls to each firm are made. After screening, the sampling frame is reduced to a useable sample population of 952 firms. This sample is thought to comprise a near-complete record of foreign-owned subsidiaries in New Zealand.

Data are collected using a survey (rather than personal interview approach) because of the survey method capacity to collect data from a large sample (Brewerton & Millward, 2001). Questionnaires are sent to respondents via post and through email to the most senior representative of the company in New Zealand with information sought on the New Zealand-based operations as a whole. Titles of respondents are mainly the Country Manager, Chief Executive Officer (CEO), Chief Operations Officer (COO), Managing Director, and the General Manager.

RESEARCH CONTRIBUTIONS

The thesis makes several contributions. These contributions range from macro to micro theory, empirics, as well as management and policy implications. The contributions are stated briefly in the following paragraphs:

Theoretical Contribution

The thesis extends the overarching theories (i.e., RBV, RDT, and the network model) used to ground the subsidiary development argument and the overarching framework. The theories are extended mainly in terms of: (i) the identification of characteristics associated with subsidiary resource development or depletion; (ii) the identification of characteristics associated with development of competencies through which subsidiaries can develop internal resource dependencies; and, (iii) the identification of markets/networks more linked to subsidiary development, and the factors associated with broader roles in various networks/markets.

Overall, the key factors linked to resource development/depletion and dependence are exports, autonomy, initiative, country manager professional characteristics, MNE

management structures, internationalisation motives, and expatriation. The contingencies are compared with the literature, and their novelty is discussed.

Subsidiary Strategy and Management

The thesis is based on an extensive literature review. Two broad surveys were conducted, which drew on a range of subsidiary development issues. The results reveal new findings, and also some findings, which either refute or support the existing literature. The most significant contribution of this thesis is that it produces a developmental classification of subsidiaries. The classification identifies alternate subsidiary types. The framework's dimensions are theoretically based; the relevance and importance of the dimensions are established, and the framework is linked to the prior frameworks. Existing frameworks lack such characteristics, and the literature identifies these as research gaps (see Enright & Subramanian, 2007; Morschett et al., 2015). By filling these gaps, the overarching framework developed can be seen as a novel framework to classify subsidiaries.

Context has been largely ignored in the subsidiary research (Enright & Subramanian, 2007). This thesis is the first to develop a broad developmental context and to study linkages of subsidiary evolution and the context under which the subsidiaries operate. Contextual contingencies were linked with different subsidiary types, e.g. for one subsidiary type the key developmental context was found to be the market-seeking motive while, for the other, it was strategic asset-seeking motive.

Micro theoretical contributions are significant. Among these, the key are contributions in the literature on MNE management structures and the subsidiary country manager. MNE management structures are an under-researched area (Wolf & Egelhoff, 2012). This thesis develops a model, which is based on a range of MNE management

structures' contingencies, and establishes (through literature and original empirical evidence) which structure favours subsidiary development the most (i.e., the lateral) and which the least (i.e., the CHQ).

The literature on the subsidiary country manager is scant (Schmid et al., 2014). This thesis extends the literature on country manager in terms of the country manager's roles, and managerial characteristics associated with subsidiary development (i.e., international experience). It also identifies cases (and their implications for subsidiary resource development) where the subsidiary has a designated country manager, but the manager is located overseas.

Empirical Contributions and Implications for Policy and Management

The thesis addresses the development of foreign subsidiaries in New Zealand. The thesis uses evidence from a nation-wide survey to offer the best possible generalisation on subsidiaries in New Zealand. Earlier (nation-wide) studies using New Zealand evidence were FDI studies (see KPMG, 1995; Scott-Kennel, 2001), and did not address the roles and development issues in general.

The thesis has several important implications. In terms of policy, the key implication is how to increase and encourage the (relatively) most developed 'entrepreneurial' subsidiary type. What this thesis suggests to the policy-makers is that they may look at attracting investments more in the manufacturing industry rather than the services industry, and encourage the local and domestic firms to engage in collaboration. Invest more in R&D, and seek relocation of HQ to New Zealand (as is currently aspired by the policy-makers). However, where a relocation is not possible, then seek management of the subsidiaries under either a matrix or a lateral structure than any other formal structure.

The key implication for management practice concerns how managers can develop their subsidiaries. The first thing is to identify a developmental path. The path is less likely to be generic as it will vary depending on the contingencies such as industry, the management structure, and the MNE global strategy. The managers need to collaborate more with the local industry and need to seek their subsidiary management under a matrix or a lateral structure. They need to aim to reduce internal isolation or if this is not possible then to engage heavily in initiatives. Lastly, subsidiary managers in general need to look at their resource dependence relationships as valuable resources to develop from, rather than exploit their positions and risk losing their mandates.

STRUCTURE OF THE THESIS

The thesis comprises six chapters. Chapter one is the introduction chapter. This chapter provides the background of the thesis and illustrates the research issues, research objectives, and the approach adopted to achieve the objectives. Contributions to the macro and micro theory, and implications for policy and management practice are described.

Chapter two reviews: *(i)* the overarching theories used in the thesis that are RBV, RDT, and the network model of the MNE; *(ii)* the subsidiary strategy and management literature; and, *(iii)* conceptualises an overarching subsidiary classification framework, and identifies the key dimensions of the subsidiary developmental context.

Chapter three discusses the philosophical position and the methodology adopted in the thesis. The chapter operationalises the concepts and discusses the data analysis techniques used in the thesis.

Chapter four analyses the data, and undertakes various tests to establish data reliability, and validity. The chapter offers descriptive results, and then discusses the

results using both the literature and inferential analysis techniques such as correlation and variance. Implications for general theories are made.

Chapter five produces a developmental classification of subsidiaries and configures the subsidiary types with their developmental contexts. Developmental paths of the subsidiaries based on contingencies such as industry, management structures, and internationalisation motives, etc. are identified. Implications for theory are made.

Chapter six concludes the thesis. It outlines the research contributions of the thesis in terms of, how the research questions are answered, the subsidiary literature, and the implications for theory, policy and management practice. The chapter then outlines the limitations of the thesis and identifies paths for future subsidiary research.

CHAPTER 2 - LITERATURE REVIEW AND CONCEPTUAL DEVELOPMENT

Chapter 1 stated the broad research question of the thesis: *How can different foreign subsidiaries be classified on a multidimensional framework, and how does their evolution vary depending on the contexts they operate in?* The relevance of the general theories (i.e., resource-based view, resource dependence theory, and the network conceptualisation of the MNE) to the research issues was established. The research issues are based on the gaps left in the subsidiary strategy and management literature. Main focus of the issues is subsidiary development. The research issues have been elaborated on in Chapter 1, but briefly, they are about the following issues:

- (i) The limited nature of the existing subsidiary classification frameworks (see Enright & Subramanian, 2007; Morschett et al., 2015) and the narrow view about the subsidiary roles.
- (ii) The gaps in subsidiary literature with respect to MNE management structures (see Alfoldi et al., 2012; Amann et al., 2014; Wolf & Egelhoff, 2010, 2012); in particular, regarding their influence on subsidiary roles and development.
- (iii) Limited research focus on subsidiary contexts (see Birkinshaw & Morrison, 1995; Enright & Subramanian, 2007; Yip, 1995; Yip & Hult, 2012); and, their linkages with subsidiary development.

The thesis's objectives are to address the research issues identified through producing a broad developmental classification of subsidiaries, and then configuring the classification with their unique developmental contexts. To this end, an overarching

subsidiary classification framework is developed (which draws on all the streams of the subsidiary literature), and a range of contextual dimensions are identified to form a developmental context.

This chapter reviews the subsidiary strategy and management literature as well as the literature on the three theories identified above. The chapter is structured as follows. First, it reviews the theories: RBV, RDT, and the network model. This is followed by a section on a review of the subsidiary literature. Conceptual development section comes next, in which the gaps identified in the literature review are conceptualised. This is followed by a statement of the research objectives and questions. The chapter ends with a summary section highlighting key lessons learned from the literature review and the conceptual development.

THEORETICAL FOUNDATION

This section explains the origins and the contemporary state of the macro theories used in the thesis and briefly makes links of the theories to the subsidiary research. Detailed and specific links to the subsidiary research are made in the conceptualisation section later in this chapter. The section closes with a conclusion section summarising key lessons learned from the review of the theories.

The Resource-based View of the Firm

The resource-based view (RBV) of the firm is one of the key theories of the strategic management discipline. RBV's central idea is that firms possess various strategic resources, which contribute to their ability to develop a competitive advantage and achieve improved performances. RBV has its roots in the 'theory of growth of the firm' offered by Penrose (1959). Penrose discussed how some firms grow at a faster pace

than the other firms. Penrose paid particular attention to the firm's resources (physical and human), and emphasized the management (a resource) in converting firm's resources into 'valuable outputs' or 'productive services' (Kor & Mahoney, 2004). Penrose's ideas did not receive significant attention until the mid-1980's when the research recognised that it was not just the firm's external environment (see five forces in Porter, 1979), but also the internal resources and capabilities that could shape the firm's strategy. These brought researchers back to the Penrose's growth ideas leading to the development of the RBV which took firm's resources as the basis of its competitive advantage and superior performance (see Barney, 1991; Wernerfelt, 1984).

The firm's resources have been identified as physical capital (e.g. physical technology, plant and equipment), human capital (e.g. experience, intelligence, and relationships), and organisational capital (e.g. reporting structures, planning, and controlling systems) (Barney, 1991). Contemporary research broadly classifies these resources as tangibles (physical), and intangibles (human), with the organisational capital as the intangible one (Maier, 2004). RBV contends that for any resource to be strategic (i.e., meet competitive advantage) it must meet VRIN (valuable, rare, inimitable, and non-substitutable) criteria. The resource must be: (i) valuable in terms of exploiting opportunities and neutralizing threats; (ii) rare in terms of its uniqueness and not being employed by other firms; (iii) inimitable in terms of being difficult to be replicated by other firms; and, (iv) non-substitutable in terms of not being a substitute, alternate or equal to resources used by other firms. Barney also argued that for the competitive advantage to sustain, the resource must be heterogeneous (across firms) and immobile (Barney, 1991). RBV contends that such differences in resources explain the differences among firms in terms of their competitive advantages and performances.

This logic of Barney was the starting point of RBV as a theory and has broadly remained similar as of date. The theory gained considerable interest, but at the same time some criticism. The first critique raised questions about the dynamics of the firms' resources, e.g. RBV ignored the processes of resource creation in a firm (see Black & Boal, 1994). To address such critique Barney (1997) in his revised 'VRIO' framework merged⁵ the imitation and substitute dimensions of the VRIN and introduced a new 'organisational processes' (O) dimension positing that the firm should be organised and be able to readily exploit its resources. Further thought to the organisational processes' dimension of RBV later led to the development of the 'Dynamic Capabilities' perspective (see Teece, Pisano, & Shuen, 1997), which is often seen as an extension to the RBV. The dynamic perspective on resources refers to the "capacity of organisations to purposefully create, extend, or modify their resource base" in the dynamic external environments (Helfat et al., 2009, p. 4). The dynamic capabilities perspective advanced the resource-based view with its focus on the combination of resources and competencies. This led to the view that to achieve competitive advantage, individual resources do not matter as much as the way the resources are clustered and interacted with each other. Therefore, it is not about the rarity of a resource, but the ability of a resource to fit in a system (Foss, 1998). Contemporary research emphasizes the combination of effectively managed/exploited resources employed to achieve superior firm performance taking into account the dynamic external environment (Sirmon, Hitt, & Ireland, 2007).

Although the RBV looks simple and easy to understand, over the years, researchers have faced great difficulty in operationalising the resources (in particular the intangible ones). The difficulty arises, because realistically resources are not isolated from each other. Based on this Priem and Butler (2001) have argued that it is impossible to

⁵ As imitation could be a duplicate or a substitute.

distinguish the value created by an individual resource. In other words, it is too difficult to identify if a resource meets the VRIN/VRIO criteria, which were originally thought to discern how resources create value. Newbert (2007)'s review of studies examining RBV found that only 53% of the studies support the original RBV concept. Also out of all the studies reviewed, 76% examined only one resource. Newbert suggested that researchers further explore the RBV and examine it with its contemporary theoretical extensions.

Similarly, it is argued that not all resources may provide a competitive advantage as resources get influenced (with their values decreased) with the changes in the external environment (Fiol, 2001). It is also argued that RBV has only a limited focus on how firms further develop resources (Hoopes, Madsen, & Walker, 2003). RBV also has a limited focus in offering managerial prescriptions as to how to obtain or use the resources (Miller, 2003; Priem & Butler, 2001). Contrary to this some scholars argue that resources do contribute to sustained competitive advantage; they further develop through the firm's dynamic capabilities (Barney, 2001); and, they further develop through the other organisational resources (Winter, 2003).

Kraaijenbrink, Spender, and Groen (2010)'s detailed analysis of the critique on RBV concluded that RBV has been criticised on eight aspects. The criticism on five of the eight aspects, such as managerial implications, infinite regress, applicability, SCA, and a theory of the firm, can be comfortably withstood by the RBV provided its variables, boundaries and applicability are adequately specified. Criticism on the remaining three that are 'resource', 'value', and 'sustained competitive advantage', however, is difficult to dismiss. The authors suggest further research and theorizing.

It is fair to say that RBV offers great potential to the study of MNEs and their subsidiaries. In particular, the evolution of subsidiary roles stream draws mainly on the RBV (Birkinshaw & Pedersen, 2010). There are some problems in terms of

operationalising RBV (especially in terms of the appropriate unit of analysis) in an MNE environment. MNEs in comparison with monolith organisations are complex networks (Forsgren, 2008). There can be two ways of operationalising the MNE. One way is conceptualising subsidiaries alone as firms and taking the resources they possess as potential contributors of their own competitive advantage. The other way is looking holistically at the firm (the MNE), where various internal and external units are embedded in relationships, and engage in transfer of resources and competences (Achcaoucaou, Miravittles, & León-Darder, 2014; Ferraris, 2014). There is an issue with the former view as subsidiaries do not just draw on their own resources, but also on the MNE resources (see Li & Lee, 2014), and they work for the MNE. Issues of rarity and substitutability (e.g. to what) may not apply much within an MNE network as it is more about leveraging the resources globally across the entire MNE. The issue is that for an MNE the subsidiary resource matters if it complements other resources/capabilities across the MNE and is recognised as valuable by the MNE as whole (Birkinshaw et al., 1998; Birkinshaw & Pedersen, 2010; Ferraris, 2014; Rugman & Verbeke, 2001; Rugman, Verbeke, & Nguyen, 2011). A subsidiary resource, therefore, must have relevance to the MNE internal network. Relevance of the resource only to the subsidiary external environment may bring competitiveness to the subsidiary, but such subsidiary cannot be referred to as, possessing specialized resources, a ‘centre of excellence’ or a competence-creating subsidiary (Cantwell & Mudambi, 2005; Enright & Subramanian, 2007). Contemporary RBV emphasizes resource bundling, integration of resources across other resources, and their sharing of functions (Newbert, 2007; Priem & Butler, 2001). This shows some consistency to the latter view discussed above about the subsidiary resource’s complementarity and leveraging on a global basis.

RBV is popular across multiple disciplines and has received support, particularly, in terms of its ability to explain how some firms perform better and are more profitable than the others. For example, Seddon (2014) finds strong support for the RBV in the IT industry and argues that strategic management researchers criticising RBV need to conduct further tests on the 'VRIN-ness' of the theory. Opposing the critique on RBV (i.e., its lack of offering managerial prescriptions) researchers suggest the continued implementation of RBV, particularly in the project management research and practice (see Almarria & Gardiner, 2014).

A key requirement for a good theory is that it must not be unfalsifiable (Popper, 1959). Clearly, RBV is criticised particularly in terms of its empirical relevance (Newbert, 2007). Most of the organisational theories have (such) issues (Bacharach, 1989), and RBV is no exception. Studies interested in subsidiary development have drawn much on the RBV, and it is now established that subsidiaries through their resource development contribute to the MNE's competitive advantage (Birkinshaw, 2014; Birkinshaw et al., 1998; Cantwell & Mudambi, 2005). RBV is a useful theory and a logical choice for the subsidiary and MNE research.

The Resource Dependence Theory

Resource dependence theory (RDT), an organisational theory, deals with the organisational interdependence and behaviour. The core of the theory is that organisations are interdependent units rather than self-sufficient entities. They require resources for their survival and for that seek resources from other organisations. Pfeffer and Salancik (1978) introduced a comprehensive approach to the organisational behaviour. Integrating the earlier works on the organisational context (see Blau, 1964; Emerson, 1962; Jacobs,

1974), Pfeffer and Salancik suggested various organisational responses with respect to their dependencies (Davis & Cobb, 2010).

The logic used in the earlier works on which RDT is grounded are power and dependence (i.e., the dependence actor X has over Y proportionates directly to the power actor Y has over X) (Emerson, 1962). Power leads to influence over and compliance by the weak actors (Blau, 1964). Power is exercised in terms of control through resource exchange relationships (Boddy, 2011; Jacobs, 1974). These relationships are established for self-interest (Shook, Adams, Ketchen Jr, & Craighead, 2009). For the survival of organisations these exchanges are indispensable (Pfeffer & Salancik, 2003).

RDT assumes that the ultimate aim of any organisation is: (i) maximum control over resources and minimal external dependence; and, (ii) enhance resource control through making other organisations dependent upon own resources (Ulrich & Barney, 1984). Organisations seek to avoid resource uncertainty (and have resources readily available to them) as well as avoid resource dependency on others (Fink, Edelman, Hatten, & James, 2006; Hillman et al., 2009; Nienhueser, 2008). Due to the power and control factors, where possible, dependent organisations adopt defensive mechanisms (Pfeffer & Salancik, 1978).

Broadly RDT is considered as one of the dominant management theories explaining organisational-environmental relations. The theory just like any other theory has been the subject of various criticisms. Casciaro and Piskorski (2005), for example, find contrasting results to the hypotheses of RDT and show that power inequality impedes inter-organisational relationships (e.g. in mergers & acquisitions), while interdependence supports such relationships. Robbins and Judge (2012) argue that RDT underestimates the complex nature of the organisational behaviour. There are also questions raised as to

the robustness of the theory, e.g. a review of literature by Hillman et al. (2009) shows that RDT has not been rigorously tested as claimed by Pfeffer and Salancik (2003).

Drees and Heugens (2013) respond to the criticism and conduct a meta-analysis, consolidating results of 157 major studies using RDT, and test some hypotheses. Overall their results are consistent with the model of Pfeffer and Salancik (1978). The results show that where resource dependency occurs, inter-organisational arrangements are formed. Such arrangements lead to increased autonomy and legitimacy of the focal organisation (i.e., the one on whose resources the other organisation depends). The autonomy then leads to the focal organisation's high performance.

This does not mean that RDT is unfalsifiable or is without its limitations. The neo-institutional scholars have criticised RDT that it focuses too much on the focal organisation (avoiding the wider environment). It does not focus much on the institutional forces that constrain the organisations and is simplistic in its view that organisations can influence the environment alone. RDT does implicitly acknowledge the role of institutions as factors constraining organisational behaviour, but also maintains that neo-institutionalism is rather deterministic (Pfeffer & Salancik, 1978). In support for RDT, Tolbert and Zucker (1996) find similarities in the arguments of neo-institutionalism to RDT and posit that the boundaries between the two approaches are cloudy.

One of the RDT's strengths lies in its prescriptive nature in that it provides managerial prescriptions as to how to, avoid resource uncertainty, and gain autonomy via the firm's resources. This lies in the implicit assumption of the theory that organisational behaviour (e.g. exchange relationships) will always be rational (i.e., managerial control and competence). It is argued that the theory overlooks that organisational behaviour can also be irrational (e.g. reckless, incompetent and destructive). It overlooks other important factors (environmental and systematic) that can influence the organisational behaviour

(Eiriz & Wislon, 2006). It is also argued that the theory focuses mainly on power and influence in terms of managing relationships, and has limited focus on how relationships can be built, and seen as a useful resource (Donaldson, 1995).

Davis and Cobb (2010) argue that the world since the time of RDT inception has changed, and, therefore, the RDT's managerial prescriptions especially regarding external control need a change. The authors suggest that through the use of IT, firms get ready information about prices, alternatives suppliers, and other miscellaneous facilities. Firms make use of different sources of finance available and increasingly create international relationships, and there are institutional systems, laws and regulations that guard the firms. All these factors in the modern world discourage firms' monopolistic behaviours, and moderate dependencies and power relationships.

These managerial suggestions make good sense and are applicable in an MNE. For example, subsidiaries develop capabilities (e.g. functional, technological and business-related) on which the whole MNE may draw upon and so can make the MNE dependent upon their competencies (Mudambi, Pedersen, et al., 2014). There is much discussion on the link between subsidiary competence-transfer and subsidiaries gaining centrality, legitimacy, influence and autonomy within the MNE (Bouquet & Birkinshaw, 2008; Mudambi & Navarra, 2004; Mudambi, Pedersen, et al., 2014; Najafi-Tavani et al., 2015). Subsidiaries are embedded in external network relationships (Forsgren, 2008) and may decide their own suppliers. Subsidiaries may get alternate finances, e.g. domestic sourcing (Williams, McDonald, Tüselmann, & Turner, 2008), and retain and reinvest their own earnings to add to their finances and growth (Nguyen & Rugman, 2014).

However, there is a caveat. It is broadly understood that in an MNE, the ultimate source of power, resource and influence is the CHQ. Subsidiaries are legally owned by the MNE and so have limited options to operate entirely independent of the MNE

(Birkinshaw & Pedersen, 2010). The desire to be independent among subsidiaries is theoretically and empirically established. However, subsidiaries may not always get very high levels of independence and power. Also independence does not always go in the subsidiary's favour. A balance between independence and integration with the MNE is critical to subsidiary's performance and capability development (Kawai & Strange, 2014). Also, while rights of subsidiaries can be guarded through local institutional laws and regulations, there are cases where subsidiaries exploiting their rights and powers, were punished, and their mandates were revoked. Power of a subsidiary in an MNE may be seen as earned, but it is always granted by the HQ. Any misuse of power can result in the subsidiary losing the power, position or even existence (Dörrenbächer & Gammelgaard, 2011).

The discussion above shows that RDT is a powerful theory explaining interdependencies and relationships within and across organisations (Drees & Heugens, 2013). RDT concepts provide good grounds for studying the MNE-subsidiary competence relationships (Mudambi, Pedersen, et al., 2014). Therefore, it is a logical choice for this thesis.

The Network Conceptualisation of the MNE

Coase (1937) argued why firms and partnerships are created when there are cheaper options of trading in the market. He argued that firms will have an advantage if production is internalized, but there is a chance of decreased returns with the increase in costs and mismanagement. He also argued that relationships external and internal to the firm influence the firms' growth. Such analytical discussion provided insights to the later researchers leading them to the development of a network view. Later research focused

on how firms operate in complex environments and build relationships with other organisations.

Following Coase's view, Williamson (1975) conceptualised network as an intermediate between markets and hierarchies (firms) taking markets and hierarchies as two alternate ways of undertaking economic activities. Networks were conceptualised as relationships based on coordination of resources, products and activities, through interaction and adaptation (Johanson & Mattsson, 1985). A network involves a resource, an actor, and an activity. A relationship occurs when the actor (e.g. a firm) performs an activity (e.g. a transaction), which involves use or exchange of resources. Such relationship/network developed can be seen as a 'quasi-organisation' involving two or more actors (Baraldi & Strömsten, 2008; Håkansson, 1987).

MNE subsidiary research increasingly applies the network view to the MNE. A key advantage of applying this approach, in particular to the subsidiary, is that the subsidiary is then visualized as a node in the MNE network (rather than an MNE subordinate), having its links to the various actors (within and outside the MNE), and having greater autonomy and discretion (Birkinshaw & Pedersen, 2010). The network view is based on that the MNEs consist of several business units, with each unit interconnected, and connected to their external contexts. Such an approach provides an easy way to understand how a particular MNE unit functions, and how it is internally and externally connected across network(s) (Holm, Johanson, & Thilenius, 1995; Holm & Sharma, 2006). This overarching conceptualisation is arguably descriptive and at times difficult to falsify making it rather weak a theory. Nonetheless, it is most appropriate to study subsidiaries, in particular, their development and internal/external embeddedness (Birkinshaw & Pedersen, 2010).

Historically the network view was applied to the MNEs in the 1980s by the scholars interested in industrial marketing and purchasing theories (Piekkari & Welch, 2010). Among those was the Swedish scholar Gunnar Hedlund, who first conceptualised the MNE as a hypermodern ‘heterarchy’ (Hedlund, 1986). Hedlund argued that an MNE structure is not as simplistic as a hierarchy because its various units (actors) link variously to several actors within the network and across various other networks.

In a similar vein, several other descriptions to the MNEs as networks have been provided. For example, Ghoshal and Bartlett (1990) argue that an MNE is an internally differentiated ‘inter-organisational network’ (rather than an organisation) that is embedded in an external network consisting of suppliers, customers, and regulators. The authors focus solely on the hierarchical network relationship between the MNE and its national subsidiaries, rather than on the lateral relationships between the subsidiaries.

MNEs have also been referred to as ‘differentiated networks’ (Nohria & Ghoshal, 1997). As differentiated networks, MNEs are viewed in terms of their lateral relationships and differentiated in terms of their characteristics such as resources, entry mode, and business contexts. The business units are thought to benefit from each other through the exchange of resources and capabilities. Later extensions to the differentiated perspective emphasize heavily the subsidiary external (local) network (Achcaoucaou et al., 2014; Alessandra & Anderssonb, 2014; Andersson et al., 2014; Andersson et al., 2007; Najafi-Tavani, Giroud, & Andersson, 2014; Nell et al., 2011b).

A business network perspective has also been applied to the MNEs in which MNEs are viewed as networks of business relationships (Forsgren, 2008). MNE units are embedded into several business contexts. The headquarters in that network is treated as an outsider rather than an insider (Forsgren, 2008). This perspective being less hierarchical than the other network perspectives links back to the original MNE

heterarchy perspective of Hedlund (1986). The business network perspective suggests that MNEs are not as simplistic in terms of their relationships, but are rather complex in terms of each unit (actor) connected to various actors on multiple levels in multiple ways. The business network perspective, therefore, suggests that MNEs should be studied using a multilevel (e.g. a subsidiary along with its network relationships) lens rather than with a single level (Gnyawali, Singal, & Mu, 2009; Nell et al., 2011b; Piekkari & Welch, 2010; Strutzenberger & Ambos, 2014).

The network conceptualisation of the MNE is a promising and an attractive overarching perspective and a logical choice for the MNE subsidiary research. Although its strength in terms of being an overarching theory is low given that it is frequently used in a purely descriptive way making it rather unfalsifiable (Birkinshaw & Pedersen, 2010). It, however, can advance better and its potential better realized if used in a more analytical and a constructive way, for example, if used along/integrated, with other overarching theories (Birkinshaw & Pedersen, 2010; Doz & Prahalad, 2005).

Conclusions (the theories)

1. RBV, RDT and Network theory are robust theories offering great potential in the MNE subsidiary research (Li & Lee, 2014; Mudambi, Pedersen, et al., 2014; Najafi-Tavani et al., 2014).
2. Subsidiaries should be studied using multi-theoretical lenses, as MNEs are complex firms/networks (Birkinshaw & Pedersen, 2010; Nell et al., 2011b; Strutzenberger & Ambos, 2014).
3. The theories need to be applied / advanced / examined with their contemporary extensions (Birkinshaw & Pedersen, 2010; Newbert, 2007; Seddon, 2014).

4. To advance and fulfil their potential in the MNE subsidiary research, theories need to be used in a more precise, and an integrated way (Birkinshaw & Pedersen, 2010; Davis & Cobb, 2010; Kraaijenbrink et al., 2010; Nell et al., 2011b; Piekkari & Welch, 2010).

SUBSIDIARY STRATEGY AND MANAGEMENT

This section reviews the subsidiary strategy and management literature. More specifically it reviews the ‘subsidiary roles’ and the ‘evolution of subsidiary roles’ literature. Regarding the other streams it reviews concepts relevant to the thesis’s broader issue that is subsidiary evolution.⁶ The overall purpose of this section is to develop a basis for a theoretically grounded subsidiary classification framework, drawn from various subsidiary research strands, and identify various developmental contextual factors influencing subsidiary roles and their evolution.

Subsidiary Roles

The role⁷ of a subsidiary refers to the main function or functions performed by a subsidiary for the parent organisation. A number of subsidiary role frameworks have been developed to classify subsidiaries based on their roles and strategies. Classifications have been developed from a variety of perspectives because, at various times, researchers have tended to focus on different issues as a key to understanding variations in subsidiaries. Broadly the role frameworks are the Scope framework (D’Cruz, 1986; White & Poynter,

⁶ Subsidiary evolution and subsidiary development are used interchangeably throughout the thesis.

⁷ A subsidiary role is an activity or set of activities assigned to the subsidiary by the parent MNE. A strategy can be viewed as the MNE strategy (i.e., towards local responsiveness and global integration) or a subsidiary’s own strategy (Birkinshaw, 2014; Birkinshaw & Morrison, 1995; Birkinshaw & Pedersen, 2010). Whether a subsidiary’s role is assigned or assumed, in broader sense, the term ‘subsidiary role’ can be used interchangeably with terms such as ‘subsidiary types’, ‘subsidiary classification’ or ‘subsidiary strategy’, especially where either is used in conjunction to ‘framework’. The three terms are used interchangeably in the thesis in conjunction to the ‘framework’, e.g. a subsidiary classification framework.

1984), the Competence-Strategic Importance framework (Bartlett & Ghoshal, 1986), the Knowledge flows framework (Gupta & Govindarajan, 1991), the Integration-Responsiveness framework (Jarillo & Martínez, 1990; Prahalad & Doz, 1987), and, the Autonomy and Procedural Justice framework (Taggart, 1997a). The frameworks have been tested a number of times by various studies that report varying levels of support from partial to full support.

Later studies have discussed/used these frameworks in a variety of ways. For example, studies have either:

1. ***Tested the frameworks and made slight extensions to them*** (see Harzing & Noorderhaven, 2006b; Meyer & Yu-Shan, 2014; Taggart, 1997c);
2. ***Organised the frameworks and developed, a revised framework*** (see Enright & Subramanian, 2007) – or *a typology* (see Birkinshaw & Morrison, 1995);
3. ***Used as a base, and developed a new role framework*** (see Randoy & Li, 1998; Wang et al., 2009) or integrated issues, e.g. I-R and knowledge flows and *developed a typology* (see Kasper, Lehrer, Mühlbacher, & Müller, 2009; Lin & Hsieh, 2010b) or *extended a framework* with additional dimension(s) (see Benito et al., 2003; Meyer & Estrin, 2014; Pearce & Papanastassiou, 1996; Schmid, 2003; Schmid & Hefter, 2014);
4. ***Reconceptualised a framework*** (see Rugman, Verbeke, & Yuan, 2011);
5. ***Used the framework to examine, roles*** (see Hogenbirk & Kranenburg, 2006; Manolopoulos, 2010) or *a subsidiary management issue* (see Harzing & Noorderhaven, 2006a);
6. ***Rejected a framework*** (see Haugland, 2010).

In the following section, each of the key frameworks (as indicated above) are reviewed. The purpose of this review is to develop a basis through critical analysis and a way forward towards a new framework, which could address the thesis's research issues. To this end, it would be valuable to also separately review the two organising frameworks (mentioned in point 2 above) to gain an overall understanding of the frameworks. The other studies (mentioned above in the list) are discussed in their contexts within the sections below. Table 2.1 outlines the frameworks, the theories and literature used in the frameworks, the research motives/questions, and the role/strategy typologies with their descriptions. The section ends with a conclusion section highlighting the key lessons learned from the review of the subsidiary roles literature.

The Scope Framework. The scope framework is based on the configurational approach of the organisational theory and strategy research (Miller, 1986; Miller & Friesen, 1984). This approach argues that organisations are 'clusters of interconnected structures and practices' rather than isolated or loosely coupled entities (Fiss, 2007). The framework looks at the configuration of subsidiary strategy (Reilly & Sharkey, 2014). The implication (of configuration) is that subsidiaries would show different features and outcomes as their strategies to respond to the changes in their local, and global environments change.

White and Poynter (1984), focusing on the 'effects of environmental changes on subsidiary strategy', identified five strategies (Table 2.1) available to the foreign-owned subsidiaries in the manufacturing sector in Canada. The researchers argued that a subsidiary strategy is determined by the product scope (subsidiary product line extensions / new products), market scope (markets served), and the value-added scope (R&D, manufacturing). A change in either of these dimensions would likely result in a change

in the overall subsidiary strategy. Together these dimensions provide a subsidiary role/strategy framework broadly known as the scope framework. The framework identifies five subsidiary types (for a description see Table 2.1): Miniature Replica Business; Marketing Satellite Business; Rationalized Manufacturer; Product Specialist; and, Strategic Independent.

The importance of this widely accepted framework is twofold: (i) being a pioneering framework, it provided a base for the later subsidiary classification studies; and, (ii) it talked about subsidiary strategy and changes in strategy, and implicitly assumed that a subsidiary could change its strategy and eventually assume a role different to the one assigned by the parent MNE. This differs from the other subsidiary roles' studies, which mainly assume that the role is assigned to the subsidiary by the HQ. This framework, therefore, provides a base for both the subsidiary roles and the evolution of subsidiary roles' streams of literature (Birkinshaw & Pedersen, 2010).

The scope framework has been variously used in the studies examining subsidiary roles, and has received good empirical support showing framework's sound validity (see Hogenbirk & Kranenburg, 2006; Manolopoulos, 2010; Pearce & Papanastassiou, 1996). However, the product scope dimension has been rarely used, let alone the three dimensions operationalised simultaneously. Studies have essentially taken two dimensions: the value-added scope and the market scope. Taking two dimensions only leaves out the possibility of a simultaneous change in the value-added, geographic, and product scope of the subsidiary, potentially presenting a wrong/partial picture of the subsidiary strategy in a particular economy.

Table 2.1: Subsidiary Classification Frameworks

Classification Framework / Role Typology	Theory / Approach and Literature	Research Motive / Question	Subsidiary Types and their Description
Scope Framework (White & Poynter, 1984)	Literature: <i>Global Strategy</i> Approach: <i>Configuration</i> Study: <i>Empirical</i>	Changes in subsidiary strategy in response to the changing business environments.	Miniature Replica Business (A small-scale operation producing and marketing parent's or related product lines); Marketing Satellite Business (Importers/marketers of products produced centrally); Rationalized Manufacturer (Produce for international/global markets); Product Specialist (Produce, market, and develop products for global markets); Strategic Independent (Subsidiaries with an unconstrained product, market and value-adding scope of activity).
Competence-Strategic Importance Framework (Bartlett & Ghoshal, 1986)	Literature: <i>Global Strategy</i> Approach: <i>Configuration</i> Study: <i>Empirical</i>	How to organise to be globally competitive and achieve the global strategic objectives.	Implementer (low strategic importance, low competence); Contributor (low strategic importance, high competence); Strategic Leader (high strategic importance, high competence); Black Hole (high strategic importance, low competence).
Integration–Responsiveness Framework (Jarillo & Martínez, 1990; Taggart, 1997c)	Literature: <i>Global Strategy</i> Approach: <i>Contingency</i> Study: <i>Empirical</i>	-Balancing subsidiary goal congruence with the MNE (i.e., global integration), with local market demands (i.e., local responsiveness). -Assessing the relative importance of the two conflicting demands.	Quiescent (low local responsiveness, high global integration); Autonomous (high local responsiveness, low global integration); Active (high local responsiveness, high global integration); Receptive (low local responsiveness, high global integration).
Knowledge Flows Framework (Gupta & Govindarajan, 1991)	Literature: <i>Global Strategy</i> Approach: <i>Contingency</i> , Theory: <i>Network Model</i>	-How corporate control within the MNE varies across the subsidiaries. -How subsidiaries differ in terms of their capacities to providing knowledge to the MNE, and receiving knowledge from the MNE.	Global Innovator (high outflow, low inflow); Integrated Player (high outflow, high inflow); Implementer (low outflow, high inflow); Local Innovator (low outflow, low inflow).

Table 2.1 continued: Subsidiary Classification Frameworks

Classification Framework / Role Typology	Theory / Approach and Literature	Research Motive / Question	Subsidiary Types and their Description
<p>Organising Role Typology (Birkinshaw & Morrison, 1995)</p>	<p>Literature: <i>Global Strategy</i></p> <p>Approach: <i>Configuration</i></p> <p>Study: <i>Empirical</i></p>	<p>The purpose was to draw a typology from existing role frameworks mainly to explore ways in which the subsidiary structural context varied according to their strategy.</p>	<p>World Mandate (high strategic autonomy, low internal product flows, high international value-chain configuration, high performance);</p> <p>Specialized Contributor (intermediate strategic autonomy, high international value-chain configuration, high internal product flows, low performance);</p> <p>Local Implementer (low strategic autonomy, low international value-chain configuration, high internal product flows, high performance)</p>
<p>Autonomy–Procedural Justice Framework (Taggart, 1997a)</p>	<p>Literature: <i>Global Strategy</i></p> <p>Theory: Implicit focus on the <i>Behavioural theory, and the Network Model</i>.</p> <p>Study: <i>Empirical</i></p>	<p>Can subsidiaries be classified across autonomy and procedural justice?</p>	<p>Vassal (low procedural justice, low autonomy, high configuration, high integration, high responsiveness, low coordination and low market/product/value-added scope);</p> <p>Collaborator (high procedural justice, low autonomy, high market scope, high coordination, high configuration, high integration, and low responsiveness, low product/value-added scope);</p> <p>Militant (low procedural justice, high autonomy, high responsiveness, high product/value-added scope, low coordination, low configuration, low market scope, and low integration);</p> <p>Partner (high procedural justice, high autonomy, high coordination, high market/product/value-added scope, low configuration, low integration and low responsiveness)</p>
<p>Organising Framework (Enright & Subramanian, 2007)</p>	<p>Literature: <i>Global Strategy</i></p> <p>Approach: Organised selected elements of the Competence-Strategic Importance, Knowledge Flows, and the Scope Framework.</p>	<p>Studying the national subsidiary role in an MNE by adopting a four-dimensional approach, which allows for an organisation of the earlier frameworks.</p>	<p>A 24-part subsidiary role typology emanating from four national subsidiary types: Leader, Innovator, Implementer, and Observer, each of which leads to three subsidiary types: <i>Global</i>, <i>Regional</i>, <i>Local</i>, where the product scope is high, and three subsidiary types: <i>Global Specialist</i>, <i>Regional Specialist</i>, <i>Local Specialist</i>, where the product scope is low.</p>

The framework due to its focus on changes in subsidiary strategy has also been used by the researchers interested in the evolution of subsidiary roles (Birkinshaw & Hood, 1997; Delany, 1998; Dörrenbächer & Gammelgaard, 2006; Hood & Taggart, 1999; Taggart, 1999b). Despite its popularity, the scope framework has also been criticised. The framework is criticised because scope cannot be examined without simultaneously considering the competence (i.e., how efficiently and effectively the activity is taken) of the subsidiary. Subsidiary competence has a strong association with subsidiary roles and without considering this dimension the scope alone may not determine the subsidiary role accurately (Benito et al., 2003). In contrast, Pedersen (2006) finds a negative relationship of competence with scope, and speculates that subsidiaries with high levels of competence may be narrow in scope and vice versa.

The contemporary research uses the scope framework in different ways. For example, the scope dimensions and dynamic capabilities perspective are used to study the subsidiary competence and capabilities (see Filippov & Duysters, 2011). The scope framework is relevant to study subsidiary evolution through regional economic integration in terms of regional integration causing changes in the various strategies of subsidiaries (see Filippov & Duysters, 2012). Building on the Miniature Replica of the scope framework, Reilly and Sharkey (2014) argue how the Miniature Replicas can develop lateral linkages and innovate through encompassing the entire value chain in one location. Along with the related concepts (i.e., with competence and capabilities - see Schmid, 2003), the framework is used to examine the relationship of subsidiary developmental factors with the subsidiary knowledge sharing (see Filippov, 2014).

The Competence-Strategic Importance Framework: This framework takes a configurational approach and also implicitly recognises the potential changes in

subsidiary roles. Bartlett and Ghoshal (1986) found that while subsidiaries aspired to become globally competitive and were well informed about what to do to become globally competitive, they overlooked the organisational challenges. Therefore, it was less clear to them on how to organise to be globally competitive.

This framework identified two factors: strategic factors (i.e., the strategic importance of the subsidiary host location), and organisational factors (i.e., the subsidiary competence) and proposed a classification of national subsidiaries. It was posited that each subsidiary plays a unique role in the MNE, which differs on the extent of the subsidiary competencies and location advantages, and, consequently, in terms of the subsidiary's ability to achieve the MNE's global strategic objectives. The four-part subsidiary classification was developed on capacities along strategic importance and competence: (i) Implementer (low strategic importance, low competence); (ii) Contributor (low strategic importance, high competence); (iii) Strategic Leader (high strategic importance, high competence); and, (iv) Black Hole (high strategic importance, low competence) (Bartlett & Ghoshal, 1986).

This classification of national subsidiaries is widely accepted today and appears in a majority of the international business textbooks taught around the world (Rugman, Verbeke, & Yuan, 2011). It, however, cannot be avoided that the classification is based only on two dimensions (Enright & Subramanian, 2007), and the typology reflects the MNEs' situation around 20 years ago. The business environment has been changing (Benito et al., 2003; Bouquet & Birkinshaw, 2008; Kedia & Mukherjee, 2009), therefore for the knowledge to advance in the right direction, contemporary research suggests a re-conceptualisation of the competence-strategic importance framework (see Meyer & Yu-Shan, 2014; Rugman, Verbeke, & Yuan, 2011).

Rugman, Verbeke, and Yuan (2011) offer a re-conceptualisation of this framework across the following two overlooked issues:

- (i) The framework assumes that national subsidiaries take aggregate and unique roles that span the entire value-chain, overlooking that many national subsidiaries take specialized narrow roles. For example, a subsidiary as a ‘strategic leader’ in sales, can also be an ‘implementer’ in R&D, in value-chains where bundling of internal and external resources is feasible (see Jensen & Pedersen, 2011). Individual subsidiaries can differ in their capabilities and can play a number of different roles in different value-chain activities across the MNE;
- (ii) With respect to subsidiary roles and changes in roles, the framework ignores the regional integration, which reduces the institutional distance among countries (see Hutzschenreuter, Voll, & Verbeke, 2011), giving subsidiaries an easy access to the regional locational advantages, opportunities to bundle resources, and enhance competencies and capabilities.

It is also argued that national subsidiaries rarely exist at least in the developed world. It has long been argued that national subsidiaries are becoming ‘endangered species’, and are being replaced by specialized subsidiaries (with discrete value-added tasks). The need to have political links, and strong subsidiary leadership (as needed in case of national subsidiaries) is now diminishing in the developed world (Birkinshaw, 1995; Birkinshaw & Pedersen, 2010). With respect to subsidiary competencies, the

framework is also criticised that it ignores the subsidiary entry mode. Entry mode influences subsidiary competencies and their roles (Cantwell & Mudambi, 2005).

The re-conceptualisation of Rugman, Verbeke, and Nguyen (2011) finds empirical support in the contemporary research (see Glückler, 2014). However, at the same time, the contemporary research benefits from the Bartlett and Ghoshal framework's dimensions. Subsidiary competence is widely considered a major factor determining subsidiary roles (see Zhang, Jiang, & Cantwell, 2014). Location's strategic importance is also widely taken as a base argument by researchers interested in business network theory particularly the literature interested in subsidiary's external embeddedness (see Andersson et al., 2014; Najafi-Tavani et al., 2014).

The Integration-Responsiveness Framework. This framework takes a contingency approach, which suggests that organisations are contingent upon the environments. Organisations balance their internal needs and align with the environments in which they operate (Hofer, 1975; Morgan, 2006). In case of the MNEs, it is about a balance in the environments (internal or external) and the global strategies. The framework is built on the work of Prahalad (1976), Doz (1976), Prahalad and Doz (1987), and Bartlett and Ghoshal (1989), which focus on the competitive environmental factors pressing MNEs to integrate globally and respond locally. The framework assesses the relative importance of the two conflicting demands (Prahalad & Doz, 1987).

The two conflicting demands that are global integration [subsidiary goal congruence with MNE or integrating/standardising operations in the global market], and local responsiveness [responding to the local market demands] exert pressures on the MNE in the opposite directions (Benito, 2005). Local responsiveness suggests that the subsidiary customizes strategy to adapt to the changing local market demands. Global

integration suggests that the subsidiary standardises and exploits parent company advantages in the markets it serves (Ghoshal & Nohria, 1989).

Jarillo and Martínez (1990) across integration-responsiveness (I-R) examined strategies of 50 MNE subsidiaries in Spain. Three subsidiary types emerged: (i) Autonomous (high local responsiveness, low global integration); (ii) Active (high local responsiveness, high global integration); and, (iii) Receptive (low local responsiveness, high global integration). Other studies, e.g. Roth and Morrison (1990), and Johnson (1995) also tested the I-R framework and found support for it.

Jarillo and Martinez could not find a subsidiary with the low local responsiveness and low global integration in their study. This motivated exploration of that particular subsidiary type. Taggart (1997c), for example, examined if there could be subsidiaries with the low local responsiveness and low global integration. Taggart identified such a subsidiary type that he named 'Quiescent' in his study of 171 MNE subsidiaries in the UK. Taggart found that some subsidiaries aspired to change their strategies. For example, a Quiescent subsidiary was looking forward to becoming highly locally responsive (e.g. like the Autonomous subsidiary type), but such a shift required high subsidiary autonomy and performance-based bargaining power within the MNE, which the subsidiary was lacking. Taggart (1998) in his other publication revealed that the Quiescent strategy was a result of a strategy shift. A number of 'Active' and 'Autonomous' subsidiaries got downgraded to this strategy resulting partly from their poor performance, but also due to, disintegration from the MNE internal and global networks, inability to compete in the local market, and the rejection of investment proposals sent to the MNE. The subsidiaries clearly were risking a run down and closure in the future. However, such shifts were rather spontaneous and not knowingly accepted by the subsidiary or applied by the HQ. Taggart (1998) recognised changes in the subsidiary roles, which the original I-R

framework did not. Taggart (1998) in relation to the work of Jarillo and Martinez argued that the emergence of a new subsidiary type was a reflection of the difference in strategies of the Spanish and the UK subsidiaries.

The I-R framework as a whole is considered by many a robust framework to study, the subsidiary strategy (Sambharya, Kumaraswamy, & Banarjee, 2005), international expansion strategies (Andersen & Joshi, 2008), and strategy and management in the modern MNEs (Lin & Hsieh, 2010a, 2010b). Due to its focus on environmental dimensions, the framework is considered to offer a broader scope of understanding MNE strategy (Westney & Zaheer, 2009). The framework finds empirical support in both the developed and emerging economies (Fan & Zhu, 2014).

This does not mean that the framework is without its weaknesses. The framework suggests that balancing and/or adapting to an environmental setting will lead/link to a specific subsidiary strategy. This is not necessarily true in all cases as subsidiaries differ in their strategies and environments (Zentes, Morschett, & Schramm-Klein, 2008). Haugland (2010) completely rejects the framework. Criticising the earlier works and specifically of Lin & Hsieh (cited above), Haugland questions the level of the research contributions that can be offered by the I-R framework (as he thinks they are limited), and the framework's ability to empirically test subsidiary strategy and management. Haugland suggests that future research should move beyond studying international strategies, subsidiary roles, and theory-building based on 2x2 matrix frameworks.

The I-R framework is also criticised in terms of overlooking the variations in local contexts among subsidiaries within an MNE. It only sees the degree of local adaptation vs. global integration, and does not sufficiently recognise the complexities in adaptation, or explains how MNEs adapt to various local contexts at one time (Meyer et al., 2011). Contemporary research suggests refining and reconceptualising the I-R framework.

Meyer and Estrin (2014) propose a revised IRE framework with a third dimension (i.e., selling to local vs. export markets) represented by exports (E). The authors argue that subsidiary strategy is heterogeneous, which the original I-R overlooks, and that balancing the local responsiveness and global integration is rather difficult. The authors find empirical support for their framework and conclude that local responsiveness and export orientation strategies are contingent on the subsidiary local context.

Some researchers adopt interesting ways of using the I-R framework. For example, Kasper et al. (2009) studies associations of subsidiary strategies with subsidiary knowledge sharing practices. The authors find different knowledge sharing practices across the various subsidiary strategy types. The authors offer a typology based on their integration of the I-R and knowledge flows framework.

The Knowledge Flows Framework: This framework takes a contingency approach. The underlying argument of the framework is that HQ control over subsidiaries is contingent upon varying subsidiary capacities to provide knowledge to the MNE (outflows), and receive knowledge from the MNE (inflows) (Gupta & Govindarajan, 1991). Based on such variations a four-part subsidiary classification is offered: (i) Global Innovator (high outflow, low inflow); (ii) Integrated Player (high outflow, high inflow); (iii) Implementer (low outflow, high inflow); and, (iv) Local Innovator (low outflow, low inflow) (Gupta & Govindarajan, 1991, p. 773).

Gupta and Govindarajan (1994) find support for the differentiated control and strategic role with respect to the subsidiary internal knowledge flows. The authors speculate that subsidiary knowledge outflows are likely the result of autonomous initiatives than the MNE directives. From the perspective of the evolution of subsidiary

roles, this is an important speculation. Harzing and Noorderhaven (2006b) also find support for the knowledge flows framework.

Examining what determines intra-MNE knowledge patterns, Gupta and Govindarajan (2000) test a number of hypotheses. The authors use the communication theory and find positive associations of: (i) knowledge outflows with the value of subsidiary knowledge stock, and motivation to share knowledge; (ii) knowledge inflows with the motivation to acquire knowledge, and the absorptive capacity; and, (iii) both knowledge inflows and outflows with the quality of transmission channels.

The research uses the knowledge flows framework in a variety of ways. For example, based on the knowledge flows framework, Randoy and Li (1998) develop a resource flow (i.e., capital, product, and knowledge) classification. The authors offer a four-part classification: (i) resource provider (low inflow, high outflow); (ii) resource networker (high inflow, high outflow); (iii) resource independent (low inflow, low outflow); and, (iv) resource user (high inflow, low outflow). Monteiro, Arvidsson, and Birkinshaw (2008) identify the knowledge flows framework's 'Local Innovator' as an internally (knowledge) isolated subsidiary and examine the performance implications of internal isolation on that subsidiary. In a similar vein, Schmid and Hefter (2014) develop a customised performance evaluation model and argue that each knowledge flows framework's subsidiary type should be evaluated differently in terms of their relevance, content and process. Schmid and Hefter argue that because each subsidiary type faces different circumstances, a uniform performance evaluation system is therefore not appropriate.

Kasper et al. (2009)'s study on subsidiary strategy across the I-R framework in relation to their knowledge sharing practices find that the 'Local Innovator' subsidiary had a high local responsiveness and low global integration, 'Integrated Players' high local

responsiveness and high global integration, and the ‘Implementor’ low local responsiveness and high global integration. This study addresses some issues raised in the earlier research. For example, it is argued that it is hard to infer from the knowledge flows framework a subsidiary strategy as the framework does not provide any guidance in this regard (Enright & Subramanian, 2007). By integrating the two frameworks, Kasper et al. offer some insights.

Mudambi and Navarra (2004) link subsidiary knowledge flows patterns with subsidiary bargaining power. The authors find that subsidiaries involved heavily in knowledge outflows to their MNE units experience a high bargaining power within the MNE, as compared to those heavily involved in outflows to the other (external) firms. The authors describe bargaining power as some sort of ownership over subsidiary decision rights, which cannot be vetoed by the MNE.

A key limitation of the knowledge flows framework is that it does not talk about knowledge flows outside the MNE. Wang et al. (2009) argue that subsidiaries are embedded both in the internal as well as the local (external) contexts. The authors offer a dual role (knowledge flows based) typology. While the authors extend the knowledge flows framework they limit the subsidiary external embeddedness to the local environment, whereas it could also be the regional or global environment, where a subsidiary may have knowledge/resource exchanges.

The recent research draws heavily on knowledge flows. Li and Lee (2014) using a resource-based and dynamic capabilities perspective show positive associations of knowledge inflows with focal subsidiary capability development. Colakoglu, Yamao, and Lepak (2014) find local knowledge inflows more effective in developing the focal subsidiary knowledge creation capabilities than the internal knowledge inflows. Crespo, Griffith, and Lages (2014) find that the explicitness of knowledge and intra-MNE

communication increases subsidiary knowledge outflows to the MNE, which then increases the overall MNE financial performance. Perri and Andersson (2014) argue that subsidiary external knowledge outflows are reciprocated with internal knowledge inflows, however, where the focal subsidiary's knowledge value is high, such reciprocal relationship are likely to reduce or cease.

A Subsidiary Typology by Birkinshaw and Morrison. Birkinshaw and Morrison (1995) organise the previous subsidiary classifications and offer a three-part subsidiary typology: (i) Local Implementer; (ii) Specialized Contributor; and, (iii) World Mandate. The authors map their role typology on the previous typologies (see Table 2.2). In terms of scope, Local Implementer subsidiaries are described as having a limited product, value-added, and geographical scope. Specialized Contributor subsidiaries as possessing expertise in specific functions and highly interdependent on the internal MNE network. World Mandate subsidiaries as having an unconstrained product and value-added scope, and regional/global responsibilities. In terms of the strategy, the local Implementer subsidiaries are described as polycentric and following primarily a locally responsive strategy, whereas World Mandate and Specialised Contributor subsidiaries as geocentric and following mainly an integration strategy.

This study by Birkinshaw and Morrison configures the subsidiary typology with the MNE structural context. Structural context dimensions identified are: (i) subsidiary vertical relationships (bureaucratic control, subsidiary autonomy, normative integration); (ii) subsidiary lateral relationships (product flows, value-chain configuration); and, (iii) subsidiary specialization (subsidiary capability). 'World Mandate' subsidiaries are found to have the highest level of strategic autonomy, and lowest internal product flows. A high internationally configured value-chain is found in both 'World Mandate' and 'Specialized

Contributor’ subsidiaries. ‘Specialized Contributor’ subsidiaries show the lowest performance levels (Birkinshaw & Morrison, 1995).

Table 2.2: Subsidiary Role Typologies (Birkinshaw and Morrison)

Framework	Authors	World Mandate	Specialized Contributor	Local Implementer
Scope	White and Poynter (1984)	Global Mandate	Rationalised Manufacturer, Product Specialist	Miniature Replica
Competence-Strategic Importance	Bartlett and Ghoshal (1986)	Strategic Leader	Contributor	Implementer
Integration-Responsiveness	Jarillo and Martínez (1990)	Active	Receptive	Autonomous
Knowledge Flows	Gupta and Govindarajan (1991)	Integrated Player	Global Innovator	Local Innovator, Implementor

Source: Adapted from Birkinshaw and Morrison (1995, Table 1)

This study provides a useful description of the existing typologies, however, the classification criteria adopted is based on the notion (similar to the Competence-Strategic Importance’s classification) that a subsidiary may only play one unique role at a time. Specifically, the survey question used in this study is categorical and does not allow the respondents to indicate if a subsidiary is simultaneously serving a local, global or internal (or any combination of the three) market. This is, however, also because the existing typologies (on which this typology is mapped) are based on a similar criterion.

Birkinshaw and Morrison’s subsidiary typology has also received some moderate level criticism. For example, Harzing and Noorderhaven (2006b) argue that the Gupta and Govindarajan (1991) knowledge flows’ subsidiaries (i.e., the ‘Local Innovator’ and ‘Implementor’) vary in knowledge sharing capacities. For this reason, they cannot be grouped under the Birkinshaw and Morrison’s ‘Local Implementer’ type. Harzing and

Noorderhaven also argue that the ‘Global Innovator’ knowledge sharing subsidiary is not as integrated as the ‘Specialized Contributor’ subsidiary, but matches better with the ‘World Mandate’ subsidiary. Also, the ‘Integrated Player’ knowledge sharing subsidiary matches better with the ‘Specialized Contributor’; and the ‘Implementor’ with the ‘Local Implementer’ subsidiary.

In a similar vein, Taggart (1997a, p. 55) suggests that the scope framework’s ‘Product Specialist’ matches better with the ‘World Mandate’ rather than the ‘Specialized Contributor’. Taggart also suggests that the I-R’s ‘Active’ subsidiary and the Competence-Strategic Importance’s ‘Strategic Leader’ are not a match with the Birkinshaw and Morrison’s ‘World Mandate’ subsidiary. Taggart suggests that the two types match better with the scope framework’s ‘Strategic Independent’, which is not included in the Birkinshaw and Morrison’s comparisons.

Obviously the grouping by Birkinshaw and Morrison does not match perfectly with the previous typologies as they had different purposes and research questions. The study, however, does a good job in summarising and integrating the previous subsidiary typologies.

With regard to the structural context’s elements (i.e., autonomy, linkages) some studies conduct further examinations. Corado, Biscaya, and Nevado (2002) argue that an increased autonomy does not necessarily mean an improved role in the MNE. The authors argue that the link between the subsidiary autonomy and subsidiary role can be the other way around. The authors show that the subsidiary competence and subsidiary embeddedness together determine the subsidiary level of autonomy. Kawai and Strange (2014) argue that subsidiary autonomy impact over subsidiary performance is contingent upon factors such as technological uncertainty and high expatriate involvement. With respect to subsidiary vertical linkages and autonomy, it is found that HQ trust and internal

embeddedness are critical to gaining subsidiary autonomy (Ambos, Asakawa, & Ambos, 2011). Chiao and Ying (2013) find negative links of autonomy with the internal network range and strength, but positive links with the external network range and strength. Palmié, Keupp, and Gassmann (2014) find positive links of competence development with the subsidiary lateral and vertical linkages, low levels of strategic autonomy, and high levels of operational autonomy.

The Autonomy and Procedural Justice Framework. Taggart (1997a) identify alternative structural drivers of subsidiary roles. This study (implicitly) draws on the behavioural approach (see Mahoney, 2005) and offers a framework, which combines subsidiary autonomy, and the perceived fairness with respect to the social processes involving the subsidiary and the MNE (i.e., procedural justice, see Kim & Mauborgne, 1991, 1996). The core argument is that while subsidiaries need a certain level of autonomy to respond to the threats and opportunities in the environments they operate in, their level of discretion is affected by the behavioural patterns/mechanisms such as HQ-subsidiary communication and HQ control. Such social processes influence the subsidiary bargaining power, and their role in the network (Garnier, 1982; Picard, 1980; Prahalad, 1976; Taggart, 1997a).

The framework offers a four-part subsidiary classification: (i) Vassal (low procedural justice, low autonomy); (ii) Collaborator (high procedural justice, low autonomy); (iii) Militant (low procedural justice, high autonomy); and, (iv) Partner (high procedural justice, high autonomy). This study also links the autonomy-procedural justice dimensions to the coordination-configuration (see Porter, 1986), I-R, and the scope frameworks. This exercise allowed the author to make an interesting speculative discussion around how subsidiaries may move from one strategy type to another.

Taggart (1999a) tests the A-PJ classification across performance (e.g. sales, market share, product range), and risk (e.g. competitors, customers) factors. The study finds theoretical support for the framework as well as support for its practicability. It is found that the subsidiary managers readily understand the A-PJ concepts.

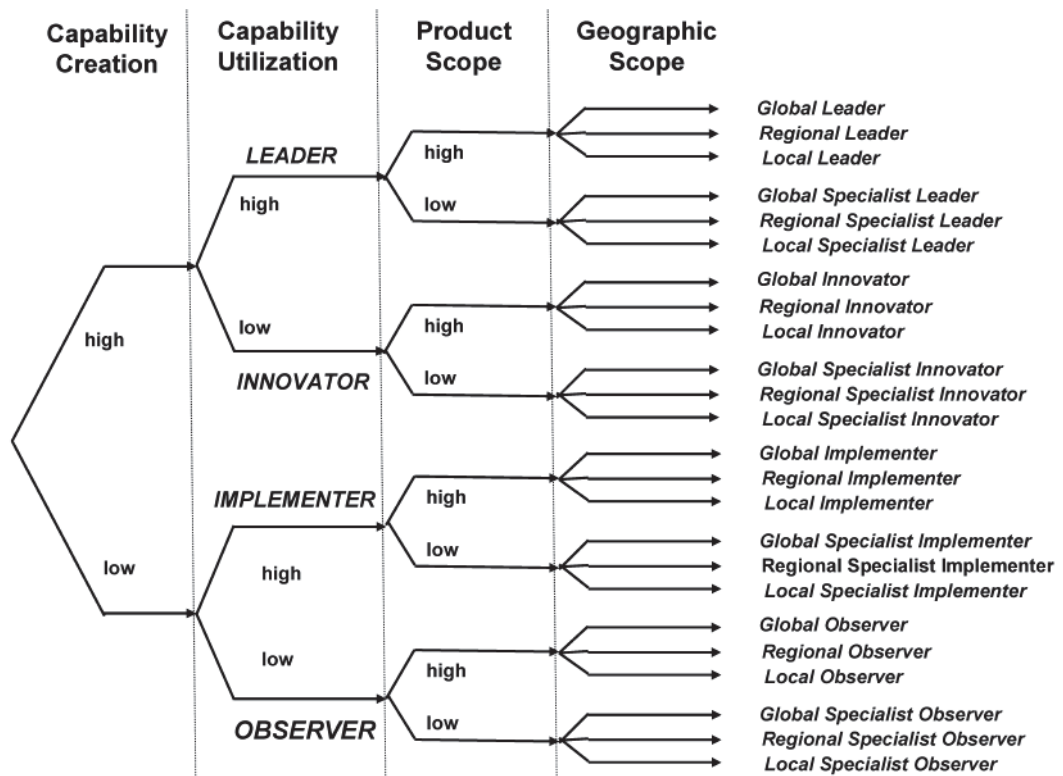
The research discusses autonomy and procedural justice concepts in a variety of ways. Brock, Barry, and Thomas (2000) argue that while autonomy and procedural justice are largely influenced by the HQ, the varying cultures in which the MNE network is embedded also matter. The national culture may favour a top-down control and/or the organisational culture facilitate a bottom-up power. Couto, Gonçalves, and Fortuna (2003) integrate the scope and the A-PJ frameworks and show (in a multi-country study) that national culture is a major determinant of subsidiary roles.

Rugman and Verbeke (2001) argue that mobility barriers associated with subsidiary-specific advantages can complicate HQ-subsidary relationships and hence procedural justice may be difficult to achieve in an MNE. Perceived procedural justice is linked to subsidiary evolution in that it is positively linked to subsidiary entrepreneurial initiatives (see Tseng, Fong, & Su, 2004). Mirchandani and Lederer (2005) show that higher perceptions of procedural justice lead to a better and effective subsidiary planning.

Chiang, Chang, Hsu, and Wang (2008) show that procedural justice leads to better subsidiary financial performance. Mirchandani and Lederer (2014) show that a high strategic autonomy leads to a sense of high procedural justice. For better subsidiary performance, high levels of subsidiary autonomy and procedural justice are critical. Verbeke, Bachor, and Nguyen (2013) show that procedural justice is positively linked to effective internal knowledge transfer and adoption.

An Organizing Framework by Enright and Subramanian. Enright and Subramanian (2007) offer an organizing subsidiary role framework. The framework draws on four dimensions: internal capability creation, internal capability utilization, subsidiary product scope, and the subsidiary market scope. The authors argue that with these dimensions the previous frameworks are combined in a single framework. The authors propose that subsidiaries can be of four types: (i) Leader; (ii) Innovator; (iii) Implementer; and, (iv) Observer. Where the product scope is high, each of these four types lead to three further subtypes: (i) *Global*; (ii) *Regional*; and, (iv) *Local*, and where the product scope is low, the three further subtypes are: (i) *Global Specialist*; (ii) *Regional Specialist*; and, (iii) *Local Specialist*. A 24-part subsidiary classification is proposed (see Figure 2.1).

Figure 2.1: An Organizing Subsidiary Role Framework by Enright and Subramanian



Source: Enright and Subramanian (2007, Figure 2)

The authors argue that earlier subsidiary role frameworks' typologies emerged mainly as a *second-order* effect. The earlier studies used either:

- (i) An MNE strategy-based (e.g. integration-responsiveness) approach. This led to a structured-based approach where the subsidiary typologies were developed empirically and enriched through examining variations across their structural drivers (e.g. classification of Birkinshaw and Morrison (1995), and the A-PJ framework); or,
- (ii) An MNE process-based approach (e.g. the scope framework), where it was posited that a subsidiary role develops with the evolution of the MNE. Subsidiaries initially setup as export offices and later evolve to branch plants or MNE replicas.

The authors argue that earlier frameworks were based on *two dimensions* drawn on a two by two matrix controlling the subsidiary types to a maximum four. The studies were biased towards manufacturing subsidiaries. The roles of subsidiaries in the services industries were not sufficiently captured (also see Manolopoulos, 2008). The authors argue that the existing frameworks are based on two different questions used interchangeably: (i) what types of strategies (e.g. locally responsive) exist; and, (ii) what types of subsidiaries (e.g. rationalized manufacturer) exist? Such an approach either limits the subsidiary types to the subsidiary strategies adopted or vice versa (Enright & Subramanian, 2007). With respect to the two-dimensional dichotomy, the authors argue that the existing studies have mainly used an 'essentialist' theoretical approach (see McKelvey, 1982) which is not appropriate to develop typologies.

The authors also show concern for the methodological approaches adopted, e.g. a good number of typologies have been developed using case studies. A well-known issue with case studies is that their findings are difficult to generalise and replicate. Also most of the studies evidence has been based on small or peripheral economies leading to biases towards subsidiaries created with a particular location-specific motive or a firm-specific need (Enright & Subramanian, 2007; Hartigan, 1975). The authors argue that factors associated with changes in subsidiary roles, and other contingent contextual factors have been ignored (e.g. local environment, industry factors, MNE internal structures and systems, MNE strategy, and subsidiary strategy) (Enright & Subramanian, 2007).

The authors conclude with a sweeping statement that the existing approaches *confuse as much as they clarify* (Enright & Subramanian, 2007, p. 902). Clearly this study is one of the most heavily criticising the subsidiary roles' stream. How far the authors have addressed the issues identified above in their organising framework will not be discussed here. The authors themselves have dutifully acknowledged that their study does not establish the empirical validity and that their conceptualisation also ignores a number of other variables (e.g. autonomy) of the existing frameworks. This is fine, however⁸, the authors did not make it clear how realistic a broad 24-part subsidiary typology is. Clearly, the more the dimensions are, the wider the conceptualisation is. This is a probability sampling and pairwise analysis principle. Also, it is not clear if the 24-part theory-based typology on four dimensions can be a complete subsidiary typology. As per the framework, the 'Leader' subsidiary with high product scope is a leader in all the three markets. Can there be a static situation where a 'Leader' subsidiary is say the leader in the local market, but 'Specialist Leader' in the other markets or that a subsidiary type does not serve outside the local market? The answer is yes. In reality it can happen, but

⁸ Literature searching showed that this study's framework was neither tested nor criticised as of date (2015). The criticism that follows here is, therefore, this thesis's own.

such is not recognised by this framework. The framework's core assumption is also rather simplistic that a subsidiary with high levels of capability creation and utilisation and a broad product scope will simultaneously be a local, regional and global leader. Levels of capability creation, utilization, and product scope are logically more relative (to other subsidiaries in the MNE network) rather than absolute.

Similarly, the authors do not consider the moderate capacity of subsidiaries (see discussion in Cavanagh & Freeman, 2012). The authors ignore the fact that they also adopted the same (as the previous studies') convenient low-high based conceptualisation. It would be valuable if the study offered a more realistic way of conceptualising subsidiary types across multiple dimensions. The study is based on four dimensions. If five dimensions were taken, the conceptualised subsidiary types (based on the same sampling procedure) would be 48, which is rather unrealistic.

Despite the criticism above, what this study proposes for the future research is interesting. It is proposed that large samples should be used for testing multidimensional frameworks; subsidiary types and strategies may be integrated (mixed or matched) to delineate novel subsidiary strategy/types; and multiple roles taking across various value-chains be considered. Overall this is a very useful study for researchers interested in subsidiary roles and strategies, as the study summarises all the previous classifications frameworks and identifies their strengths, weaknesses, and avenues for future research. The study is often cited (see Adeyemi, Slepnirov, Wæhrens, Boer, & Wu, 2014; Cavanagh & Freeman, 2012; Chen et al., 2013; Reilly & Sharkey, 2014; Rugman, Verbeke, & Yuan, 2011; Strutzenberger & Ambos, 2014), however, rather more in a descriptive way.

Conclusions (subsidiary roles). Key lessons learned from the subsidiary roles' literature review are as follows:

1. Research has produced a number of subsidiary classification frameworks. The frameworks have followed either an MNE strategy or an MNE process-based approach (Enright & Subramanian, 2007). This has been useful, however, a number of alternate subsidiary types are yet to be explored (Enright & Subramanian, 2007; Yip, 1995; Yip & Hult, 2012).
2. Existing subsidiary classifications primarily assume that the headquarters assign a subsidiary strategy or role, and that subsidiaries may only play one role at a time. The reality is that subsidiaries can simultaneously take the MNE assigned role as well as its own strategy (Birkinshaw, 2014; Enright & Subramanian, 2007).
3. Existing subsidiary role frameworks lack a theoretical basis and have mostly taken either a contingency or a configurational approach. The studies are mainly empirical (Enright & Subramanian, 2007). This literature review is consistent with other studies suggesting a lack of theory in the subsidiary roles stream (see Schmid, 2004; Schmid et al., 2014). The review also shows that every role framework drew on a new set of dimensions. It is argued that the frameworks are disconnected to the previous ones (see Hoffman, 1994). It is argued that the frameworks do not establish as to how the dimensions (the frameworks draw on) are critical to the subsidiary management (see Morschett et al., 2015).
4. Subsidiary classification frameworks are mainly two-dimensional. Subsidiaries differ across a number of dimensions (Enright & Subramanian, 2007; Haugland, 2010; Morschett et al., 2015) rather than two dimensions only.

5. The concepts in the frameworks are operationalised on extreme ends of the measure (low-high and there is no moderate option), and so do not prove useful when studying individual subsidiaries. Subsidiaries in their developmental life cycles (resources and capabilities, performance), scope of activity (product, market, value-added) and strategies (e.g. exploiting, seeking, global integration, local responsiveness) go through a variety of stages, such as from low, to moderate, to high (Cavanagh & Freeman, 2012).
6. Subsidiary roles change over time (Birkinshaw, 1997, 1999, 2014; Birkinshaw & Hood, 1998; Birkinshaw et al., 1998; Chen et al., 2013; Filippov & Duysters, 2012; Malnight, 1995, 1996). While a number of subsidiary classifications implicitly assume that subsidiaries shift strategies or change roles over time, they do not focus on the mechanisms/drivers through which subsidiary roles evolve or explain how the subsidiary roles evolve.
7. Subsidiary classification frameworks should be multidimensional and for that a large sample (drawn on multiple industries) is much appropriate (Enright & Subramanian, 2007).

Evolution of Subsidiary Roles

It is broadly understood that subsidiaries vary in terms of the roles they play. This variation reflects various levels of subsidiary development and opportunities to develop. Subsidiaries have unique developmental contexts. A developmental context may be described as various firm-specific (e.g. MNE strategy and nationality), subsidiary-

specific (e.g. subsidiary strategy and resources), and location-specific (e.g. industry and relationships) factors, which can influence subsidiary roles and its overall development.

This section is interested in factors that influence subsidiary roles and its overall development. This section reviews the evolution of subsidiary roles literature and also some concepts from other subsidiary literature streams in the context of subsidiary development. This section is divided into two parts. The first part discusses subsidiary evolution. The second part focuses on those particular aspects of subsidiary evolution which are relevant to this thesis's research objectives. The section ends with a conclusion section that highlights key lessons learned from the evolution of subsidiary roles literature.

Subsidiary Evolution. There is much evidence suggesting that subsidiaries evolve over time (see Birkinshaw & Hood, 1997; Dimitratos, Liouka, Ross, & Young, 2009). A range of factors drives subsidiary evolution. As discussed earlier, subsidiary roles studies mainly view the subsidiary evolution as MNE-driven. The evolution is either the outcome of a process (i.e., evolution of the MNE leading to the evolution of subsidiaries) or outcome of the MNE-strategy (MNE strategy shifts leading to shifts in the subsidiary strategy) (Enright & Subramanian, 2007; Taggart, 1998; White & Poynter, 1984). It is because the first studies have assumed that subsidiaries are mainly agents of the headquarters with defined roles and charters (Bartlett & Ghoshal, 1986; Paterson & Brock, 2002). It is later observed that subsidiaries may also develop through their own specialized resources and entrepreneurial initiatives (Birkinshaw, 1997), and the local environment (Birkinshaw & Hood, 1998). Today there is a broader consensus that the three factors: the MNE, the subsidiary itself, and the subsidiary local environment, determine subsidiary evolution (Birkinshaw, 2014; Birkinshaw & Hood, 1998;

Birkinshaw et al., 1998; Birkinshaw et al., 2005; Birkinshaw & Pedersen, 2010; Dörrenbächer & Gammelgaard, 2006; Schmid et al., 2014; Strutzenberger & Ambos, 2014; Verbeke, Chrisman, & Yuan, 2007).

Birkinshaw and Hood (1998), offer an organising subsidiary evolution framework built on the three determinants: *head office assignment*, *the subsidiary choice*, and the *local environment determinism*. The base argument is that while each of the three factors partly determine a subsidiary role, it is actually the cyclical interactions of the three, which determine the subsidiary role at a given point in time. The authors identify two drivers of subsidiary evolution: subsidiary charters and subsidiary capabilities. Changes (i.e., enhancement/depletion of capabilities and establishment/loss of charters) along either of the two, result in a change in subsidiary roles (Birkinshaw & Hood, 1998). The three determinants are discussed as follows:

The *head office assignment* perspective takes headquarters as the primary driver of subsidiary evolution (Chang, 1995; Malnight, 1996). The perspective suggests that headquarters' strategic decisions (e.g. control mechanisms, or directives) drive the subsidiary development. The perspective conceptualises a structural and a behavioural context imposed by the HQ through which subsidiary managers are induced to act in ways that suit the HQ and through which the HQ may suppress or support subsidiary development (Birkinshaw et al., 1998; Burgelman, 1983; Filippov & Duysters, 2014; Verbeke et al., 2007).

There are two perspectives to the HQ development process: (i) the Product Life Cycle Model (PLC) (rooted in the Transaction Cost theory) (Vernon, 1966); and, (ii) the Internationalization Process (IP) (rooted in the Cognitive and Behavioural theories) (Johanson & Vahlne, 1977, 2009). As per the PLC, subsidiary development is driven by the parent-subsidiary technology transfer and the lower production costs in the host

country. Subsidiary takes an exploitative role and sells to/makes products for the local market (Birkinshaw & Hood, 1998).

As per the IP, subsidiary development is driven through HQ management cognitive limitations and their increasing commitment to the foreign markets. Subsidiary draws on MNE investment, takes a seeking/learning role and reverses the knowledge back to the MNE. Under both the PLC and IP, subsidiary acts as the MNE subordinate (Birkinshaw & Hood, 1998). The HQ-driven development process has received empirical support (Young, Hood, & Hamill, 1988). The studies show that subsidiary role changes and such is motivated by the subsidiary local economic conditions (Almor & Hirsch, 1992), and the track record (Boddewyn, 1983). The results show that the HQ is not the sole determinant of subsidiary development (Birkinshaw & Hood, 1998).

Subsidiary choice perspective views the subsidiary as having the ability to shape its own development (Birkinshaw, 1997). The perspective draws on the characteristics of the subsidiary such as the subsidiary's organisational structure, manager, and culture (Birkinshaw & Hood, 1998; Verbeke et al., 2007). There are two perspectives to the subsidiary driven development process: (i) the network conceptualisation of the MNE (rooted in the network and social exchange theory); and, (ii) the decision process (rooted in the firm theory). As per the network perspective subsidiary development is driven as a result of the subsidiary's network-based loose coupling, which allows subsidiaries to develop their own resources. Having much in common with the RBV, this perspective suggests that subsidiary development is driven by the subsidiary resource development, which leads to subsidiaries gaining responsibilities reflective of their attained power positions in the MNE. Subsidiary becomes equal partner with the HQ, enjoys the status of a node in the network, offers its own specific advantages to the MNE, and is embedded in the local network (Birkinshaw & Hood, 1998). The decision process emphasizes the

subsidiary managers' behaviours, in particular, their autonomous actions (Birkinshaw & Hood, 1998). Of central importance to the subsidiary choice view is the subsidiary initiative assumed in response to the changes in the environments the subsidiary operates in. The term 'subsidiary initiatives' is often used interchangeably with the 'subsidiary choice' view of development (see Birkinshaw, 1997; Filippov & Duysters, 2014; Pedersen, 2006; Verbeke et al., 2007).

The *local environment determinism* view suggests that subsidiaries adapt to, and their activity influenced by their unique environments such as customers, suppliers, competitors, and the local bodies (Birkinshaw & Hood, 1998). Grounded in the economic geography, and trade theories, this perspective suggests that subsidiary development is stimulated by the growth of the environment in which the subsidiary operates. Subsidiary participates in local clusters, contributes to the local economic development, and seeks local knowledge and transfers it to the MNE (Birkinshaw & Hood, 1998). This perspective has received some support recently (discussed in the following section).

Empirical Evidence. Birkinshaw and Hood (1997) study the development process of thirteen subsidiaries in Scotland and Canada. Two developmental paths are identified: (i) product specialist; and, (ii) world mandates. The study shows that to become either of the two and/or to sustain either of the positions, a continuous high level of subsidiary initiative is required. The study concludes that subsidiary development is a function of the resource accumulation from the HQ, the subsidiary and the local environment.

A number of other studies offer insights into the subsidiary development process. Delany (2000) study subsidiary initiatives of twenty-eight foreign subsidiaries in Ireland. Drawing on the scope framework, Delany argue that subsidiaries develop in four stages: (i) Basic Mandate; (ii) Enhanced Mandate; (iii) Product Specialist; and, (iv) Strategic

Independent. The study concludes that for subsidiaries to develop, a high-level initiative taking is required in each stage.

With respect to the local environment, it is argued that the local competition enhances a firm's innovation, capability creation, and the firm's as well as the entire industry's competitiveness (Porter, 1990). Birkinshaw et al. (1998) do not find such links. Birkinshaw et al. (1998) argue that a foreign subsidiary⁹ is different from a typical firm in that a subsidiary is constrained in many ways such as autonomy, value-added capacity, and own contracting opportunity. Holm, Malmberg, and Sölvell (2003) show a positive link of the local environment dynamism with the subsidiary competence development. The authors also show that such dynamic environment disintegrates the subsidiary from the MNE. From this finding, one can infer why Birkinshaw et al. (1998) do not find a link between local industry dynamism and subsidiary competence development. It is because they were not studying competence development, but, in fact, the contributory role, which is about competence-transfer to the MNE. Although related the two concepts are different, e.g. it is not necessary that a competent subsidiary would be contributing too. What can be inferred from this discussion is that industry dynamism may enhance the subsidiary competence-creation, but suppresses the subsidiary competence-transfer. Overall a number of studies show support for the influences of local/regional environmental factors on subsidiary development (e.g. Benito et al., 2003; Filippov & Duysters, 2012; Fuller, 2005; Pedersen, 2006).

The first of empirical examination of the organising subsidiary evolution framework is offered by Pedersen (2006). With regard to the indicators of subsidiary development, the author takes three variables: subsidiary scope, subsidiary competence, and the MNE-subsidiary interdependence. With regard to the determinants of subsidiary

⁹ Which was not the Porter's study's subject.

development, subsidiary autonomy is taken as the ‘head office assignment’ determinant, subsidiary initiative as the ‘subsidiary choice’, and the suppliers’ quality and customers demand as the ‘local environment determinism’ determinant of subsidiary development. The study shows that subsidiary initiative is positively associated with all the three indicators of subsidiary development. Subsidiary autonomy is positively associated with subsidiary scope, but negatively associated with MNE-subsidiary interdependence (suggesting HQ discretion over the subsidiary scope of activity and integration). The local environment determinism is positively associated with only the subsidiary competence. The autonomy and the local environment determinants are positively associated with subsidiary initiative. The study shows that initiative is the primary determinant of subsidiary development.

Golikova, Karhunen, and Kosonen (2011), taking subsidiary capability as the indicator of subsidiary evolution, show that subsidiaries evolve through a combined effect of both the HQ’s and the local environment determinants. The authors argue that in the early stages of the subsidiary lifecycle, the HQ invests in subsidiary capabilities, but later on factors in the local environment mainly drive the subsidiary’s capability development. Egeraata and Breathnacha (2012) argue that subsidiary development is determined by the HQ, the subsidiary, and, in particular, the subsidiary external (global rather than local) environment. The authors emphasize the global environment and view it as the primary determinant of subsidiary development. Some previous studies have also emphasized the subsidiary regional and global environments for subsidiary development (see Pearce & Tavares, 2000; Tavares, 2001b, 2002). The overall evidence of the subsidiary’s global environment, however, is scant.

Tracking subsidiary evolution over time, Filippov and Duysters (2012) find that subsidiary initiative is both the determinant and the consequence of subsidiary evolution.

Subsidiaries that have not evolved over time are the lowest in their initiatives. Cavanagh and Freeman (2012) examine the influence of subsidiary initiatives and resource development on subsidiary contributory roles. The study identifies four contributory roles from the subsidiary roles, and the specialised roles' literature (i.e., Centre of Excellence (COE), Specialised Contributor, Local Innovator, and Implementer). The study shows that where subsidiaries develop resources and take initiatives together, they develop the highest level of contributory roles (i.e., subsidiaries become COEs).

Chen et al. (2013) offer a four-part subsidiary typology based on subsidiary charter (M) and subsidiary capability (C): (i) Pure Implementer (low C and M); (ii) Capability Contributor (low M, high C); (iii) Global Innovator (high C and M); and, (iv) Mandate Extender (low C, high M). The study shows that subsidiaries can take three development trajectories:

1. Enhance subsidiary mandate and then develop capabilities accordingly.
2. Develop capabilities, and then expand the mandate.
3. Develop capabilities and mandates together from their lowest level to the highest level. Such is attained by developing/acquiring resources and mandates together.

Filippov and Duysters (2014) take subsidiary scope, competence, MNE-subsubsidiary interdependence, and local embeddedness, as indicators of subsidiary development and study the determinants of subsidiary evolution. The study shows that subsidiary autonomy (without its link to subsidiary initiative) is unlikely to individually determine the subsidiary evolution. This suggests that subsidiary autonomy alone is insufficient to drive subsidiary evolution. The study shows that subsidiary initiatives

combined with subsidiary autonomy lead to better performance, competence development, and functional scope. Initiatives are strongly associated with both the subsidiary internal and external embeddedness.

Overall the empirical findings are consistent with the original subsidiary evolution framework offered by Birkinshaw and Hood (1998). The key determinants of subsidiary evolution are subsidiary autonomy, initiatives, and local environment's dynamism. Key outcomes and indicators of subsidiary evolution are subsidiary charters (scope), resources/capabilities, MNE-subsidiary interdependencies, and subsidiary internal and external embeddedness.

Subsidiary Evolution in Context of the Thesis's Research Objectives. Having now developed an understanding of the subsidiary evolution process, the next subsections review literature in the context of the thesis's research objectives. The literature review is divided into two parts: (i) the key factors influencing subsidiary roles and development; and, (ii) the subsidiary developmental contextual factors. With respect to (i), the key factors discussed in the literature review are *subsidiary initiatives*, *subsidiary autonomy*, *subsidiary external embeddedness*, *subsidiary contributory role*, and the *MNE management structures*. With respect to (ii), a range of developmental contextual factors influencing subsidiary roles and development are reviewed. These are several and include subsidiary strategy, industry, internationalisation motives, etc. Why these factors are taken with respect to the research objectives? This is explained implicitly in the review below, and explicitly in the conceptual development section (later).

It is important to acknowledge that while the literature identifies the determinants and outcomes of subsidiary evolution, a clear distinction as to what is a determinant, driver, influence, contextual factor, outcome or an indicator is vague. For example:

1. Some key determinants of evolution, e.g. autonomy and initiatives can also be seen as outcomes of subsidiary evolution (see Birkinshaw, 2014).
2. The factors are associated. For example, autonomy leads to increased initiatives, and initiatives lead to increased autonomy levels (Birkinshaw, 2014). Initiatives lead to head office monitoring, which leads to decreased autonomy (Ambos, Andersson, & Birkinshaw, 2010); a high competence level leads to increased autonomy and initiatives (Mudambi & Navarra, 2004; Mudambi & Pedersen, 2007); autonomy leads to increased contributory roles (Birkinshaw et al., 1998); initiatives lead to increased contributory roles (Birkinshaw et al., 1998; Cavanagh & Freeman, 2012).
3. There is no clear identification of an antecedent and an outcome. For example, some say local growth determines dynamism, others argue the reverse to be true (see Holm et al., 2003). Similarly, some take high external embeddedness as an outcome of subsidiary development (see Filippov & Duysters, 2014). Others (in fact, a great deal of the subsidiary network stream) views external embeddedness as the driver of subsidiary development (see Andersson, Forsgren, & Holm, 2001; Andersson et al., 2002; Meyer et al., 2011). MNE management structures may be treated as a contextual factor on which the subsidiary roles are contingent (Enright & Subramanian, 2007). They can also be treated as the HQ determinant of subsidiary development (Birkinshaw & Hood, 1998) or the MNE's intangible resource (Barney, 1991; Tomer, 1987).

Any conclusions of a study, therefore, reflect the variables chosen and their treatment (Holm et al., 2003) and what the researcher intends to achieve. The intention

here is to draw on the most relevant and critical subsidiary development factors to achieve the thesis's research objectives.

Subsidiary Initiatives. Subsidiary initiatives are autonomous actions (Burgelman, 1983; Chandler, 1962), which reflect a subsidiary's entrepreneurial behaviour (Birkinshaw, 1997, 2014). The initiative concept has much commonality with the entrepreneurship core concepts such as proactive and risk-taking behaviour, accessing resources beyond control and reach, innovation, departure from the routine practices, exploring new opportunities, alertness, responsiveness, and pursuing power and influence (Birkinshaw, 1997; Birkinshaw et al., 1998; Boojihawon, Dimitratos, & Young, 2007; Kanter, 1982; Kirzner, 1973; McDougall & Oviatt, 2000; Miller, 1983; Verbeke, Chrisman, & Yuan, 2004; Zahra, Dharwadkar, & George, 2000). It, however, is a dispersed form of entrepreneurship rather than restricted (to a particular unit) as is the conventional entrepreneurship (Birkinshaw, 1997, 2014). It can occur both independent of the HQ as well as in cooperation with the HQ.

An initiative is defined in a variety of ways. For example, it is "the entrepreneurial pursuit of international market opportunities to which the subsidiary can apply its specialized resources" (Birkinshaw et al., 1998, p. 226); "a discrete, proactive undertaking that advances a new way for the corporation to use or expand its resources" (Birkinshaw & Riddlerstrale, 1999, p. 151); or simply, "a primary manifestation of dispersed corporate entrepreneurship" (Birkinshaw, 1997, p. 207). The subsidiary initiative is often rooted in the network conceptualisation of the MNE. As per the network theory, subsidiaries in their networks mainly interface with three markets: local, internal and global. Initiatives, therefore, can be classified into the following three markets: (i) local market (opportunities identified in subsidiary host country); (ii) internal market

(opportunities identified within the MNE)¹⁰; and, (iii) global market (opportunities identified outside the local and the internal markets) (Birkinshaw, 1997, 2014; Kirzner, 1973) (for initiatives' examples see Table 2.3). Broadly for whatever market an initiative is taken, it is either a subsidiary renewal (renewing a subsidiary strategy) or a subsidiary venturing (creating a new business) initiative (Verbeke et al., 2007).

Table 2.3: Examples of Different Types of Subsidiary Initiatives

Initiatives	Examples
<i>Local</i>	<ol style="list-style-type: none"> 1. Offering new products/services to the host country. 2. Enhancements to the existing products/services.
<i>Global</i>	Developing new products/services to be sold internationally
<i>Internal</i>	<p><i>Internal-global hybrid initiative</i></p> <ol style="list-style-type: none"> 1. Expanding the local operations. <p><i>Internal initiative</i></p> <ol style="list-style-type: none"> 2. Transfer of production process from the MNE to the host country.

Source: Birkinshaw (1997), Birkinshaw (2014), and Birkinshaw et al. (1998)

An initiative is a multilevel phenomenon, but a holistic, multilevel or an overarching approach to its understanding remains absent (Birkinshaw, 2014; Schmid et al., 2014; Strutzenberger & Ambos, 2014). Subsidiary initiatives have been studied mainly at a single level, but with multiple theoretical lenses. For example, RBV of the firm suggests that firms possess various specialised resources. Using these resources subsidiaries take initiatives for various markets, and gain mandates and increased visibility in the MNE network (Barney, 1991; Birkinshaw et al., 1998). Initiatives are autonomous actions (Burgelman, 1983), which can be understood using the self-determination theory (Ambos et al., 2010; Deci & Ryan, 1985; Kanter, 1982; Pfeffer & Salancik, 1978, 2003). Initiatives involve principal-agent relationships and may be

¹⁰ Internal initiative can have two purposes: (i) reconfiguring subsidiary initiatives, which is referred to as 'the internal initiative'; and, (ii) extending the subsidiary operations, which is referred to as the 'internal-global hybrid initiative' (Birkinshaw, 2014).

studied using the agency theory (Dörrenbächer & Geppert, 2009; Eisenhardt, 1989a; Johnson & Medcof, 2002).

Successful implementation of an initiative results in enhanced internal efficiency (Birkinshaw & Fry, 1998), and the development of subsidiary resources, capabilities and contributory roles (Bartlett & Ghoshal, 1989; Birkinshaw et al., 1998; Cavanagh & Freeman, 2012; Hedlund, 1986). Initiatives positively influence subsidiary autonomy, HQ openness to subsidiary development, and subsidiary credibility (in the eyes of MNE) (Birkinshaw, 1999). Initiatives enhance subsidiary roles in the form of enhancement of subsidiary local responsiveness, global integration, and global learning (Birkinshaw, 1997; Birkinshaw & Hood, 1998). To maintain their roles and responsibilities, subsidiaries have to take high-level initiatives, and failure to do so may even cause damage to both the subsidiary's and the MNE's competitiveness (Birkinshaw & Hood, 1997). Subsidiaries take initiatives to meet the demands and to respond to the threats and opportunities sensed in the markets they serve or intend to serve (Birkinshaw, 1997). Over time, the successful initiatives add to the overall roles/charters reflecting broader responsibilities than before (Birkinshaw & Hood, 1998).

Subsidiaries cannot simply increase their influence within the MNE without the headquarters' attention. Initiatives bring autonomy to subsidiaries, but that autonomy may come with a price, such as increased headquarters' monitoring (Ambos et al., 2010). Also, the gaining of autonomy as a result of the initiatives varies with the type of the initiative taken. It is more likely for subsidiaries to gain autonomy when they take initiatives in the local market than the global or internal markets (Raziq, Borini, & Perry, 2012). Initiatives also require leadership and an entrepreneurial culture within the subsidiary organisation. Such are needed for subsidiaries to develop specialized resources, identify initiative

taking opportunities, and gain international responsibilities and HQ attention (Birkinshaw et al., 1998; Crookell, 1986).

Recent research identifies a range of issues with the studies on initiatives. It is argued that subsidiary initiatives are a multilevel phenomenon, and, therefore, a dual/multilevel perspective should be adopted (Birkinshaw, 2014). There needs to be a balance between the top-down and the bottom-up approaches adopted to study initiatives, rather than taking the subsidiary alone as the unit of analysis. The subordinate status of the subsidiary (i.e., the hierarchical relationship) needs to be recognised rather than completely overlooked. It is speculated that due to a number of developing trends, e.g. transparency within the MNE, the internal initiatives would be more common in the future than the local ones (Birkinshaw, 2014). Schmid et al. (2014) criticise the earlier works that they focus much on the internal initiatives and little on the local ones. The authors suggest that future studies focus more on the local initiatives, and an equal focus should be put on the subsidiary's local environment than the internal environment.

Strutzenberger and Ambos (2014) argue that the subsidiary initiative process involves individuals, teams, the organisation and the external networks. Studying subsidiary initiatives therefore using a multilevel approach is promising. Researchers suggest that future studies on initiatives adopt a bottom-up approach, e.g. individual to team, organisation and environment.

Subsidiary Autonomy. Autonomy is rooted in the motivation and self-determination theories, which suggest that actors have internal desires and motivations to self-determine and take decisions independently (see Deci, 1971; Deci & Ryan, 1985). Subsidiary autonomy refers to such subsidiary capacities (of self-governance and self-determination) by which they take decisions independently of the parent company. MNE

conceptualisations like heterarchy (see Hedlund, 1981, 1986), and differentiated inter-organisational networks (see Ghoshal & Bartlett, 1990; Nohria & Ghoshal, 1994, 1997), emphasize much the subsidiary autonomy.

Autonomy is described in a variety of ways. For example, it is the extent to “which units and sub-units possess the ability to take decisions for themselves on issues that are reserved to a higher level in comparable organisations” (Brooke, 1984, p. 9). Other definitions are: “the degree to which one may make significant decisions without the consent of others” (Brock, 2003, p. 58) and “the degree to which an MNE subunit may make significant decisions, referring to the whole spectrum of inter- and intra-firm relationships, with or without the consent of the HQs” (Manolopoulos, 2006, p. 49). In simple terms autonomy may be defined as a discretion, power or a degree of freedom that the subsidiary may have to pursue its own independent agenda that may or may not be already endorsed by the parent headquarters.

MNE centralization, which refers to concentrated decision-making authority, may be seen as opposite of subsidiary autonomy. Subsidiaries seek autonomy for their development, reduced HQ control, and increased freedom. HQs, on the other hand, look for efficiency and centralization (Birkinshaw & Hood, 1998; Chandler, 1962; Fayerweather, 1969; Gammelgaard et al., 2011; Paterson & Brock, 2002). Autonomy may be seen as something similar to decentralization, which is about dividing the decision-making authority between the HQ and the subsidiaries. Autonomy, however, is not limited in the extent to which a subsidiary relies on parent company decisions (Inkson, Pugh, & Hickson, 1970). Decentralization refers to that capacity of autonomy which is given by the head office such as a discretion (Williamson, 1996), whereas autonomy can be earned or acquired without specific authorisation or planning of the parent company (Manolopoulos, 2006).

Subsidiary autonomy is viewed from various perspectives since it gained attention in the 1960s (Blau, 1964; Lazarfeld & Menzel, 1961; Skinner, 1968). Early perspectives see subsidiary autonomy simply as a discretion or freedom that subsidiaries struggle for to make independent decisions or to pursue independent agendas that may not be endorsed by the parent MNEs (Egelhoff, 1984; Hedlund, 1981; Picard, 1977). Later studies tend to interpret subsidiary autonomy as a degree of freedom needed to take actions that are important for the development of a subsidiary (Birkinshaw, 1997; Birkinshaw & Hood, 1998; Paterson & Brock, 2002; Young & Tavares, 2004).

Where the autonomy is viewed as a discretion that the HQ delegates the subsidiaries with, the autonomy is seen as loans from the HQ (Foss & Foss, 2002; Williamson, 1996). Studies applying RDT lens argue that autonomy is not just the discretion type, but it can also stem from the subsidiary's bargaining power with which the subsidiaries can own their decision rights. This type of autonomy is difficult for the HQ to veto as it is derived from the subsidiaries' competencies that they transfer to the MNE (Mudambi & Navarra, 2004). Therefore where the subsidiary autonomy is loaned by the MNE then the appropriate theory to study MNE control is agency, but where the subsidiary owns its decision rights then the appropriate theory is RDT (Mudambi & Pedersen, 2007; Mudambi, Pedersen, et al., 2014).

Ambos et al. (2011) apply the social exchange theory (see Blau, 1964) and the RDT to subsidiary autonomy. The researchers show that trust and linking up with the HQ are important for subsidiaries to gain autonomy in the future. Ambos et al. (2010) apply the RDT and the self-determination theory to autonomy and explain associations of subsidiary initiatives with subsidiary autonomy and influence within the MNE.

There is much empirical evidence to support the importance of subsidiary autonomy for subsidiary development (Birkinshaw, 1997; Gammelgaard et al., 2009;

Venaik, Midgley, & Devinney, 2005). Autonomy can assist subsidiary development where the subsidiary has better knowledge of the host market environment than the parent MNE, and the subsidiary can use this insight to develop subsidiary-specific advantages (Rugman & Verbeke, 2001). Autonomy can facilitate more rapid response to threats and opportunities as they arise than when the subsidiary must first obtain headquarters' approval or ensure local actions fit within the guidelines set by the parent company (Birkinshaw et al., 2005). Autonomy may involve taking initiatives that fall outside the expected scope of the subsidiary's mandate (Birkinshaw, 2014).

Development as a result of autonomy may be seen in the form of knowledge creation (Almeida, 1996; Foss & Pedersen, 2002), innovation, lower transaction costs (Davis & Meyer, 2004; Manolopoulos, Papanastassiou, & Pearce, 2005; McDonald, Tüselmann, Voronkova, & Allen, 2006), development of new markets (Schmid & Schurig, 2003), adaptation to local environment and demands (Harzing, 1999; Roth, Schweiger, & Morrison, 1991), enhancement of capabilities (Balasubramanyam & Greenaway, 1992), contribution to the development of host economies (Edwards, Ahmad, & Moss, 2002), development of the parent organisation (Birkinshaw et al., 1998) and enhancement in the capacity for innovation in subsidiaries (Ghoshal, 1986). Autonomy is linked to subsidiaries gaining a mandate or a specific area of responsibility for the parent company (Birkinshaw, 1996). Subsidiary autonomy is linked to the development of subsidiaries into 'Centre of Excellence' having value creating capabilities (Frost et al., 2002), with independent capacity to maintain their charter and strengthen their capabilities (Birkinshaw & Hood, 1998).

While autonomy helps subsidiaries shape their own destinies, it is important to recognise the controlling role of the headquarters. The majority of the subsidiaries are resource dependent on their headquarters. Subsidiaries need resources from the parent

HQ to implement their decisions. Subsidiaries through external networks can seek resources (Williams et al., 2008). The empirical research, however, shows that the subsidiary's primary source is mostly the parent headquarters (Keupp, 2008; Scott-Kennel, 2004). Due to such a dependency the extent of what a subsidiary can do despite a high level of autonomy is often limited. Autonomy is a subsidiary's 'constrained freedom' (Young & Tavares, 2004). Autonomy without simultaneous access to resources is debated. Also as discussed above autonomy without initiatives is less likely to determine subsidiary development (Filippov & Duysters, 2014). Gammelgaard et al. (2011) use the concept of 'effective autonomy' to distinguish where the autonomy allows subsidiaries to determine budgets and spending, from where the autonomy does not allow such facilities.

Autonomy is a multi-faceted phenomenon so that subsidiaries may have high levels of autonomy in some areas of decision-making and low levels in other areas. The distinction between operational and strategic autonomy is particularly important as it has been recognised that for decisions that are operational in nature subsidiaries frequently have more autonomy than they have over the strategic issues (Hedlund, 1981; McDonald, Tüselmann, Voronkova, & Dimitratos, 2005; Scott-Kennel, 2001). Subsidiaries need operational autonomy for their day to day routine operations whereas strategic influence is closely managed to ensure that subsidiaries do not engage in activities that are not aligned with the parent MNE objectives (Chang & Taylor, 1999). There is also a concern to control those aspects of autonomy that may produce rent-seeking activities (Almeida & Phene, 2004), where benefits are pursued at the expense of the MNE (McDonald, Warhurst, & Allen, 2008; O'Donnell, 2000). Reflecting this, many studies separately analyse strategic autonomy and operational autonomy. Strategic autonomy is identified as policy decisions on 'R&D, product developments, and marketing'; operational

autonomy is identified as processes including production, sales, distribution and human resource management (McDonald et al., 2006; McDonald, Tüselmann, Voronkova, & Golesorkhi, 2011; McDonald et al., 2008).

Subsidiary embeddedness in the external networks require a high level of autonomy, as opposed to embeddedness in the internal network (Andersson & Forsgren, 1996). The external embeddedness reflects subsidiary freedom, whereas the internal embeddedness means working together with the MNE, hence less freedom. Subsidiary autonomy, however, is cyclical (Birkinshaw, 2014), dynamic, and has contingencies. For example, it is found that high internal embeddedness may lead to high levels of autonomy in the future, whereas high external embeddedness may lead to low levels of autonomy in the future (Ambos et al., 2011). It is therefore often suggested that subsidiaries maintain a balance between the internal and external embeddedness as dual embeddedness is much beneficial for the subsidiary development than the embeddedness in a single context (Achcaoucaou et al., 2014; Pedersen, 2006; Venaik et al., 2005).

MNE Management Structures. MNE management structures are various organisational structures to manage the subsidiaries. Broadly the MNE structures can be hierarchical, or heterarchical. The two are different structures having various implications for subsidiary roles and development. From a resource-based perspective, these structures are key resources of an MNE (Barney, 1991; Tomer, 1987), and a key contingency to subsidiary roles (Enright & Subramanian, 2007). The MNE strategy-structure literature links the MNE structures with their global strategies (Franko, 1974; Stopford & Wells, 1972). MNEs configure their structures and global market requirements to achieve their objectives and optimum levels of performance.

To achieve efficiency and effectiveness in their operations, the MNEs disaggregate their management offices and create various formal reporting channels/intermediaries between the CHQs and the focal subsidiaries (Rugman, Verbeke, & Nguyen, 2011). While intermediaries are broadly understood to provide the MNEs with efficient governance and strategic advantages (Goggin, 1974; Rugman, Verbeke, & Nguyen, 2011; Sayles, 1976), they are also argued to be costly and susceptible to conflicts. For example, subsidiaries may not readily accept the legitimacy and authority of the intermediary as the intermediary may dilute the subsidiary power and make it less visible to the MNE (Alfoldi et al., 2012; Delany, 2000; Joyce, 1986; Kolodny, 1981; Nell et al., 2011a). Also, the multiple boss matrix structure can be confusing for many subsidiaries (Bartlett & Ghoshal, 1990).

The 'MNE process' literature shows that the MNE-subsidary relationships are far more complex than hierarchical. Subsidiaries can have access to resources, and operate with a degree of freedom (Birkinshaw & Pedersen, 2010; Hedlund, 1986; Prahalad & Doz, 1981). Subsidiaries not managed hierarchically are called network organisations (Birkinshaw, 1998). The terms network organisations and the network model of the MNE are not synonymous. The former is a heterarchical/lateral type of organisational design and the latter a theoretical perspective (Wolf & Egelhoff, 2012). What this means is that while an MNE can be conceptualised as a network of relationships, it is not necessarily heterarchical in its structures. An MNE varyingly adopts a formal hierarchical structure and a lateral structure.

Both the formal and the informal/lateral structures have pros and cons, and there is no consensus as to which structure is better for the MNE. Also, there is little research as to which structure favours the subsidiary development. Proponents of the formal structures argue that a formal structure suits subsidiary development (see Wolf &

Egelhoff, 2010). The discussion, however, is limited and mostly hypothetical without empirical support. The MNE management structures have been studied mainly separately and there are no integrative models developed that explain the contingencies as to what characterises need for a heterarchical or a hierarchical structure (Wolf & Egelhoff, 2010, 2012).

Often the terms 'head office' and 'headquarters' are used interchangeably. Both the terms refer to the MNE main headquarters that is the corporate headquarters (CHQ). MNEs do not manage their subsidiaries only from the CHQs, but create various types of intermediaries between the CHQ and the focal subsidiaries. Intermediaries are generally the formal management units such as the regional headquarters (RHQ)/offices, divisional headquarters (DHQ), and other units that are assigned regional/divisional mandates¹¹. The intermediaries are created for various purposes and, therefore, have various roles, responsibilities, and autonomy levels. Some RHQs, for example, do not frequently have to report the subsidiary information to the CHQ (Enright, 2005b). Such variations in their roles and responsibilities can have varying implications for the subsidiary role and development. The varying influences that the intermediaries can put over the subsidiaries are yet to be explored. Overall there is limited research focus and knowledge on the MNE management structures (Alfoldi et al., 2012; Amann et al., 2014; Dellestrand & Kappen, 2011; Nell et al., 2011a; Piekkari, Nell, & Ghauri, 2010).

The CHQ's job is complex as they have to govern effectively and efficiently their heterogeneous and complex organisations in geographically dispersed locations. CHQs are overall coordinators of the MNE, responsible for the overall MNE strategy, represent, govern, and provide resources to subsidiaries, monitor and control subsidiaries' activities,

¹¹ There is also evidence of MNEs dividing CHQs in terms of function/activity applicable to the MNE as a whole (see Alfredo, Nell, & Hotho, 2014; Baaij et al., 2015; Baaij & Slangen, 2013), but such evidence is only recent, and rare. CHQ disaggregation is not within the scope of this thesis.

provide attention, manage information and knowledge, share services, handle taxes, tariffs, regulations, and resolve conflicts among and within the subsidiaries (Alfoldi et al., 2012; Ambos & Birkinshaw, 2010; Bartlett & Ghoshal, 1989; Chandler, 1991; Ciabuschi, Martín, & Ståhl, 2010; Collis, Young, & Goold, 2007; Dellestrand & Kappen, 2011; Foss & Pedersen, 2002; Goold & Campbell, 2002; Lai, Gibbons, & Schoch, 2006; O'Donnell, 2000).

While the CHQs may directly monitor and control their subsidiaries, as the MNEs expand and their units increase in number, the resultant increase in costs to monitor and coordinate subsidiaries preclude or make it difficult for the CHQ to manage subsidiaries directly. MNEs therefore delegate their functions to regional and/or divisional headquarters or to other units to which they assign regional/global mandates (Alfoldi et al., 2012; Benito, Lunnan, & Tomassen, 2011; Goold & Campbell, 2002). This is logical, however, (as stated above) why MNEs, for example, manage some subsidiaries via the CHQ or the RHQ or a lateral structure is less explored.

Regional management forms a layer between the MNE's global and local hierarchies. They are mainly regional headquarters and regional offices. The difference between the two is the level of autonomy. Regional headquarters are often autonomous and do not have to refer frequently to the CHQ. The regional offices, however, are less autonomous and often have to report back to the CHQ (Alfoldi et al., 2012; Enright, 2005a, 2005b). Regional management performs a range of functions for subsidiaries such as coordinating, monitoring, support services, marketing, customer services, integration, regional strategy formulation, senior HR management, budgeting, supply chain, identification of entrepreneurial opportunities, applied R&D, and signalling to the CHQ (Alfoldi et al., 2012; Amann et al., 2014; Hoenen, Nell, & Ambos, 2013; Li, Yu, & Seetoo, 2010; Piekkari et al., 2010).

Some subsidiaries are managed via multiple controlling authorities. These are the divisional management structures (Benito et al., 2011; Dellestrand, 2011), where, for example, a subsidiary marketing manager reports to a senior marketing manager located elsewhere. These structures are also called the multidivisional form (M-form) organisational structures where the centre forms and controls units and each unit is fully responsible for a particular management function. The divisions are based on the strategies vis-à-vis product and geography (Forsgren, Holm, & Johanson, 1995). Studies show that where the MNEs follow a product diversification strategy they adopt a multidivisional structure (see Chandler, 1962; Stopford & Wells, 1972). The usual management unit in such structures is the divisional headquarters (DHQ). The role of the DHQ is mainly to coordinate geographic and product scopes and cooperate closely with the subsidiary functional managers (Benito et al., 2011; Forsgren et al., 1995). These units remain close to the subsidiary and their business networks, and handle the usual organisational functions, and the transfer of innovations across the MNE (Dellestrand, 2011).

Some subsidiaries may be managed by other MNE subsidiaries that may have acquired or are assigned product/market mandates. These units may be purely operational units rather than administrative (as well as operational) as are the RHQs (Alfoldi et al., 2012). Management responsibility of such units may range from a single country to a region. An example of such units is 'Centre of Excellence' unit (Frost et al., 2002; Hoenen et al., 2013).

Some subsidiaries may be managed independently/laterally rather than hierarchically. Such subsidiaries are network organisations (see Wolf & Egelhoff, 2012). A network organisation is characterised as: heterarchical with no dominant vertical relationships, highly embedded in relationships, less formal, having loose lateral

interconnectedness and spontaneous (context specific) coordination, highly heterogeneous and differentiated, and gradually evolving (Wolf & Egelhoff, 2012). These subsidiaries may have high strategic importance, competence, strategic autonomy and intra-MNE influence. The MNE less supervises these subsidiaries. These subsidiaries are managed more independently without having to seek approval from the CHQ for each of their strategic and operational decisions. A lateral structure may be ideal for implementing a transnational strategy (Bartlett & Ghoshal, 1989, 1998; Bartlett, Ghoshal, & Birkinshaw, 2005).

External Embeddedness. As discussed earlier (with respect to the local environment determinism) subsidiaries adapt to the environments in which they operate. Their growth is stimulated by the growth of their local environments. The local environment determinism perspective mainly looks at the local industry dynamism, e.g. the local competition. Subsidiaries also collaborate in their local contexts. Subsidiaries participate in local clusters, engage in knowledge exchanges, and transfer the knowledge across the MNE. External embeddedness has implications for the subsidiary development (Andersson et al., 2014; Birkinshaw & Hood, 1998; Rabbiosi, 2011).

Grounded in the network conceptualisation of the MNE, *embeddedness* refers to the willingness and trust in adapting to resources, procedures, and processes of the collaborating organisations in the subsidiary network (Gammelgaard et al., 2011). Subsidiary embeddedness in the local environment leads to the development of subsidiary competences (Andersson, Björkman, & Forsgren, 2005; Andersson et al., 2002; Schmid & Schurig, 2003). External embeddedness induces subsidiary innovation processes; improves subsidiary and its sister subsidiary market performances, and improves the product and the production development processes (Andersson et al., 2002; Holm,

Holmstrom, & Sharma, 2005). It helps subsidiaries develop R&D mandates (Achcaoucaou et al., 2014).

Evidence suggests that external linkages help foreign subsidiaries in building power and developing unique capabilities (Egeraata & Breathnacha, 2012; Tavares, 2001a). Birkinshaw and Riddlerstrale (1999) argue that successful foreign subsidiaries create external linkages. Such linkages make the subsidiary managers powerful and autonomous and increase their ability to get proposals accepted from the HQ. The linkages also enable managers to better develop themselves professionally as well as develop their subsidiaries (Madureira, 2005).

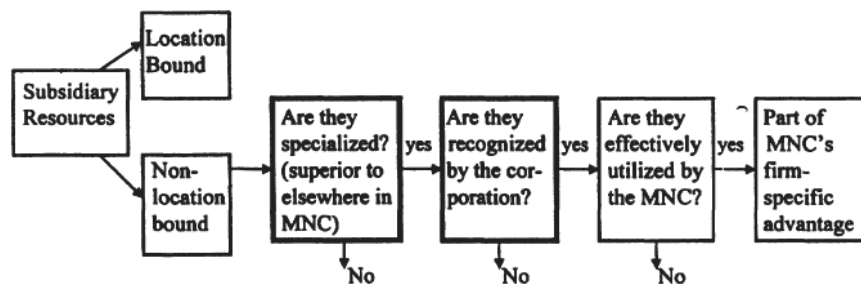
There is no shortage of literature on subsidiary competence development, and their increased performance, vis-à-vis the local embeddedness. Subsidiary network relationships from a resource-based and resource dependence perspective are valuable subsidiary resources (Andersson et al., 2002; Donaldson, 1995). It is found that subsidiaries having local linkages tend to be more of those with competence-creating mandates within the MNE (Santangelo, 2009). Subsidiary local linkages positively influence innovation within the MNE network (Almeida & Phene, 2004). MNE hierarchies, e.g. DHQs, closely monitor the subsidiary external networks and transfer the focal subsidiary innovations across the MNE (Dellestrand, 2011).

Contributory Role. As discussed earlier subsidiaries are not independent firms, but rely mostly on their parent headquarters for resources. The MNEs are also interested in their subsidiary competencies, and, therefore, the subsidiaries are closely monitored, and their strategies and contributions (to the MNE) continuously evaluated (Schmid & Hefter, 2014). What benefits, a subsidiary brings to the MNE, is what matters for the MNE. Where subsidiaries possess resources which are most specialised in the MNE, and

recognised and are readily useable by the MNE, subsidiaries are viewed as having a contributory role (Birkinshaw & Pedersen, 2010).

The subsidiaries' ability to bring competitive advantage to the MNE is contingent upon a number of factors, such as the quality of the subsidiary local context, subsidiary capability, and the HQ absorptive capacity (Ambos, Ambos, & Schlegelmilch, 2006; Monteiro et al., 2008). Subsidiaries making use of the country-specific advantages, develop competencies in terms of knowledge, resources, and capabilities. These competencies then add to subsidiaries own specific advantages. These (as stated above) if recognised by the MNE only, then become the firm-specific advantages (see Figure 2.2) (Andersson et al., 2014; Rugman & Verbeke, 2001).

Figure 2.2: Contributory Role



Source: Birkinshaw et al. (1998 Figure 2)

The MNE global competitive advantage is largely dependent upon their subsidiary's contributory role (Ho, 2014). From a resource-based perspective to add to the competitive advantage of the MNE, subsidiaries need to have a contributory role, which means their resources must be recognised and valued by the MNE as a whole (Birkinshaw et al., 1998; Birkinshaw & Pedersen, 2010; Ferraris, 2014). From a resource dependence perspective subsidiaries gain influence and value in the MNE if there is some dependency of the MNE on their competencies. Such dependency would develop only if

MNEs recognise and value subsidiary's competences (Mudambi, Pedersen, et al., 2014). Earlier research, such as Mudambi and Navarra (2004) takes subsidiary knowledge outflows as indicator of subsidiary power. Later research, such as Mudambi, Pedersen, et al. (2014) posits that the competencies must be recognised by and be relevant to the MNE network.

Subsidiary Developmental Context. Subsidiaries operate in various contexts, e.g. structural (Birkinshaw & Morrison, 1995), locational (Meyer & Estrin, 2014; Meyer et al., 2011) and strategy-based (Enright & Subramanian, 2007). Various factors in the various contexts influence the subsidiary roles and their overall development in a variety of ways. These factors as a whole, form a subsidiary (broad) developmental context. The term developmental context is used more often in the psychology and the sciences literature, e.g. in psychology, development of a child may be influenced by their developmental contexts, which can be their family or the care institution (see Diniz et al., 2013). Subsidiary developmental context is multifaceted and multileveled, in that it is the combination of firm-specific (i.e., the MNE), subsidiary-specific, and location-specific factors. Development of subsidiaries is contingent upon the combined interactions of the various factors in the three environments (Birkinshaw & Hood, 1998; Birkinshaw et al., 2005).

This section organises the subsidiary strategy and management literature and identifies key developmental contextual contingencies. Five broad dimensions of a subsidiary developmental context (Figure 2.3) are identified and discussed as follows.

Figure 2.3: Subsidiary Developmental Context



Subsidiary Strategy and Manager. Subsidiary own strategy and its manager are ignored areas in the subsidiary research. Among the subsidiary-specific contextual factors (identified in the subsidiary research), which can potentially influence subsidiary roles and development are the subsidiary track record, subsidiary credibility, subsidiary relationships within the MNE network, and the subsidiary scope of activity (Birkinshaw, 1996, 1997, 2014; Dörrenbächer & Gammelgaard, 2006; Enright & Subramanian, 2007). The importance of subsidiary manager for the subsidiary development is undisputed. Managerial mindsets and cognitive abilities are key to how organisations develop capabilities, exploit internalisation and internationalization advantages, achieve global integration, and source global knowledge (Bartlett & Ghoshal, 1989; Becker-Ritterspach & Dörrenbächer, 2011; Dörrenbächer & Geppert, 2009; Luo, 2002; Monteiro, 2015; Murtha, Lenway, & Bagozzi, 1998; Storey, 1994). Little evidence exists as to the outcomes of the various subsidiary strategies at the level of the subsidiary manager (Schmid et al., 2014). Most of the subsidiary research is conducted at the organisational

level (Strutzenberger & Ambos, 2014). The following paragraphs discuss some key manager-specific contextual contingencies.

Communication. The subsidiary manager has to maintain a fair level of communication with the MNE. If the subsidiary manager remains distant from the head office officials and limits contact with them, the manager's chances to make any relational connections with the HQ officials will be limited. Managers with relational connections get a better hearing by the headquarters' officials (Kaplan, 1984; Ragins & Sundstrom, 1989). Communication has implications for subsidiary development. Connectivity and frequent communication with the headquarters are positively associated with the subsidiary contributory role (Birkinshaw et al., 1998).

Internal Networks and Linkages. Collaboration with the headquarters' functional managers, especially at the R&D department, can help subsidiaries perform better and clear the obstacles by weakening the initial HQ resistance (Ernst, Hoyer, & Rübsaamen, 2010; Hauschildt & Kirchmann, 2001; Witte, 1973). The subsidiary manager, therefore, should have a strong network with the R&D managers at the head office. Personal relationships with the headquarters' officials help the subsidiaries in getting support for their proposals (Dutton, Ashford, O'Neill, Hayes, & Wierba, 1997). The better and stronger the relationships of the subsidiary manager with the head office officials are, the more the opportunities for subsidiary development.

Subsidiary Manager's Professional Characteristics. Subsidiary growth and development are linked to their managers' professional characteristics (Becker-Ritterspach & Dörrenbächer, 2011; Dörrenbächer & Geppert, 2009; Storey, 1994). These

characteristics are manager's prior work experience, job status, and nationality, etc. The evidence as to the ways in which different characteristics of the subsidiary managers impact subsidiary development is limited (Dörrenbächer & Geppert, 2009; Schmid et al., 2014).

MNE Strategy, Behaviour, and Nationality. A key determinant of subsidiary roles and strategy is the MNE strategy. An MNE following a multi-domestic strategy will have mostly locally responsive subsidiaries, while one following a global strategy will have subsidiaries with standardized and rationalized practices (Bartlett & Ghoshal, 1989; Jarillo & Martínez, 1990; Meyer & Yu-Shan, 2014). With the shifts in the MNE strategy, some subsidiaries may gain mandates while others lose mandates (Birkinshaw, 1996; Birkinshaw & Morrison, 1995; Dörrenbächer & Gammelgaard, 2011). An MNE (as discussed previously) is one of the key determinants of subsidiary development.

An important aspect of the MNE strategy is the MNE control strategy. Headquarters adopt various procedures in monitoring and controlling their subsidiaries. The procedures can be: (i) informal, e.g. meetings, routine communications and similar mechanisms or committees; and, (ii) formal, e.g. planning systems, formal evaluations and reporting procedures (Harzing, 1999; Harzing & Noorderhaven, 2006a). The HQ control can be exercised over culture (values and interests); behaviour; and output (achieving desired target and output) (Chang & Taylor, 1999; Eisenhardt, 1989a; Ouchi, 1981; Ouchi & Maguire, 1975).

To monitor subsidiaries, an MNE may draw upon a variety of tools. Some of the most widely used are sending expatriates to the business units (Boyacigiller, 1990), bureaucratic monitoring (rules and procedures), and reporting to collect information about subsidiaries' activities (Galbraith, 1973; O'Donnell, 2000). An MNE may recruit

locals or expatriates to manage their subsidiaries. Tan and Mahoney (2006), suggest that for MNEs, expatriates, especially parent country nationals (PCNs) are more useful. PCNs are better able to mitigate issues in recruitment and contracting, and more easily align subsidiary activities with the MNE objectives. Kawai and Strange (2014) show that the impact of subsidiary autonomy on subsidiary performance is greater where there is high expatriate involvement. The use of expatriates is positively associated with knowledge flows from, and flows (to a lesser extent) to the HQ (Harzing et al., 2015). In contrast, expatriates are less capable of completing their assignments in the host country and may not always be loyal towards the MNE (Black & Gregersen, 1992, 1999). There are also contingencies identified. The use of local managers is likely to increase where a need exists for the local market expertise and connections (Harzing & Noorderhaven, 2006a). Where there are large cultural differences use of expatriates is likely to be high (Colakoglu & Caligiuri, 2008).

MNEs often bring up the subsidiary management, seeking to go beyond their mandated functions, against the so-called ‘corporate immune system’ (CIS). The idea of an immune system draws attention to a range of forces impeding subsidiary development including ‘resistance to change, suspicion to unknown, and ethnocentrism’ (Birkinshaw & Riddlerstrale, 1999); ‘tight funding, bureaucratic inertia, and corporate politics’ (Dörrenbächer & Gammelgaard, 2004); and the ‘not-invented-here’ syndrome (Katz & Allen, 1982). An MNE developmental strategy, therefore, may be reflected by (see Birkinshaw, 1999; Birkinshaw et al., 1998; Birkinshaw & Riddlerstrale, 1999; Glückler, 2014; Lemański, 2014) the following considerations:

1. *Its openness towards subsidiary development*: It is the extent: (i) to which the MNE offers investment support to its subsidiary, encourages

innovation outside the home region or discourages innovations in particular countries/regions; and, (ii) the openness of the sister subsidiaries in terms of not resisting the grant of parent investment support to the focal subsidiary.

2. The *entrepreneurial culture* as reflected by the extent to which an MNE encourages, risk-taking behaviours of the subsidiary managers and their entrepreneurial activities.
3. The extent to which an MNE provides subsidiaries with *investment support for initiatives*

An aspect influencing MNE strategy, behaviour, and control, and the subsidiary autonomy is the MNE nationality (Hulbert & Brandt, 1980). Firm-specific factors such as MNE nationality have much relevance to the subsidiary roles (Yip, 1995; Yip & Hult, 2012). Research classifies two types of economies: “coordinated market economies” (CME) and the “liberal market economies” (LME) (Soskice, 1999). Subsidiaries belonging to the MNEs in the CMEs [e.g. non-Anglo-Saxon countries (Hall & Soskice, 2001)] are mostly decentralized, having high levels of autonomy, and informal relationships with the HQ (Hedlund & Åman, 1983), and are institutionally constrained with a local rather than a global focus. Whereas subsidiaries belonging to MNEs in the LMEs tend to follow a centralized global strategy (Jong & Dut, 2010).

MNE-subsidiary Transactions. MNEs are viewed as internal networks of transactions (Gupta & Govindarajan, 1991). These transactions can be seen as flows of knowledge, product and capital within the various units of the MNE. Subsidiaries vary in terms of the magnitude and directionality of the transactions. This means their patterns

(outflows vs. inflows), and intensity (low vs. high flows) may vary. Some subsidiaries are competence-exploiting or capability utilisers, and so engage more in inflows, while others are competence/capability-creators and engage more in outflows (Cantwell & Mudambi, 2005; Enright & Subramanian, 2007). These flows indicate and influence subsidiary roles and level of development in a variety of ways so that subsidiaries highly engaged in knowledge flows have more opportunities to develop resources and capabilities (Achcaoucaou et al., 2014; Ambos et al., 2006; Crespo et al., 2014; Li & Lee, 2014; Martine & Jonathon, 2014; Mudambi & Navarra, 2004; Najafi-Tavani et al., 2014; Perri & Andersson, 2014), while others have fewer opportunities to develop.

Host Country Strategic Importance. A key determinant of subsidiary development is the local environment in which the subsidiary operates. Subsidiary development is contingent upon the local environment dynamism (Birkinshaw & Hood, 1998), and the location-specific advantages (Verbeke et al., 2007). These are reflected in the various location-specific MNE internationalisation motives (Buckley & Casson, 1976, 1998; Buckley et al., 2001; Dunning, 1988, 2009; Rugman, Verbeke, & Nguyen, 2011). Roles of a subsidiary created with a resource-seeking motive can be expected to be different to those created with a market-seeking motive. The former is more likely to learn from/explore the local environment than the latter, which is more likely to be interested in exploiting the firm-specific advantages. Similarly, some host locations offer more development opportunities for subsidiaries in terms of growth and exporting than the others (Enright & Subramanian, 2007).

Subsidiary Characteristics. Subsidiary roles and development are contingent upon a number of subsidiary own contextual factors. These are discussed as follows:

Resources. As per resource-based view, firms possess various tangible and intangible resources on which they draw upon and achieve competitive advantages (Barney, 1991, 2001; Wernerfelt, 1984). Subsidiaries possess resources, which if specialized, and recognised by the MNE may lead subsidiaries to developing firm-specific advantages (Birkinshaw et al., 1998; Rugman, Verbeke, & Nguyen, 2011). A subsidiary may be considered developed if the level of its resources/capabilities is high (Birkinshaw & Hood, 1997) It is the high level of subsidiary resources which leads subsidiaries to successful initiatives and high levels of autonomy (Birkinshaw, 2014).

Competence/Capability. Competence-based perspective suggests that a firm's competence can be its resource, asset or a skill needed to perform an activity, or it can be the activity itself which utilises the firm's resources and assets (Collis, 1994; Escrig-Tena & Bou-Llusar, 2005). A capability is a subsidiary resource (Collis & Montgomery, 1995), or it can be the subsidiary's ability to perform its basic functions (Collis, 1994). Both the concepts: competence and capability are frequently used in the strategic management literature (see Collis, 1994; Collis & Montgomery, 1995; Kaplan, Murray, & Henderson, 2003; Teece et al., 1997). The concepts are used interchangeably (see Andersson et al., 2014; Bartlett & Ghoshal, 1986; Mudambi, Pedersen, et al., 2014; Roth & Morrison, 1992; Winterscheid, 1994)¹². A subsidiary's capability leads to the subsidiary's competitive advantage (Lei, Hitt, & Bettis, 1996).

Performance. Applying agency theory to the MNE, the corporate shareholders push the MNE management for better performance, e.g. in terms of returns on their investments (Fernando, 2006). The MNE management also expects their subsidiaries to

¹² In this thesis (in the subsequent sections/chapters), the terms competence and capability are used interchangeably.

perform better both in terms of their financial performance and productivity. A number of factors determine subsidiary performance. Among these factors, subsidiary's resources and capabilities play a key role. A subsidiary's financial management capability leads to better financial performance (Nguyen & Rugman, 2014). A subsidiary's contributory role leads to better financial performance of the MNE (Crespo et al., 2014). A subsidiary's own business strategy largely influences a subsidiary's performance than does the MNE international strategy alone. Subsidiaries following a local/domestic strategy or a transnational/glocal (local + global) strategy are likely to show better performance than those following a global strategy (Tian & Slocum, 2014). Subsidiary autonomy leads to better subsidiary performance (Kawai & Strange, 2014). Subsidiary autonomy, bargaining power, initiatives and headquarters' attention lead to better subsidiary performance (Ambos & Birkinshaw, 2010). There is a positive link of subsidiary external embeddedness with the subsidiary performance (Andersson et al., 2002). A low subsidiary performance can be expected where the subsidiary is internally isolated (Monteiro et al., 2008). Subsidiary performance is contingent upon the local industry dynamism and the economy development (Tian & Slocum, 2014).

Subsidiary Isolation. The concept of distance is widely used in the literature to denote a degree of dissimilarity (or perception of dissimilarity) between the focal subsidiary and the other subsidiaries of the same MNE or its parent headquarters (Ambos & Håkanson, 2014a; Ambos & Ambos, 2009). Distance matters much in international business (Ambos & Ambos, 2009; Nachum & Zaheer, 2005), and can be of various types, e.g. cultural, geographic, administrative, knowledge, and social (Berry, Guillén, & Zhou, 2010; Ghemawat, 2001). For example, a subsidiary may be low in knowledge outflows than the other subsidiaries, or it may be high in geographic distance from the rest of the

MNE. Isolation reflects a degree of subsidiary solitariness, distance or separation from its MNE internal context. Where the focal subsidiary is dissimilar or perceives itself to be dissimilar on the dimensions such as culture, knowledge, from the rest of the MNE, it may be treated as internally isolated (i.e. distant from the other units of the MNE). Overall subsidiary isolation is an under researched area.

From a knowledge flows perspective, a key determinant of subsidiary isolation is the subsidiary's competence. Subsidiaries with low levels of capabilities isolate themselves from the MNE, and also the highly competent subsidiaries engage less in knowledge flows with the less competent subsidiaries (Monteiro et al., 2008). Subsidiaries geographically isolated from their MNEs have narrow roles and mandates (Harzing & Noorderhaven, 2006a). MNEs should adjust knowledge transfer mechanisms in accordance with the cultural and geographical distances (Ambos & Ambos, 2009). Geographic and/or economic distance between the MNE home country and the subsidiary's host country leads to low autonomy levels for the subsidiary (Jong et al., 2015). Distance negatively influences subsidiary development and transfer of firm-specific and subsidiary-specific advantages (Ferraris, 2014). While distance is mostly taken negatively, some researchers, e.g. Ambos and Håkanson (2014b) argue that research should not rule out the possibility of positive influences of subsidiary isolation.

Perceptions of Autonomy: There is a broader recognition of the heterogeneity of the HQ-subsidary relationship (Hedlund, 1981; Jakobsen & Rusten, 2003; Scott-Kennel, 2007). Such heterogeneity is determined by various factors, e.g. subsidiary strategic importance, competence-creation and the role within the MNE network (Birkinshaw & Pedersen, 2010). A key dimension of such heterogeneity is the subsidiary autonomy (Raziq, Borini, Perry, & Battisti, 2013). Subsidiaries can have varying needs and

perceptions of autonomy. Some subsidiaries of high importance are monitored by the MNE and will strive for independence, while others have low capability and will strive for integration (Ambos et al., 2010; Hedlund, 1981; Monteiro et al., 2008). Subsidiary perception about autonomy (in terms of the potential benefits it can offer to the subsidiary) can, therefore, vary from subsidiary to subsidiary. Such a contingency to autonomy exists but is rarely applied.

Conclusions (evolution of subsidiary roles). The following are the key lessons learned from the evolution of subsidiary roles' literature review:

1. Subsidiary evolution has multiple determinants and indicators. Promising approaches to studying the subsidiary evolution broad concept are a multilevel (involving both the subsidiary and the manager) (Birkinshaw, 2014; Schmid et al., 2014; Strutzenberger & Ambos, 2014) and/or a holistic approach (Bouquet & Birkinshaw, 2008).
2. Subsidiary roles and changes in roles are contingent upon a number of contextual factors (Enright & Subramanian, 2007). It is, therefore, appropriate to study the subsidiaries holistically.
3. Elements of subsidiary roles (in particular the scope framework) and evolution of subsidiary roles' streams of literature can be well integrated to develop an overarching subsidiary classification framework, which could distinguish subsidiaries over a range of factors.
4. Subsidiaries are managed under various MNE structures (Rugman, Verbeke, & Nguyen, 2011), created for various purposes. Some of them are hierarchical while others are heterarchical. Under some, subsidiaries may have high opportunities to develop while under others subsidiaries

tightly monitored and controlled, and may have fewer opportunities to develop. This varying influence, however, is yet to be explored.

5. The MNE management structures have been studied mainly separately and there are no integrative models developed that explain the contingencies as to what characterises need for a network organisation or a formal hierarchical structure (Wolf & Egelhoff, 2010, 2012).

THE CONCEPTUAL DEVELOPMENT

This section conceptualises the research objectives: (i) to develop an overarching subsidiary classification framework, (ii) to configure the subsidiaries with their developmental contexts. With regards to objective (i), following a contingency approach (in that subsidiaries are differentiated across their roles and development), an overarching subsidiary classification framework is conceptualised. With regards to objective (ii), a configurational approach is applied to explore variances in the subsidiary developmental contexts across the subsidiaries. This section first underpins the thesis's overall argument into the overarching theories: RBV, RDT, and the network model. It then proceeds towards conceptualising the thesis's research objectives. In the end research issues, objectives, and questions are elaborated on.

Theoretical Underpinnings

As discussed earlier, the subsidiary roles stream mainly assumes that the headquarters can only assign the subsidiary roles. Subsidiaries, however, can have strategies of their own and their roles may enhance over time (Birkinshaw & Hood, 1998; Enright & Subramanian, 2007; Taggart, 1998). Subsidiaries can also evolve on their own rather than through the MNE driven evolution process or the MNE-driven strategy. This

view of subsidiaries has mainly emerged from the network conceptualisation of the MNE. The network model suggests that subsidiaries are interconnected (as nodes) in a network of relationships, which include the CHQ, the sister subsidiaries, and the external firms (Birkinshaw & Pedersen, 2010; Forsgren, 2008; Ghoshal & Bartlett, 1990; Ghoshal & Nohria, 1989; Nohria & Ghoshal, 1997). CHQ is a node, but a major entity with which all the other nodes in the (internal) network link vertically. A subsidiary can be vertically (e.g. where there are intermediaries) or laterally connected to other subsidiaries. A subsidiary is also *embedded* with a number of external actors such as customers and local firms. Overall these relationships form a subsidiary 'business' network (Andersson et al., 2007; Forsgren, 2008). As per the network model, subsidiaries through their *embeddedness* in the network can develop both capabilities and resources, and can assume a strategy and role on their own (Andersson & Forsgren, 1996; Birkinshaw & Hood, 1998; Birkinshaw et al., 2005).

The principles of the network model of the MNE are consistent with the resource-based view of the firm. RBV assumes that subsidiaries possess various resources and capabilities through which they can achieve a competitive advantage (Barney, 1991; Barney et al., 2001; Wernerfelt, 1984). The network model of the MNE takes subsidiary relationships as key subsidiary resources (see Andersson et al., 2002). The resource-based view also takes the organisational network and *MNE management structures*, e.g. the ways, processes and procedures through which headquarters manage their subsidiaries in the MNE network as key (organisational/intangible) MNE resources (see Barney, 1991; Tomer, 1987). Network model suggests that subsidiaries in their network interface with three markets: local, internal and global. Subsidiaries making use of their valuable and specialized resources take entrepreneurial *initiatives* in the three markets (Birkinshaw, 1997, 2014). Such initiatives combined with the subsidiary specialised resources lead to

the development of unique subsidiary resources more specialised all over the MNE. Subsidiaries with such resources are assigned internal mandates, such as *contributory roles* (Birkinshaw, 2014; Cavanagh & Freeman, 2012) and broad *geographical mandates* (Birkinshaw & Hood, 1997, 1998; Filippov & Duysters, 2014).

Both the resource-based view and the network model of the MNE link to the resource dependence theory. RBV is about firm's resources. Network model is about relationships as valuable subsidiary resources. RDT is about resource-based dependence and power relationships, which again can be seen as subsidiary's valuable resources (Donaldson, 1995). RDT argues that the power of organisations relates to control over resources. For self-interest and survival, relationships between organisations are created (Pfeffer & Salancik, 1978, 2003). RDT suggests that organisations based on their needs seek resource-based relationships with other organisations (possessing resources) to gain resource access. This relationship of dependence leads the organisation possessing resources to exercise power and influence over the dependent (resource-seeking) organisation (Boddy, 2011; Drees & Heugens, 2013; Hillman et al., 2009; Nienhueser, 2008; Pfeffer & Salancik, 1978, 2003; Robbins & Judge, 2012). Subsidiaries possessing resources on which the MNE is dependent gain high levels of *autonomy*, legitimacy, and performance (Drees & Heugens, 2013; Mudambi, Pedersen, et al., 2014).

RDT, RBV and network model, can be easily integrated. The MNE-subsidiary relationships today are viewed as less hierarchical and more of interdependence (Mudambi & Navarra, 2004; Mudambi & Pedersen, 2007; Mudambi, Pedersen, et al., 2014; O'Donnell, 2000). Both the MNEs and their subsidiaries possess resources and capabilities (Birkinshaw & Pedersen, 2010). MNEs create subsidiaries with various internationalisation motives (Buckley & Casson, 1976, 1998; Dunning, 2009; Dunning & Lundan, 2008a), and based on that, assign the subsidiaries a *geographical scope* (White

& Poynter, 1984). Subsidiaries draw some of their resources from the parent firm or other subsidiaries, some on their own, and some through external relationships (Andersson et al., 2014; Dunning, 2009; Rugman, Verbeke, & Nguyen, 2011). The overall MNE resources and capabilities become heterogeneous. Where a subsidiary has a dependency upon the MNE, the MNE exercises power and influence. Where the MNE is dependent on subsidiary, the subsidiary uses influence in the MNE (Mudambi & Navarra, 2004; Mudambi & Pedersen, 2007; Mudambi, Pedersen, et al., 2014; Najafi-Tavani et al., 2015). Subsidiaries, however, being legal ownership of the MNE rather than independent units (Birkinshaw & Pedersen, 2010) should adopt a ‘rent-seeking’ behaviour, such as pursue their ends (Mudambi & Navarra, 2004), rather than attempting at dictating the MNE. Such rent-seeking behaviour may help where the subsidiary takes *initiatives* and seek parent approval or support for the initiatives (Birkinshaw, 2014).

There is an important caveat in determining how subsidiaries may evolve. Whatever a subsidiary does, it needs a ‘tacit blessing’ (i.e., an informal or formal approval) of the CHQ (Birkinshaw & Hood, 1997). MNEs disaggregate their operations in terms of breaking down their management and governance functions to smaller or less influential units than the CHQ (Rugman, Verbeke, & Nguyen, 2011). MNEs make use of their organisational resources, e.g. various *MNE management structures* for managing their subsidiaries. Where resource-rich subsidiaries are managed formally, the intermediary between the focal subsidiary and the CHQ may be embedded in the subsidiary’s local contexts (creating an embeddedness overlap) to balance the focal subsidiary’s power in the MNE (Nell et al., 2011b). Much of what a subsidiary does, is, therefore, influenced by the *structure* under which the subsidiary operates. Applying the network view, these managing units are usual nodes in the MNE network, but major in terms of their powers and responsibilities than the focal subsidiaries. Applying the RBV,

the managing actors per se are the MNE resources (Barney, 1991; Tomer, 1987). At the firm level, this resource is used to coordinate effectively and integrate the MNE activity at a regional/global level (Wolf & Egelhoff, 2012). At the subsidiary level, this resource (e.g. the matrix structure) helps subsidiaries develop through the transfer of innovations within the MNE (Dellestrand & Kappen, 2011). Applying RDT, the CHQ and intermediaries form a power and a hierarchical relationship with subsidiaries. In cases where there are intermediaries, there would be dual boss/power relationship for the focal subsidiary. The intermediary also in most cases possesses a degree of influence over the MNE (Mahnke et al., 2012). Some argue that intermediaries may have negative implications for the subsidiary, as subsidiary's power may get diluted due to barriers (intermediaries) between the subsidiary and the CHQ (see Delany, 2000; Nell et al., 2011a). This, however, is likely to be contingent on the type of the structure as HQ-subsidiary relationships can vary according to subsidiary competence, and various other factors, e.g. host location.

Grounding the overall subsidiary development argument in the network conceptualisation of the MNE, the resource-based view, and the resource dependence theory, five important factors relevant to the subsidiary evolution can be identified: (i) MNE management structures (under which the subsidiaries operate); (ii) external embeddedness (the subsidiary's embeddedness in its external networks); (iii) contributory role (subsidiary specialised resources on which the MNE is dependent); (iv) autonomy (subsidiary power and influence within the MNE); (v) initiatives (subsidiary autonomous actions taken for its development); and, (vi) geographical scope (the markets the subsidiary serves).

Towards an Overarching Subsidiary Classification Framework

This section develops a new classification framework of subsidiaries. The framework takes a holistic approach and draws on all the streams of subsidiary strategy and management literature. The framework is based on the following concepts: subsidiary initiatives, subsidiary autonomy, subsidiary contributory role, subsidiary external embeddedness, subsidiary geographical scope, and the MNE management structures. Previous section grounded these concepts in the overarching theories. This section using these dimensions conceptualises an overarching subsidiary classification framework. The section is structured as follows: First, relationships between these concepts are established. Second, key motives of developing a new framework are presented. Third, roots of the concepts and their relevance to the subsidiary roles and development are presented. Fourth, an overarching subsidiary classification framework is presented.

Key Concepts and their Relationship to each other. MNEs configure and coordinate their overall activities globally (Buckley & Casson, 1976; Dunning, 1980; Rugman, Verbeke, & Nguyen, 2011). The MNEs' aim is to achieve optimum levels of performance through the configuration of their structures and their global market requirements. To effectively and efficiently manage their globally dispersed investments, MNEs disaggregate their functions and create various *management structures*. The structures can be hierarchical (intermediaries, e.g. RHQ, DHQ) or heterarchical (e.g. a network organisation). Where the structure is hierarchical, MNEs put their subsidiaries under a formal reporting channel. Where the structure is lateral, the subsidiary is rather managed independently and, its overall internal relationships are less formal. As the structures vary in their characteristics and roles, the development of subsidiaries (operating under these structures) also get influenced in various ways.

The MNEs assign their subsidiaries with a *geographical scope*. The scope is either the local, global or internal markets or any combination of the three markets (Birkinshaw, 2014). Usually in the start the subsidiaries follow an MNE strategy (i.e., responsiveness or integration). Over time as the subsidiaries evolve, they develop and implement their own strategies (Birkinshaw & Hood, 1998). Adopting own strategy requires a level of discretion or *autonomy*. This autonomy can be assigned by the MNE or assumed by the subsidiary itself (Manolopoulos, 2006). Usually, the basis of autonomy whether earned or acquired is the subsidiary's level of competence (Mudambi, Pedersen, et al., 2014).

A major indicator of a subsidiary assuming its own strategy is the entrepreneurial *initiative* it takes. Subsidiaries take initiatives in the three markets: local, global, and internal (Birkinshaw, 2014). The initiatives are less possible without the simultaneous possession of subsidiary specialised resources and sufficient level of autonomy (Birkinshaw et al., 1998). Naturally, all subsidiaries possess a level of resource, which can be firm-specific, subsidiary-specific or location-specific. The relationship of the subsidiary resource level with autonomy and initiative is reciprocal or circular. For example, through competencies, subsidiaries gain autonomy and take initiatives (Birkinshaw et al., 1998; Mudambi, Pedersen, et al., 2014). A high level of autonomy leads to initiatives (Ambos et al., 2010) and enhancement of resources (Almeida, 1996; Balasubramanyam & Greenaway, 1992; Foss & Pedersen, 2002; Ghoshal, 1986). Initiatives combined with resources lead to a subsidiary *contributory role*, and also the autonomy and contributory role are positively associated (Birkinshaw et al., 1998; Cavanagh & Freeman, 2012). A subsidiary is considered to have a contributory role or broad international responsibilities, where the MNE considers the subsidiary's resource level as most valuable in the MNE (Birkinshaw et al., 1998).

Subsidiaries *embed* in their external networks (Achcaoucaou et al., 2014). A subsidiary external embeddedness requires a high level of autonomy (Andersson & Forsgren, 1996). Empirical evidence suggests that subsidiaries highly embedded in their external networks tend to be competence-creating too (i.e., they also have a contributory role) (Achcaoucaou et al., 2014; Almeida & Phene, 2004; Santangelo, 2009). Embeddedness in the external network enhances subsidiary resource-base (Achcaoucaou et al., 2014; Andersson et al., 2001; Meyer et al., 2011). This has direct implications for the subsidiary initiatives.

The various factors: MNE management structures, subsidiary autonomy, subsidiary initiatives, subsidiary geographical scope, subsidiary external embeddedness and the subsidiary contributory role are naturally linked to each other. All these factors simultaneously influence the subsidiary roles and development. These factors are sufficient and appropriate for an overarching subsidiary classification framework.

Motives for Developing a New Framework. This section lists the motives for developing a new framework. While a lot regarding the thesis' issues is discussed in the previous sections, this section precisely explains why there is a need for a new framework.

1. Existing subsidiary role frameworks assume that subsidiaries only take roles that are assigned to them by the headquarters, and their evolution is either MNE process-based or strategy-based (Enright & Subramanian, 2007). The reality is that subsidiaries do not just take the assigned roles, they also assume roles and strategies of their own (see Birkinshaw, 2014; Birkinshaw & Pedersen, 2010). The subsidiary strategy is a key contingency to subsidiary roles and development (Enright &

Subramanian, 2007), and, therefore, an entirely appropriate conceptual dimension to determine subsidiary types.

2. Some subsidiary role frameworks classify subsidiaries into subsidiary types, while others into MNE strategy. It is more appropriate to integrate various characteristics and strategy-based dimensions. With this approach novel, subsidiary types can be identified (Enright & Subramanian, 2007).
3. Subsidiary studies have contributed mainly to the various individual research strands. There is no overarching subsidiary classification framework developed, which is based on multiple streams of the subsidiary literature. It is appropriate to take a holistic approach and study how all the subsidiary research strands can be integrated (Bouquet & Birkinshaw, 2008).
4. A subsidiary classification should be based on broad, multifaceted multiple dimensions rather than the usual two dimensions (Morschett et al., 2015).
5. Existing subsidiary role frameworks lack theory¹³ (Schmid, 2004; Schmid et al., 2014) and are disconnected to the other frameworks (Hoffman, 1994). There is a need for a theoretically grounded framework, which can inform on the theories, and where the dimensions selected are theoretically justified.

Concepts and their Relevance to Subsidiary Roles and Development. This section discusses the concepts in terms of their origins and relevance to the subsidiary roles and development.

¹³ Although the frameworks have drawn on micro theoretical issues, their basis in general theories is lacking.

Geographical Scope. This dimension comes from the subsidiary roles stream of literature. The scope framework is based on the argument that changes in either the value-added scope, product scope or the market scope of the subsidiary result in changes in the subsidiary overall strategy. In the original conceptualisation of the role framework, White and Poynter (1984) take the market scope dimension common along the other two dimensions: product scope and value-added scope. The probable reason is that the subsidiary market scope indicates the most important aspect of a subsidiary strategic role. Subsidiary market scope and value-added scope dimensions are (implicitly or explicitly) common in all the subsidiary role frameworks (Hogenbirk & Kranenburg, 2006; Taggart, 1997b). The market scope dimension is less substitutable. The value-added scope dimension, however, can be substituted with, for example, a subsidiary capability or a resource.

Among the role frameworks, the scope framework due to its underlying dynamic approach is used most widely to study the subsidiary evolution. Delany (2000) uses the scope framework to study the subsidiary development process. The author discusses how various types of initiatives are appropriate in various stages of a subsidiary lifecycle. Taggart (1996) studies the development of subsidiaries using the scope framework. Dörrenbächer and Gammelgaard (2006) show how the three dimensions of the scope framework influence subsidiary development in peripheral economies. Studies empirically testing the Birkinshaw and Hood (1998)'s generic subsidiary evolution framework use the scope framework's market scope dimension as an indicator of the subsidiary development (see Filippov & Duysters, 2014; Pedersen, 2006).

Autonomy. The roots of autonomy concept can be found in almost all the subsidiary streams. It is discussed in the HQ-subsidary relationship literature, which is

concerned with the control of subsidiaries (Gates & Egelhoff, 1986; Hedlund, 1981). The MNE process stream, which is concerned with the heterarchical structures (Hedlund, 1986). Subsidiary role stream explicitly uses it. It is conceptualised in the I-R framework, the typology by Birkinshaw and Morrison (1995), and in the A-PJ framework. Autonomy is a key element of the evolution of subsidiary roles stream (Birkinshaw, 2014; Birkinshaw & Hood, 1998). It is discussed in the network stream (Andersson & Forsgren, 1996), as well as the specialised roles stream (Frost et al., 2002).

Initiatives. The initiative concept comes from the subsidiary evolution of roles stream (Birkinshaw, 1997). There is much recognition about the developmental role the initiatives play for subsidiaries, and how the initiatives can transform into broader subsidiary roles (Birkinshaw, 2014).

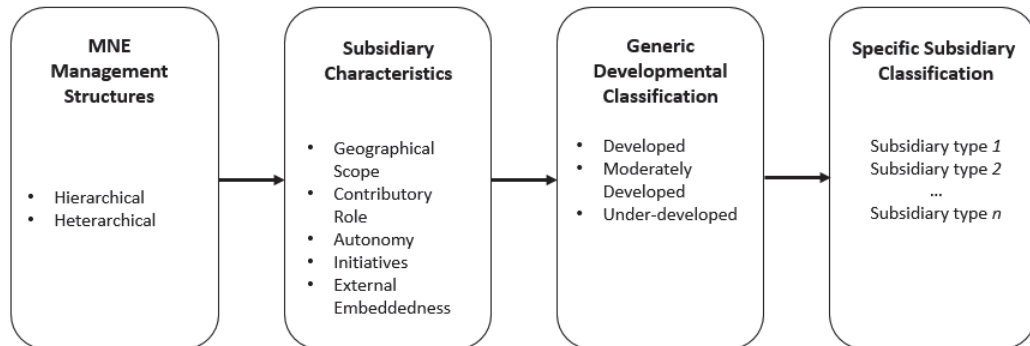
Contributory Role. The contributory role concept comes explicitly from the evolution of subsidiary roles stream (Birkinshaw et al., 1998). It, however, is discussed in different ways in almost all the streams. For example, the knowledge flows framework identifies subsidiaries as Global Innovators, which contribute to the MNE. Specialised roles' stream refers to contributing subsidiaries as 'Centre of Excellence' or competence-creating subsidiaries (see Ambos & Reitsperger, 2004; Andersson & Forsgren, 2000; Birkinshaw, 2014; Cantwell & Mudambi, 2005; Forsgren & Pedersen, 1998; Frost et al., 2002). Network stream also discusses the subsidiary competence-creating capacity (Andersson et al., 2014). The contributory role concept, however, is broad and unique in that it refers to those subsidiary resources that are most specialised in the MNE.

External Embeddedness. External embeddedness concept comes from the network stream (Andersson et al., 2001, 2002). Recently, studies interested in subsidiary development use this dimension as an indicator of subsidiary development (see Filippov & Duysters, 2014). Its relevance to the development of subsidiary resources and capabilities is well established (see Achcaoucaou et al., 2014; Ho, 2014; Li, Liu, & Thomas, 2013).

Management Structures. This dimension comes from the: strategy-structure stream, which is concerned about the hierarchical structure (Stopford & Wells, 1972); and, the MNE process stream, which is concerned about the lateral structure (Hedlund, 1986). It also briefly links to the headquarter-subsidiary relationship stream due to its focus on monitoring, control, and coordination of the subsidiary activity. As the management structures vary, the variations can have implications for subsidiary roles and development.

The Overarching Subsidiary Classification Framework. The overarching subsidiary classification framework is conceptualised in a network relationship (across heterarchy and hierarchy) fashion (Figure 2.4). The MNE management structures dimension is taken as a controlling dimension in the framework. Subsidiary types are differentiated across their capacities in terms of the geographical scope, initiative taking, autonomy, contributory role, and external embeddedness. With this framework, an alternate and a broad subsidiary classification is expected.

Figure 2.4: An Overarching Subsidiary Classification Framework



Generally a classification can be based on theory or empirical data (McKelvey, 1982). Where the framework is based on theory, subsidiary classification is pre-conceptualised, and where not, the classification is based on the empirical data. This framework takes a theoretical approach towards classification. It, however, does not pre-conceptualise the subsidiary types as usually the theory-based frameworks do. The reason for this is not that the framework wants the empirical data to decide the subsidiary types, but an issue associated with pre-conceptualising on multiple multifaceted dimensions, which does not occur in two-dimensional frameworks. The issue is twofold:

1. Existing subsidiary role frameworks have made conceptualisations mainly on two dimensions controlling the resultant subsidiary types to a maximum of four. The overarching framework has multiple multifaceted dimensions such that there are overall six dimensions with the most having multiple faces, e.g. initiatives is classified into three: local, global, and internal, rather than just one broad dimension. The usual sampling or

pairwise based subsidiary pre-conceptualisations on such a framework would lead to an unrealistically large number of subsidiary types.

2. Existing subsidiary role frameworks mainly conceptualise subsidiaries on their capacities across dichotomous measures (e.g. Global Innovator = low inflows + high outflows). It is broadly recognised that behaviours and attributes are best measured on a continuum rather than a dichotomy. The capability of a subsidiary or its manager may be assessed as low, high or moderate rather than just low or high. For example, there can be subsidiaries showing low knowledge inflows and moderate knowledge outflows. However, pre-conceptualisations (as above) on a continuum lead to a further extension of the classification.

With regard to the above (1 and 2), it is suggested that:

- a. Realistically subsidiary types are not as numerous, as they can be conceptualised via the usual probability method.
- b. Pre-conceptualising subsidiary types (based on multiple multifaceted dimensions) on a continuum (low, moderate, and high) is impractical.

Based on the above assertions the overarching framework does not offer a theoretical pre-conceptualisation. It offers a simplistic and generalisable developmental classification of subsidiaries from which specific subsidiary types based on the empirical evidence may be drawn. Various managed subsidiaries with various capacities can potentially form three broad developmental subsidiary types: developed, moderately

developed, and under-developed subsidiaries. From amongst them, a range of specific subsidiary types could be drawn through empirical examination. How far the subsidiaries vary in their roles and developmental capacities across the management structures would be established empirically and hence it is a priori. Each of the three generic developmental subsidiary types are conceptualised as follows:

Developed Subsidiary. Such subsidiaries have either of the two capacity levels as follows:

1. A high-level capacity on all the dimensions, e.g. high contributory role, high initiative, high autonomy, high external embeddedness and high (broad) geographical scope.
2. A combination of high and moderate capacities in terms of the contributory role, initiative, autonomy, geographical scope, and external embeddedness, and no low-level capacity in any of the dimensions.

Moderately Developed Subsidiary. Such a subsidiary type has either of the two capacity levels as follows:

1. A moderate level capacity on all the dimensions: contributory role, initiative, autonomy, geographical scope, and external embeddedness.
2. A combination of high, moderate, and low capacities in terms of the contributory role, initiative, autonomy, geographical scope, and external embeddedness.

Under-Developed Subsidiary. Such subsidiaries have either of the two capacity levels as follows:

1. A low-level capacity on all the dimensions: contributory roles, initiatives, autonomy, geographical scope, and external embeddedness.
2. A combination of low and moderate capacities in terms of the contributory role, initiative, autonomy, geographical scope, and external embeddedness, and no high-level capacity in any of the dimensions.

Based on these varying capacities a number of specific subsidiary types can potentially emerge. For example, some subsidiaries within the developed subsidiary type may have all-high capacities, some might have equally high and moderate while others have one dominant level capacity over the other. For example, some subsidiaries may be high in the contributory role, but moderate in external embeddedness while others may show high levels on both the dimensions. Similarly, their characteristics can be multifaceted, e.g. some subsidiaries may be high in operational autonomy, but moderate in strategic autonomy. Some may be high in local initiatives, but moderate in internal or global initiatives.

In What Ways is the Framework Different? The framework draws on all the recognised streams of subsidiary strategy and management literature (for an overview of the streams see Birkinshaw & Pedersen, 2010), and is based on general theories. The overarching framework is based on the assertion that the subsidiary roles are complex, determined by multiple factors including subsidiary own strategy and their level of development, and that such complexity can be best captured with a holistic approach.

With this, the framework moves away from the common approaches followed in the existing studies. For example, it is different to where the subsidiary classifications were based on either, the MNE classification [e.g. global, transnational, multi-domestic, international (see Bartlett & Ghoshal, 1989; Meyer & Yu-Shan, 2014)], the MNE strategy [e.g. integration-responsiveness (see Jarillo & Martínez, 1990; Meyer & Estrin, 2014; Prahalad & Doz, 1987)] or the MNE process [e.g. the scope of activity (see White & Poynter, 1984)]. With these approaches, only those subsidiaries can be identified, which can be found in an MNE (Enright & Subramanian, 2007; Yip, 1995; Yip & Hult, 2012).

The framework also moves away from another common approach followed in the subsidiary roles studies where the subsidiary classification is either based on theory (see Gupta & Govindarajan, 1991; Taggart, 1997a) or empirics (see Bartlett & Ghoshal, 1986; White & Poynter, 1984). The overarching framework aims at identifying alternate subsidiary types and is based on both theory (both micro and macro) and empirics. Subsidiary types are conceptualised into three generic developmental capacities (i.e., low, moderate, and high). The cluster analysis then (based on the original empirical evidence) decides the number of subsidiary types and their characteristics. Earlier studies have limited the subsidiary types to a maximum four irrespective of whether the classification is based on theory or empirics. Where the frameworks are based on theory, there was a need to bring consistency between the data and the a priori framework because the researchers have sought four clusters on their 2x2 frameworks¹⁴. Similarly where the classification is based on empirics only, there can be generalisability issues. The approach adopted in the overarching framework avoids a particular clustering solution with a preferred number of clusters, and grouping subsidiaries on issues identified only from the data patterns emerging from the analysis. Here it is not being argued that the two

¹⁴ See Taggart (1997a, p. 63), and Harzing and Noorderhaven (2006a, p. 173).

approaches above are wrong. The point is that the approach adopted here is better as it is more reflective of reality, appropriate for the multidimensional framework, and not restricted to a specific number of subsidiary types.

It is important to acknowledge here that this thesis mainly adopts and builds on a single line of thinking that is subsidiaries would have evolved roles (broader and improved) over time. This is mostly the ultimate motive of an MNE (i.e., achieve highest level of performance). However, development can be cyclical as it can go both ways, e.g. it is evident that some subsidiaries may also devolve, or dissolve over time. This thesis recognises this and takes as a limitation.

Research Issues, Objectives and Questions

As indicated in the introduction chapter this thesis addresses the broad research question: *How can different foreign subsidiaries be classified on a multidimensional framework, and how does their evolution vary depending on the contexts they operate in?* So far, this chapter (through a detailed literature review) attempted to provide a theoretical rationale for the thesis's research issues in a structured step-wise linear way. The broad research question was broken down into two research objectives: (i) to develop an overarching subsidiary classification framework, (ii) to configure the subsidiaries with their developmental contexts. MNE subsidiary literature was reviewed, and an overarching classification framework was developed. A subsidiary developmental context and various contingent contextual factors were discussed. This section presents the thesis's research issues, objectives and the approach adopted in achieving the objectives, and the research questions.

Research Issues 1 & 2: These research issues relate to the development of an overarching subsidiary classification framework. The research issue (i) is about *the need of a multidimensional generic framework which classifies subsidiaries over a range of issues, e.g. subsidiary roles and strategies assigned, assumed, and drivers/mechanisms through which the subsidiaries evolve*. The research issue (ii) relates to *the limited knowledge on subsidiary management structures and how they potentially influence subsidiary roles and development*.

Research Objective 1: To achieve the research objective (i), an overarching classification framework is developed, and a management perspective is applied to it. The framework is expected to produce an alternate subsidiary classification due to its breadth and uniqueness in terms of the conceptualisation.

The Approach. A contingency approach is applied to the framework in that it is assumed that variously managed subsidiaries (across various management structures) vary across their roles and development. The contingency approach (grounded in the strategy literature), suggests that there is no ideal organisational structure. It is rather, what is appropriate, that is contingent upon the appropriate organisational strategy (Clegg et al., 1996; Donaldson, 2001). The contingency approach suggests, the way a firm can be organised varies because there are external and internal environmental contingencies (see Hofer, 1975; Morgan, 2006). The contingency approach, therefore, focuses on a causal relationship, which means the occurrence of one characteristic causes the occurrence of another (Reeves et al., 2003). Applying the approach to the overarching framework, it suggests that subsidiary roles and development will vary across the dimensions of the overarching framework.

Various streams of the subsidiary strategy and management literature, such as subsidiary roles, subsidiary specialized roles, evolution of subsidiary roles, subsidiary network, strategy-structure, MNE process, and the HQ-subsubsidiary relationship streams are integrated to develop an overarching subsidiary classification framework. The framework is expected to produce a developmental classification of subsidiaries. A management perspective is applied to the framework so that the framework is conceptualised in a network relationship (hierarchy and heterarchy) fashion. Given that some of the relationships between the subsidiary and the CHQ are hierarchical while others are heterarchical, some subsidiaries may have more opportunities to develop while others have fewer opportunities to develop. The implications are that the subsidiary development will be influenced by the particular structure under which the subsidiary operates.

What will be achieved? A novel/alternate subsidiary classification as the framework is unique in terms of its conceptualisation and is based on a number of multilevel dimensions. For a comparison with the existing, see Table 2.4.

Research Question 1: *How can different foreign subsidiaries be classified on a multidimensional framework, particularly in terms of the way they are managed?*

Table 2.4: Delineation of the Concepts, Frameworks, a Prior Literature, Underpinning Theories and Links to Research Questions

Classification Frameworks	Dimensions (and their Origins)	Theory / Approach	Research Motive / Question	Subsidiary Typology	Concepts Inter-Relation	Key Characteristics
Scope Framework (White & Poytner, 1984)	Geographic Scope, Product Scope, and Value-added Scope (Subsidiary Roles Stream)	Approach: <i>Configuration</i> Study: <i>Empirical</i>	Changes in subsidiary strategy in response to the changing business environments.	Miniature Replica Business; Marketing Satellite Business; Rationalized Manufacturer; Product Specialist; Strategic Independent;	A change along one or more of the dimensions would bring a change in subsidiary strategy	-Subsidiary types restricted to the conceptualisation; -Based on assumption that subsidiaries only take roles that are assigned by the HQ; -Subsidiaries conceptualised on dichotomous levels; -Limited or no focus on subsidiary's own strategy and changes in roles. -Limited or no focus on MNE management structures. -Limited in theories.
Competence-Strategic Importance Framework (Barlett & Ghoshal, 1986)	Competence, Strategic-Importance (Subsidiary Roles Stream)	Approach: <i>Configuration</i> Study: <i>Empirical</i>	How to organise to be globally competitive and achieve the global strategic objectives.	Implementer; Contributor; Strategic Leader; Black Hole	Various subsidiary competence levels and strategic importance of the host location determine a subsidiary role	-do-
Integration-Responsiveness Framework (Jarillo & Martinez, 1990; Taggart, 1997b)	Local Responsiveness, Global Integration (Subsidiary Roles Stream)	Approach: <i>Contingency</i> Study: <i>Empirical</i>	-Balancing subsidiary goal congruence with the MNE (i.e. global integration) with local market demands (i.e. local responsiveness). -Assessing the relative importance of the two conflicting demands.	Quiescent; Autonomous; Active; Receptive;	Various levels of subsidiary local and global strategic orientations determine subsidiary roles	-do-
Knowledge Flows Framework (Gupta & Govindarajan, 1991)	Intra-MNE Knowledge Inflows and Outflows (Subsidiary Network, and Subsidiary Roles Streams)	Approach: <i>Contingency</i> Theory: <i>Network Model</i>	-How corporate control within the MNE varies across the subsidiaries. -How subsidiaries differ in terms of their capacities to providing knowledge to the MNE, and receiving knowledge from the MNE.	Global Innovator; Integrated Player; Implementer; Local Innovator;	Various levels of subsidiary knowledge inflows and outflows in the MNE determine subsidiary roles	-do-

Table 2.4 continued: Delineation of the Concepts, Frameworks, a Prior Literature, Underpinning Theories and Links to Research Questions

Classification Framework	Dimensions (and their Origins)	Theory / Approach	Research Motive / Question	Subsidiary Typology	Concepts Inter-Relation	Key Characteristics
Organizing Role Typology (Birkinshaw & Morrison, 1995)	Drawn from Literature (Subsidiary Roles Stream)	Approach: <i>Configuration</i> Study: <i>Empirical, Typology drawn from literature</i> Theory: <i>Network Model</i>	Purpose was to draw a typology from existing role frameworks mainly to explore ways in which the subsidiary structural context varied according to their strategy.	World Mandate; Specialized Contributor; Local Implementer;	-	-do-
Autonomy- Procedural Justice Framework (Taggart, 1997a)	Autonomy and Procedural Justice (Subsidiary Roles, and HQ-Subsidiary Relationship Streams)	Approach: <i>Some implicit references to Behavioural theory</i> Study: <i>Empirical</i> Theory: <i>Network Model</i>	Can subsidiaries be classified across autonomy and procedural justice?	Vassal; Collaborator; Militant; Partner;	Various levels of subsidiary autonomy and perceived procedural justice determine subsidiary roles.	-do-
Organising Framework (Enright & Subramanian, 2007)	Capability Creation and Utilization (Subsidiary Roles and Network Streams) Geographic and Product Scope (Subsidiary Roles Stream)	Theory/Approach: Organised selected elements of the Competence- Strategic Importance, Knowledge Flows, and Scope Frameworks.	Studying the national subsidiary role in a MNE by adopting a four dimensional approach, which allows for an organisation of the earlier frameworks.	4 generic subsidiary types each leading to 6 conceptual types totalling 24: <i>Leader,</i> <i>Innovator,</i> <i>Implementer,</i> <i>Observer,</i>	-	-do-

Table 2.4 Continued: Delineation of the Concepts, Frameworks, a Prior Literature, Underpinning Theories and Links to Research Questions

Classification Framework	Dimensions (and their Origins)	Theory / Approach	Research Motive / Question	Subsidiary Typology	Concepts Inter-Relation	Key Characteristics
Overarching Subsidiary Classification Framework (this study)	<p><i>Geographic Scope</i> (Subsidiary Roles Stream)</p> <p><i>Autonomy</i> (Subsidiary Roles, Evolution of Roles, and HQ-Subsidiary Relationship streams)</p> <p><i>Initiatives</i> (Evolution of Subsidiary Roles Stream)</p> <p><i>Contributory Roles</i> (Subsidiary Roles, Specialized Roles, Evolution of Subsidiary Roles, and Network Streams)</p> <p><i>External Embeddedness</i> (Subsidiary Network Stream)</p> <p><i>MNE Management Structures</i> (Network, Strategy-Structure, MNE process, and HQ-Subsidiary Relationship Streams)</p>	<p>Approach: <i>Contingency Approach</i></p> <p>Underlying Theories: <i>Resource-based view, Resource Dependence Theory, Network Model.</i></p>	How can different foreign subsidiaries be classified on a multidimensional framework, particularly in terms of the way they are managed?	<p>Three generic subsidiary types each leading to unspecified number of specific subsidiary types: <i>Developed; Moderately Developed; Under-Developed;</i></p>	<p>Subsidiary roles change over time and are determined through a number of factors interacting with subsidiary simultaneously.</p> <p>To effectively and efficiently manage their subsidiaries MNEs put subsidiaries under various management structures where managing actors have varying roles, and power and influence in the MNE. Such variations have various influences on subsidiary roles and development. Subsidiaries are assigned a geographical mandate and based upon their level of capabilities MNEs receive competences (Contributory Role) from the subsidiaries. Subsidiaries develop collaborative linkages in the external environment (external embeddedness) through which they further develop their competences. Based on such competences, dependency relationships in the MNE network are created which lead to various levels of autonomy for the focal subsidiaries. Subsidiaries using their resources (competences, network relationships) and autonomy take initiatives in the various markets they interface with in their networks.</p>	<p>-The range of subsidiary roles/types unrestricted and the classification based on both the theory and empirics;</p> <p>-Based on assumption that subsidiaries can take both the assigned roles as well as can take their own strategies;</p> <p>-Subsidiaries conceptualised on three measures rather than dichotomous measures;</p> <p>-Drives on all the streams of subsidiary literature and offers an overarching subsidiary classification;</p> <p>-Takes a holistic and a multifaceted approach, e.g. it is based on three types of initiatives and two types of autonomy;</p> <p>-Explicit focus on MNE management structures;</p> <p>-A Contingency approach as well grounded in rich theories such as RBV, RDT, and Network Model;</p>

Research Issue 3: This research issues is related to configuration of subsidiary roles and developmental contexts. While there is recognition that subsidiaries have their own contexts on which their roles and development are contingent (see Birkinshaw & Morrison, 1995; Enright & Subramanian, 2007; Yip, 1995; Yip & Hult, 2012), there is lack of work that specifically addresses the linkages between the subsidiary types and their developmental contexts.

Subsidiary roles and development are contingent upon a number of contextual factors such as host location, MNE strategy, subsidiary own strategy etc., yet there is little synthesis of the various contexts and how they interact to influence subsidiary roles and development. Subsidiary contextual contingencies are not isolated, but rather occur together. There is little research focus on that.

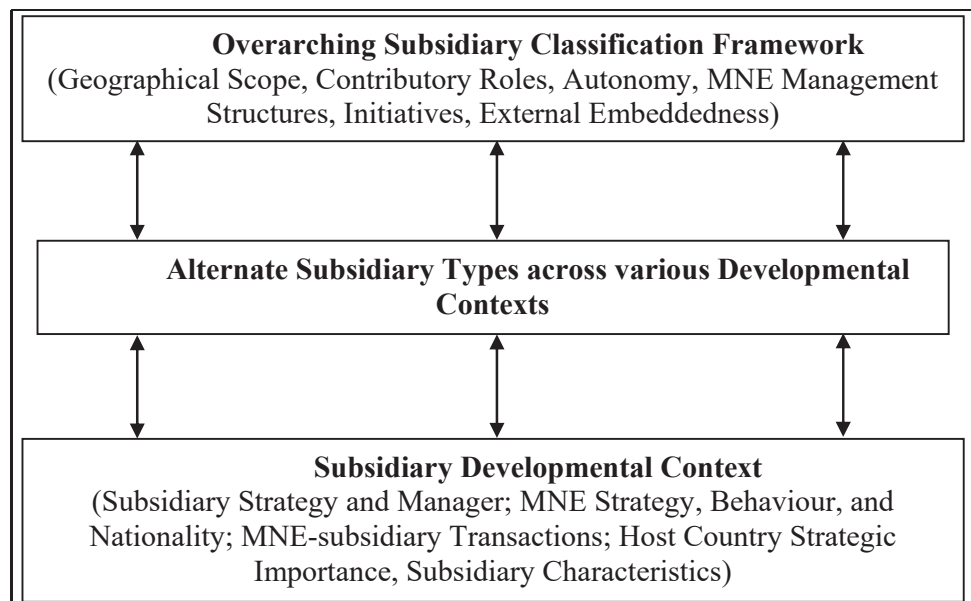
Research Objective 2: To achieve the objective (ii), a configurational approach is applied to the subsidiary types and their contexts. Linkages between the subsidiary types and their developmental contexts are explored.

The Approach. Subsidiary roles and development are contingent upon their (developmental) contexts, and their contexts vary across the subsidiary types. The issue is ‘in what ways they vary’? A configurational approach is applied to explore this. The configurational approach (grounded in both the contingency approach and the organisational analysis), suggests that organisational forms are clusters of interconnected structures and practices rather than being isolated or loosely coupled (Fiss, 2007). Every strategy type/setting fits better with a particular organisational configuration (Miller, 1986; Ven & Drazin, 1985). The approach is broadly applied in the strategy literature to explore relationships of the organisational structures with the strategic intent (Hult,

Ketchen-Jr, Cavusgil, & Calantone, 2006). Applying the approach to subsidiary development, it is implied that a subsidiary is embedded in its own unique ‘developmental’ context. A particular developmental context would be appropriate or better fit with a particular subsidiary type. Subsidiaries show different contextual features and outcomes with variations in their roles. Configuration takes a holistic approach in that it looks at alignment and interaction among broad and multidimensional conceptualisations as a whole (Reeves et al., 2003). Applying a configurational approach may help in understanding holistically how developmental context varies across the subsidiary classification.

What will be achieved? Linkages between the subsidiary types and their developmental contexts are identified. Alternate subsidiary types from the overarching classification framework are configured across their unique developmental contexts (Figure 2.5).

Figure 2.5: Configuration of Subsidiaries and Developmental Context



Research Question 2: *How does subsidiaries' evolution vary depending on the contexts they operate in?*

SUMMARY

The resource-based view, resource dependence theory, and the network conceptualisation of the MNE are robust theories offering great potential in the MNE subsidiary research. It would be fruitful if these theories are applied, advanced and examined with their contemporary extensions (Newbert, 2007). To fulfil their potential in the MNE subsidiary research, these theories need to be used in a precise, and an integrated way (Birkinshaw & Pedersen, 2010).

Researchers over the years have done a great deal of work in classifying subsidiaries. The dominant approach followed has been MNE-centric. The subsidiary classification frameworks have followed either an MNE strategy or an MNE process based approach (Enright & Subramanian, 2007). This has been useful. However, it leaves a number of alternative subsidiary types. A subsidiary strategy or role is not just assigned by the headquarters, but may also be assumed by the subsidiary itself.

There are a number of contingent contextual factors unique to subsidiaries, which determine their roles and changes in roles. Existing classifications are based on two dimensions and two levels (low and high). Such arrangements only give the concept-specific picture of a maximum four subsidiaries. A number of dimensions may be used to classify subsidiaries. Multidimensional frameworks are more appropriate for a subsidiary classification than the two-dimensional frameworks. Large samples (across various industry sectors) are appropriate for testing multidimensional frameworks (Enright & Subramanian, 2007).

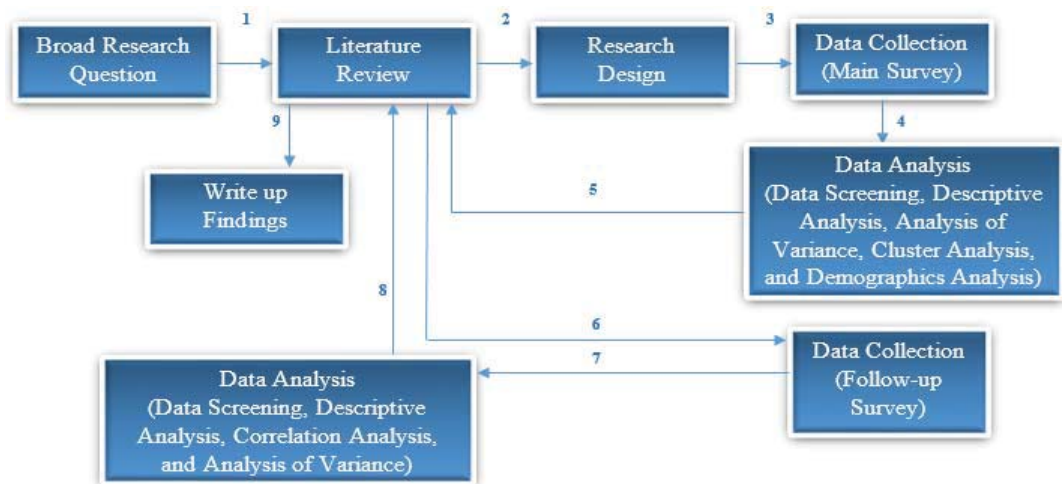
Elements of the various streams of MNE subsidiary literature can be integrated to develop a classification framework. Existing subsidiary roles' frameworks lack theory, and their dimensions are mainly arbitrary (Hoffman, 1994; Schmid, 2004; Schmid et al., 2014). An overarching subsidiary classification framework is needed. Appropriate theories for such a framework are the RBV, the RDT, and the network model of the MNE. Some of the most relevant concepts are subsidiary autonomy, subsidiary initiatives, subsidiary contributory role, subsidiary external embeddedness, subsidiary geographical scope, and the MNE management structures.

Subsidiary development is contingent upon a number of contextual factors and may be well understood if studied holistically. Applying a configurational approach may help in understanding holistically the linkages between the subsidiaries and the contexts the subsidiaries operate in.

CHAPTER 3 - RESEARCH METHODOLOGY

The conduct of research is generally iterative in qualitative studies (Bradley, Curry, & Devers, 2007). This study (while quantitative) follows an iterative research process (see Figure 3.1). This is primarily because it involves two surveys (a main survey and a follow-up survey) where the follow-up survey sample draws from the main survey respondents and it requires some analysis of the main survey data prior to conducting the follow-up survey.

Figure 3.1: Thesis's Research Process



The research process starts with the broad research question. This is followed by a detailed literature review (leading to the identification of the underlying theories and concepts, and development of a theoretical framework). This is followed by the development of a research design, which is based on a research paradigm, philosophy and research/context-specific factors. The thesis then undertakes an iterative process that is data collection (via the main survey); data analysis; comparison with literature; data

collection (via the follow-up survey); data analysis; and (again) comparison with literature. The research process ends with a write-up of the findings.

This chapter sets out in detail the thesis's research strategy. The chapter starts with the research design section. Research paradigm, philosophy, and context-specific factors, the sampling frame, sample size, data collection, and the questionnaire design are elaborated on. This is followed by the research measurement section where the overarching subsidiary classification framework, the developmental context, and background/demographic concepts are operationalized. An outline of the statistical tests used to analyse the data are provided, where the relevance of the tests to achieve the thesis's research objectives is established. The chapter ends with a summary section.

RESEARCH DESIGN

The thesis is exploratory and interested mainly in theory building/enrichment. The research questions are based on theoretical observations. To answer the research questions the thesis develops a new conceptual framework, gathers empirical data (through surveys), tests/validates the framework, the empirical findings are compared with the existing literature, and then as a result of empirical investigation the framework's underlying theories (i.e., RBV, RDT, & network model), and the subsidiary strategy and management literature, are updated. With such characteristics, the approach adopted in the thesis is 'inductive' as it involves developing a new model for theory building purposes. More specifically it is a 'quantitatively inductive' approach as it gathers data through survey methods, and applies mainly quantitative data analysis techniques. When an inductive approach is adopted to conduct quantitative research, an exploratory data analysis is appropriate (Dudovskiy, 2015). The thesis involves exploratory methods, such as cluster analysis that is used to produce classifications (see Enright & Subramanian,

2007), and variance analysis, used for configuration exercises (see Birkinshaw & Morrison, 1995).

As the thesis draws on evidence collected through survey methods, the research paradigm¹⁵ therefore adopted is positivism. However, as discussed in Chapter 1, a paradigm and its underlying philosophy are not the only factors which determine the appropriateness of a research method. The appropriateness of a method is contingent upon a number of other (research-specific) factors, e.g. *research objectives* (see Silverman, 2013), *approach adopted in similar studies* (see Hurmerinta-Peltomäki & Nummela, 2004), *underlying theories*, *practical considerations*, researcher's *values*, *epistemology*, and *ontology* (see Bell & Bryman, 2003). These factors are discussed as follows:

1. Methodologically, positivism involves strict scientific/quantitative procedures, e.g. surveys, as opposed to constructivists and criticalists, which follow naturalistic designs (Ponterotto, 2005). With regard to the contextually-based factors such as the *approach adopted in similar studies*, and *research objectives*, the positivism paradigm is a good fit. The thesis's objectives are: (i) developing a subsidiary classification; and, (ii) configuring the classification with the appropriate developmental context. The approach adopted in earlier studies with similar objectives is either inductive or deductive. The classifications are either founded on theory and then validated empirically (e.g. Taggart, 1997a; Wang et al., 2009) or based solely on the empirical evidence. For those based on empirical evidence, issues (based on the information collected) are identified and

¹⁵ A research paradigm is used to classify, contextualize and conceptualise research. There is a range of paradigms, e.g. positivism, post-positivism, critical theory, and constructivism. The paradigms are differentiated in their philosophical stances across ontology, epistemology, axiology, and methodology (Denzin & Lincoln, 2000; Guba & Lincoln, 1994).

upon them the subsidiaries are classified (e.g. Bartlett & Ghoshal, 1986; White & Poynter, 1984). The methods adopted are less strict along induction or deduction lines and the studies frequently adopt a quantitative inductive approach (e.g. Jarillo & Martínez, 1990; Taggart, 1997a; Wang et al., 2009). This thesis develops a theory-driven model, data are collected through structured questionnaires, cluster analysis is applied, the framework is tested, and the literature updated with an alternate subsidiary classification. Studies interested in configuration also adopt the same techniques (see e.g. Birkinshaw & Morrison, 1995). The thesis's framework is based on multiple multifaceted dimensions. For such frameworks large samples are appropriate. For large samples quantitative methods are appropriate, and for developing typologies quantitative analysis techniques, e.g. cluster analysis, is appropriate (see Enright & Subramanian, 2007). This thesis adopts a quantitative inductive approach, which is consistent with its objectives as well as the approach adopted in similar studies.

2. Ontologically,¹⁶ positivism emphasizes theory verification and a singular reality. Post-positivism emphasizes theory falsification as it posits that reality cannot be captured. Constructivism emphasizes multiple realities, so that reality can be formulated in the human mind. Critical theory challenges the status quo, and views the theories and beliefs critically (Hansen, 2004; Kincheloe & McLaren, 2000; Lincoln & Guba, 2000; Ponterotto, 2005; Schwandt, 1994). From the perspective of *ontology*, and the (*underlying*) *theories*, a mixed methods approach (and so a

¹⁶ Ontology concerns about the nature of reality, such as what is the form of reality. (Ponterotto, 2005)

pragmatic/critical realist paradigm) could be ideal as it could offer greater depth to the findings than the surveys or interviews alone:

- a. From the aspect of *ontology*, the thesis makes multiple assumptions. It assumes that subsidiaries can be assigned roles as well as they can assume roles and develop on their own. The thesis also assumes that subsidiaries cannot develop without the support of the MNE. Subsidiaries' interests and objectives need to be aligned with the MNE objectives, and that subsidiary development is contingent upon various internal and external factors. The assumption that subsidiaries can develop on their own, supports a constructivist view that the subsidiary manager decides their subsidiary's destiny. The assumption that subsidiaries cannot develop independently supports a positivist view that subsidiaries are expected to act in a predetermined way.
- b. From the *underlying theories'* aspect, the subsidiary research, (where a contingency or a configurational approach is followed), uses either a quantitative or a qualitative method. The same is true for studies building or testing the RBV, RDT or the network theory.

For this thesis, a mixed methods approach is clearly ideal, but as per the *practical considerations* aspect it was less feasible. Research should be feasible and achievable within the constraints of the time and cost (Bryman, 2012; Easterby-Smith, Thorpe, & Lowe, 2002). A researcher is mostly constrained by resources. Capturing both the depth (more possible with interviews) and

generalisability (more possible with surveys) in a single study can therefore, be less practical (Creswell, 2008). To add depth to the findings from the main survey, interviews from a large number of respondents representing various subsidiary types (e.g. in terms of the subsidiary industry, size, age, and management structures) would be required. From a cost and time perspective it was not feasible. This was moderated with an internet-based follow-up survey (explained in later sections), which obtained data from 75 respondents representing the subsidiary classification, and was feasible in terms of cost (because it was internet-based it was free), and time (as it did not require appointments and travel). A potential issue here despite the responses being representative of the subsidiary classification (derived from the analysis of the main survey), is the management of non-response bias. All surveys are susceptible to non-response bias. Generally, a number of steps may be taken to reduce the chances of non-response bias. These include making questionnaires of appropriate length (i.e., not too long), ensuring smooth running on the medium (i.e., the online questionnaire should be quick to load), giving the respondents sufficient time to respond, sending reminders, ensuring respondent confidentiality, and offering incentives (Fife-Schaw, 1995; Lancaster, 2005; Penwarden, 2013). Statistical tests may be taken to check for the occurrence of non-response bias (Armstrong & Overton, 1977). These steps were taken both in the main survey as well as the follow-up survey to manage the non-response bias.

3. *Epistemologically*,¹⁷ a positivist approach emphasizes *dualism* (i.e., the researcher, the topic, and the research participant, independent of each other), and *objectivism* (i.e., the research study can be taken in an unbiased way). Post-positivism allows some flexibility in the approach and suggests a degree of researcher influence over the research activity (Ponterotto, 2005). Constructivism and critical theory emphasize subjectivity, suggesting that reality is socially constructed. Critical theory in addition is transformational and value-mediated (Ponterotto, 2005). A positivist approach here favours the thesis. Constructs used in the thesis's surveys are commonly used in the subsidiary strategy and management research, which enable the researcher to take an *objective* stance. Due to this a need for close interaction with the respondents (as in a case study or interviews) is not deemed necessary, and therefore survey methods are deemed appropriate.
4. Axiologically,¹⁸ positivism and post-positivism maintain that the research activity is independent of the researcher's *value*, as opposed to the constructivism and critical theory, which take researcher's values as an essential part of the research process (Ponterotto, 2005). A researcher's *values* are about their feelings and beliefs (Bell & Bryman, 2003), which can lead to biases. While all types of research are susceptible to bias, which must be reduced (Eisenhardt, 1989b), positivism compared to other paradigms is most objective hence less susceptible to bias. From the aspect of axiology (i.e., *values*) a positivist approach in the thesis is supported.

¹⁷ Epistemology is concerned about the relationship between the research and the research participant (Ponterotto, 2005).

¹⁸ Axiology concerns the role of the researcher's values in the research.

Based on the parameters above, the thesis's overall method (i.e., positivist paradigm, a quantitative inductive approach, and data collection through survey methods) is elaborated on and justified.

Sampling Frame and Sample Size

As set out in Chapter 1 (in the empirical context and the research methodology sections), the target population comprises foreign-owned multinational enterprise subsidiaries operating in New Zealand. Legally these entities may exist as subsidiaries or branches. Subsidiaries operate in New Zealand as registered companies with their own legal entity. Branches as subsidiaries operate under the New Zealand law, but are not separate legal entities, so obligations of the local entity are obligations of the parent organisation too.

To obtain contact information for the target population, government agencies (i.e., Statistics New Zealand, Companies Office New Zealand, Overseas Investment Office New Zealand) and commercial database providers in New Zealand (i.e., Kompas New Zealand, Business Who's Who, Dun and Bradstreet, Martins, and Universal Business Directories) were contacted. Among those contacted it was concluded that Kompas New Zealand had the most complete database distinguishing the local and foreign companies, including complete postal address information. The Companies Office New Zealand also maintains records of all foreign-owned companies, but due to confidentiality reasons did not disclose the companies' postal addresses (which were needed for the survey). Statistics New Zealand also maintains a database, but again did not disclose company names and addresses.

Kompass New Zealand provided data on 960 foreign-owned firms. A list (without postal addresses) of 1,723 foreign firms from Companies Office New Zealand was also

obtained. Lists from both the sampling frames were merged to have the maximum number of companies in the sample population - duplicates were deleted. As the Companies Office New Zealand list was without postal addresses, each (non-duplicate) company on the list was manually checked on the internet (i.e., the company's own website and the business directories were checked). Postal addresses of only 77 companies could be obtained. For the remainder, no information could be found. Further exploration revealed that some companies that were registered with the Companies Office were not physically present in New Zealand. Some of the registered companies had one to two registered employees who operated from overseas (mainly Australia). Further efforts could not help in making additions to the sampling frame.

Merging the two samples with postal addresses, a final sampling frame of 1,037 firms [i.e., 960 (Kompass), 77 (Companies Office)] was generated. Postal addresses of all the companies in the new sampling frame were verified via telephone. The verification process revealed that a number of companies no longer existed (35), were then locally owned (23), or were not willing to participate (27). This left a useable sample population of 952 firms. This sample is thought to comprise a complete or a near complete population of all the foreign-owned firms in New Zealand.

Data Collection

Data were collected using survey methods. Survey methods are used widely in social science research (especially business studies) as they provide a good way to collect data from large samples (Brewerton & Millward, 2001; Emory & Cooper, 1991; Fife-Schaw, 1995; Lancaster, 2005). In survey methods, data are mainly captured through questionnaires, which can be sent to respondents via post, fax, or internet-based (email/online) methods (Lancaster, 2005). This thesis used both postal and internet-based

methods to enable data collection from a large sample within the constraints of time and cost. Both survey methods provide similar benefits in terms of response speed and response quality, but they also have some disadvantages. Postal surveys are generally more expensive and time-consuming than internet-based surveys. A key disadvantage of internet-based surveys is the relatively lower response rate than the postal surveys (Lancaster, 2005; Tse et al., 1995). Compared with collecting data through interviews, mail-out questionnaires provide the respondents time to think about the responses, whereas interviews provide the opportunity to get a clearer and more detailed response. While the key benefit of survey methods is the capacity to collect data from a large sample (Brewerton & Millward, 2001), the key disadvantage is a low response rate. How this risk was minimised is discussed below.

Prior to data collection, a pilot study was conducted. Five respondents were selected from large multinational subsidiaries [headquartered in Japan (2), the USA (1), Australia (1), and the UK (1)], based in Palmerston North city. The pilot study proved quite useful in developing confidence in the researcher, particularly when the researcher had to call all the respondents on the phone for postal address confirmation. It is argued that getting responses from top management of multinationals is difficult (see Harzing, 1997). A few faculty members at Massey University also cautioned the researcher about this. Naturally, the researcher had little confidence at the start of the pilot study. This, however, got better when the executive assistants of the five respondents were contacted by phone, and the responses received from them were friendly and welcoming. Following that, the questionnaires were sent to the respondents. The response received was quick. All questions were answered in full and all the five respondents provided their email addresses for a summary of the results to be sent after the surveys were completed. This gave a lot of confidence to the researcher and the hope that getting sufficient responses

was possible. With the quality and quantity of responses received, it was established that there were no issues of misinterpretation in the questionnaires, so there was no need to make changes to the questionnaires.

A survey was conducted from November 2011 to April 2012, followed by a second survey in February 2013. The rationale of using the two surveys, and the reason for a time gap between the surveys, are explained as follows:

1. Rationale of the Two Surveys: The thesis addresses two broad research issues. The first relates to an overarching classification, and the second relates to subsidiary configuration with their developmental contexts. As the two issues are broad, a large survey questionnaire was therefore required. This was, however, deliberately avoided because of two factors: *response rate* and *survey length*:

- a. Low survey responses are common in international business studies. Due to this some, e.g. Harzing (1997) argue that responses as low as 6% in international business studies may still be valuable. However, there are issues of low confidence and generalisability of findings and the sampling bias caused due to a low response rate. Such issues must not be ignored. A high response rate is critical to achieving accuracy in results (Rea & Parker, 1997).
- b. The appropriate length of a questionnaire is critical to getting good responses because long and short questionnaires risk the surveys being ignored (Fife-Schaw, 1995).

To avoid the surveys being ignored and missing responses (where questionnaires were responded to), the thesis's research issues had to be divided across two reasonable sized (four pages each) questionnaires. The first survey addressed the classification issue and was named the 'Subsidiary Strategy and Management' (SSM) survey. The follow-up survey addressed the configuration issue and was named the 'Subsidiary Configuration' (SC) survey.

2. Time Gap Between the Surveys: When the SC survey would be conducted was decided by two factors:

- a. To address the issue of configuration, a subsidiary classification was needed. This was possible only when the SSM survey was completed, data were analysed, and a subsidiary classification was achieved. The SC survey sample needed to be representative of the subsidiary classification derived from the SSM survey. In addition, it also had to be representative of the SSM sample in terms of demographics, e.g. subsidiary industry, age, size and MNE management structures (see subsequent chapter for analysis).
- b. The SSM survey was completed in April 2012, but responses continued to be received till July 2012. After the responses were complete, the data were screened, and adjustments were made. Data were analysed and the framework was validated. Following this, through further analysis a subsidiary classification was achieved. Based on the responses where respondents agreed to take a follow-up survey, a survey sample was derived. Representativeness of the survey sample against the factors

mentioned above was checked. A new questionnaire addressing the configuration issue was developed. All this was completed by February 2013. The SC survey was conducted immediately afterwards in February 2013.

The SSM survey (Appendix F) looks broadly at the *demographic variables* (e.g. subsidiary age, size, entry mode, country of origin, legal status), the concepts involved in the *overarching classification framework*, and (partially)¹⁹ the *developmental context*. The SC survey (Appendix G) included all the other aspects of the *developmental context* which were not included in the SSM survey.

All research must consider ethical issues. So before sending out the surveys it was assessed if the surveys carried any risk to the respondents such as privacy, discrimination, and discomfort. It was concluded by peer assessment (Massey University's Research Ethics Office) that the surveys were low risk and did not need full Ethics Committee approval. Considering the ethical issues, it was deemed appropriate that respondents of the SSM survey (in the SSM survey questionnaire) be asked if they wanted to participate in the SC survey, and only those were contacted for the SC survey who wished to participate.

The SSM survey started with an email-based survey. Respondents whose emails were identified were sent surveys via emails. Surveys were developed in the popular online survey tool 'Qualtrics'. Respondents were sent reminders for three weeks (one each week). After that the rest of the respondents whose email IDs were not identified, and those who did not respond to email-based surveys, were sent postal surveys.

¹⁹ Not all the aspects of a particular dimension of the developmental context were included. To bring overall cohesion in the SSM survey (in terms of issues, e.g. initiatives and resource support for initiatives), and to adjust the two survey lengths, only select/relevant aspects of the developmental context were included in the SSM survey.

Subsidiary strategy and management studies mainly gather empirical evidence from the subsidiary's top management. For example, in a number of subsidiary roles studies (see Bartlett & Ghoshal, 1986; Jarillo & Martínez, 1990; Taggart, 1997a; White & Poynter, 1984), and evolution of subsidiary roles studies (see Birkinshaw, 1997; Birkinshaw et al., 1998), data have been collected mainly from the top management, such as from CEOs or country managers. A probable reason for this is that the firm's top management has an overall and a broader view of their firm's operations, and they are generally more in contact with their bosses at the HQ than, for example, a line manager. The thesis's surveys therefore were directed to the most senior representative of the company in New Zealand with information sought on the New Zealand-based operations as a whole. The database showed that subsidiary top management in New Zealand were represented by (titles) *Country Manager*, *Chief Executive Officer*, *Chief Operations Officer*, *Managing Director*, and *General Manager*. During the confirmation process via telephone, it was revealed that a small number of respondents were replaced by others as a result of promotion, secondment, or for other reasons. The survey sample database was updated accordingly, and after confirmation of postal addresses, surveys were posted.

For a better presentation and to include formality and attraction in the survey, questionnaires were sent along with a printed cover letter. The questionnaire booklet used fine quality paper (rather than a plain paper), and a return self-addressed envelope. Each respondent was given a month to return the questionnaire. After this, for those who did not respond, a reminder was sent and another month was given to complete the survey. For those who still had not responded, a second reminder was sent after a month. No reminders were sent after that. With each reminder a letter, a questionnaire booklet, and a return envelope were sent.

According to social exchange theory, relationships among humans can be developed using a subjective cost-benefit analysis. Exchange involves trust and reward for an action and leads to repetition of the action. Satisfaction is achieved with some returns on expenditure (Blau, 1964; Emerson, 1976; Homans, 1961; Stafford, 2008). Using the social exchange approach it is logical to assume that if respondents were rewarded and trust was established, a higher response rate could be achieved. To this end, in the cover letter/email respondents were invited to have a free copy of results in exchange for their responses. The value of the research and their responses was highlighted. A free copy of the summary of results to respondents can be seen as a reward and a courtesy. It may also be expected that the time and energy spent on writing a summary from the raw data, for the respondents, is recognised as an acceptable return of their expenditure. Through providing free of cost pre-paid envelopes, respondents' attention and motivation to respond are sought. Trust and sympathy (for the researcher) are established by addressing the respondents with their name and identifying that the survey is for completion of a doctoral degree.

Questionnaire Design

The questionnaires used in the two surveys were mainly opinion/attitude questions formed on 4, 5, and 7-point Likert scales (with options: None/Major Extent, Strongly Disagree/Strongly Agree, Lowest/Extremely High). To make sense of the questions, scales were slightly modified across constructs. For example, the level of autonomy could be major (4) or complete (5), and therefore a 5-point scale was deemed fine, as opposed to the extent of the initiatives activity, which could be major (4) extent, but not complete extent. Therefore for the initiatives' construct a 4-point scale was deemed appropriate. The SC survey mainly used a 7-point scale as the survey involved mainly low/high,

disagree/agree questions. Such variations in scales was thought not to affect the overall results, as the thesis developed its own measure that is a 3-point absolute scale for each (4, 5, and 7-point) scales. This approach of scale reflects the interest in avoiding extremes, such as dichotomies, and in capturing complexity.

Other questions include closed/pre-coded questions, e.g. demographic and background information questions, and an open space for additional qualitative comments (in both surveys). Both the survey questionnaires are four pages in length. The SSM survey comprises 15, and the SC survey 12 questions, and each construct addresses either a single issue or related multiple issues. The questions used in the surveys are mainly taken from existing studies in which they have already been tested for reliability and validity (see Tables 3.1 and 3.2), yet a number of tests are conducted, which show acceptable to good reliability of constructs (see subsequent chapter). Due to already established reliability and validity, it was thought that the issues of misinterpretations from respondents are deemed not likely to occur and that questionnaire pre-testing was not required. Also, as discussed above, the pilot study revealed that there were no issues of misinterpretation in the surveys.

It is important to note that some studies despite high reliability and validity may still end up with some biases in responses. How the non-response bias was managed, is discussed earlier. Here the management of response bias is discussed. A response can be considered biased if the respondent did not provide an accurate or true response. Research is divided on the issue of response bias with one school of thought suggesting that response bias does not have any significant effect on responses and so nothing needs to be done in this regard (see Gove & Geerken, 1977). The other school of thought suggests the opposite (see Furnham, 1986). While it is argued that the chance of a response bias is greatly diminished in large sample studies (Gove & Geerken, 1977). In this study, what

can be done to manage such a bias is no different. Therefore, some steps were taken to reduce the possible chances of response bias. A response bias can be the researcher's own bias, which occurs when the researcher has little knowledge of the subject or the survey is ill-planned. A response bias can also be related to poor survey design. Response bias can also be the respondent bias where the respondent for some reason is unable or unwilling to provide the true answer (Penwarden, 2013). To avoid the researcher bias, a pilot study was conducted, literature was reviewed extensively, and the issues relevant to subsidiary development were selected accurately. To avoid the survey bias, the questions were selected mainly from existing studies and so the chance of poorly worded questions or misinterpretations were minimised. Every question on the survey was assigned options such as not applicable, none, not known etc. With this the chances of respondent bias were minimised. Taking all these steps there was confidence that there will be little or no response bias in either of the surveys.

RESEARCH MEASUREMENT

This section presents the measurement of the concepts used in the thesis. The section first establishes a key measurement technique of the thesis (i.e., a 3-point absolute rank) to be used throughout the analysis for accurate interpretation of results. Following this, they are grouped into the two objectives of the thesis (i.e., classification and configuration) such that each of the concepts used in the two surveys, along with their items, and their measures are presented in tables. Measurement of the demographic and background variables is presented following this.

A 3-Point Scale

As discussed earlier, existing subsidiary strategy/role frameworks are mainly conceptualised on dichotomous (low, high) measures, and the resultant subsidiary types therefore show capacities as either low or high. Subsidiaries in their life cycles can be at varying stages of development rather than just low or high. It is illogical to assume that subsidiary managers would not have a perception of their subsidiary capacities as being at a moderate level. Studies where a dichotomous approach is followed risk presenting an inaccurate and incomplete picture of reality. In such studies either a categorical question (with low, high options) or a scale is used. Where a scale is used, the scale is divided at the midpoint so that the score on one side is assigned low and the other high (for example see Meyer & Yu-Shan, 2014). It is, however, less justifying that there is no moderate capacity, and that the difference between the low and high capacities is only one point. It is more logical that each measure (whether categorical or on a scale) includes a low, a high and a neutral/moderate option to provide a more realistic and complete picture.

A criterion to measure absolute capacity representing low, moderate and high on the scales is presented (Figures 3.2, 3.3, and 3.4). To avoid any confusion it is important to state that these measures relate to the average scores. The respondents answer on the Likert questions on the questionnaires. For interpreting their scores, these scales are developed, and the technique of dividing the score as low and high over a single point is avoided due to the point made above. This new technique of 3 points is used throughout the study to interpret results. For variables measured on a 4-point Likert scale, the average scores from 0.1 to 2.0 represent 'low' extent, scores from 2.1 to 3.0 represent 'moderate' extent, and scores from 3.1 to 4.0 represent 'high' extent (Figure 3.2). For variables measured on a 5-point Likert scale, scores less than 2.4 represent 'low' extent, scores from 2.5 and 3.4 represent 'moderate' extent, and scores more than 3.4 represent 'high'

extent (Figure 3.3). For a 7-point scale, scores from 0.1 to 3.0 are ‘low’ extent, scores from 3.1 to 5.0 ‘moderate’ extent, and scores from 5.1 to 7.0 ‘high’ extent (Figure 3.4). This approach can definitely also be criticised, but it at least allows some scores to be interpreted as moderate, and it avoids dividing the extremes (low, high) over a single point.

Figure 3.2: 4-Point Scale to Interpret Mean Scores

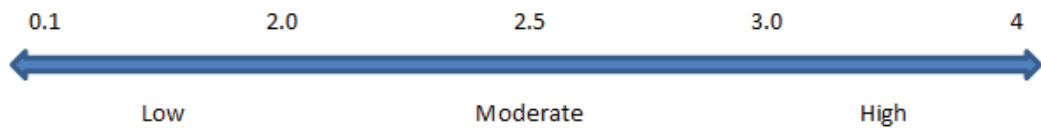


Figure 3.3: 5-Point Scale to Interpret Mean Scores

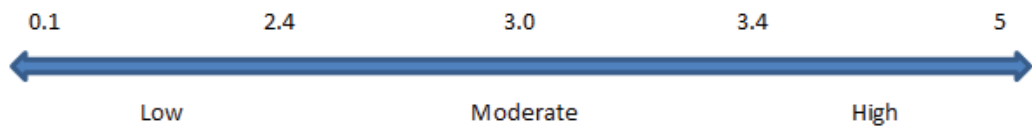
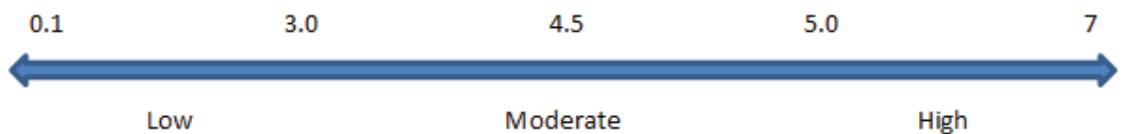


Figure 3.4: 7-Point Scale to Interpret Mean Scores



Subsidiary Classification

The dimensions of the overarching classification framework are *MNE management structures* (asks how subsidiaries are managed: hierarchically or heterarchically?), *subsidiary geographical scope* (local and international market scope), *subsidiary initiative* (in local, global, and internal markets)²⁰, *subsidiary external embeddedness* (collaboration with local firms), *subsidiary contributory role* (subsidiary value-added contribution to MNE), and *subsidiary autonomy* [strategic and operational autonomy]. Measurement of each of the dimensions is summarized in Table 3.1.

Table 3.1: Overarching Classification Framework

Number in Instrument	Variable Name	Variable Components	Data Type and Coding
SSM – 15	Subsidiary External Embeddedness (Adapted from Gammelgaard et al. (2011), Birkinshaw and Riddlerstrale (1999))	Extent of the subsidiary activity? <ul style="list-style-type: none"> Subsidiary collaborative agreements with local firms 	Discrete Interval (0=N/A, 1=Not at all, 2=Minor extent, 3=Moderate extent, 4=Major extent)

²⁰ Purpose of an initiative here is to reflect the various forms of subsidiary entrepreneurial activity in the local, internal and global markets, and how implications for a broader subsidiary role/strategy than simply selling products/services to the local market can be made. Clearly such activity can be a headquarter assignment, or a subsidiary choice. The activity may or may not be aligned with the MNE business scope and objectives. Also this thesis does not establish if an initiative was a success or a failure. Such would be possible if the study was qualitative, a case study or longitudinal, or there was a large section on initiatives. Unfortunately due to the research design, the thesis scope, the ethical issues, and the risk of low response rate, it was deemed not important to expand the survey size beyond its planned size. The relevance of the aspects, however, is acknowledged.

Table 3.1 continued: Overarching Classification Framework

Number in Instrument	Variable Name	Variable Components	Data Type and Coding
SSM – 8	Subsidiary Geographical Scope (Concept taken from White and Poynter (1984))	Extent of the subsidiary activity? <ul style="list-style-type: none"> • Serve Local Market • Serve International Market 	Discrete Interval (1=None, 2=Minor Extent, 3=Moderate Extent, 4=Major Extent, 5=Sole)
SSM – 8	Subsidiary Contributory Role (Adapted from Birkinshaw et al. (1998), Harzing and Noorderhaven (2006a))	Extent of the subsidiary activity? <ul style="list-style-type: none"> • Undertakes R&D for the MNE as a whole • Product Management for the MNE as a whole • Supply Inputs to the MNE as a whole 	Discrete Interval (1=None, 2=Minor Extent, 3=Moderate Extent, 4=Major Extent, 5=Sole)
SSM – 13	Initiatives (Adapted from Birkinshaw (1997), Birkinshaw et al. (1998))	Engagement in following activities in last 5 years ²¹ ? Local Initiatives <ul style="list-style-type: none"> • Offering new Products/Services to Host Country • Enhancements to Existing Products/Services • Market Development • New Technology Adaptation Global Initiatives <ul style="list-style-type: none"> • Developed New Products/Services to be Sold Internationally • Expanding R&D activity Internal Initiatives²² <ul style="list-style-type: none"> • Transfer of Production Process to Host Country • Acquisition of Local Companies • Expanding Company Operations in Host Country 	Discrete Interval (1=Not at all, 2=Minor Extent, 3=Moderate Extent, 4=Major Extent)

²¹ Classification is based on literature, and reliability and confirmatory factor analysis – see Appendix A.

²² These internal initiatives include both types of internal initiatives, such as configuring, e.g. transfer of production (internal market initiatives), and growth, e.g. expanding company operations (internal-global hybrid initiatives).

Table 3.1 continued: Overarching Classification Framework

Number in Instrument	Variable Name	Variable Components	Data Type and Coding
SSM - 6a	MNE Management Structures (Concepts taken from Birkinshaw and Hood (1997), Enright (2005b), Wolf and Egelhoff (2012))	How are subsidiaries managed?	Categorical
		Hierarchically <ul style="list-style-type: none"> • Corporate Headquarters • Regional Headquarters/Office • Mandated Subsidiary • Divisional Headquarters Heterarchically <ul style="list-style-type: none"> • Independent Management Other <ul style="list-style-type: none"> • Other 	
SSM - 9a and 9b	Autonomy (Adapted from Birkinshaw et al. (1998), Gammelgaard, McDonald, Stephan, Tüselmann, and Dörrenbächer (2012), Gammelgaard et al. (2011), Mudambi and Navarra (2004))	Subsidiary autonomy for following activities ²³ ? Strategic Autonomy <ul style="list-style-type: none"> • Hiring Senior Officials • Outsourcing Product/Services • Market Development • Product Development • Annual Budget Setting • Changes in Organisation of Activity • Financing • Choice of Technology • Overall Autonomy Operational Autonomy <ul style="list-style-type: none"> • Changes in Standard Operating Procedures • Changes in Product/Service Design • Day to Day Management 	Discrete Interval (1=None, 2=Minor Extent, 3=Moderate Extent, 4=Major Extent, 5=Complete)

²³ Classification is based on literature and reliability analysis – see Appendix A.

Subsidiary Configuration

The subsidiary developmental context includes a range of broad dimensions.

These are as follows:

1. *Subsidiary strategy and manager* (subsidiary track record, subsidiary credibility, scope-based strategy across various markets, subsidiary product scope relative to MNE, communication with HQ, network and relationship with HQ, and subsidiary manager's professional characteristics);
2. *MNE strategy, behaviour, and nationality* (MNE international strategy, control strategy, openness towards subsidiary development, resource support for subsidiary initiatives, entrepreneurial culture, and MNE country of origin);
3. *MNE-subsidiary transactions* (Intra-MNE knowledge flows, and Inter-organisational product flows);
4. *Host country strategic importance* (local industry dynamism, MNE current motives of subsidiary operations, subsidiary growth opportunities, and subsidiary export opportunities);
5. *Subsidiary characteristics* (resources, competence/capability, performance, subsidiary isolation, and perceptions of autonomy).

Table 3.2: Subsidiary Developmental Context

Number in Instrument	Variable Name	Variable Components	Data Type and Coding
SSM-10a ^{a1} SSM-10b ^{a2} SSM - 11 ^{a3} SSM - 12 ^b SC - 11 ^c SSM - 15 ^d	Subsidiary Strategy and Manager (Concept taken from Birkinshaw (1999), Birkinshaw et al. (1998), Birkinshaw and Riddlerstrale (1999), Dörrenbächer and Geppert (2009), Keupp (2008), Storey (1994), Taggart (1996), White and Poynter (1984))	Subsidiary Manager's Professional Characteristics	Categorical^{a1} (0=No, 2=Yes, 3=other (please specify))
		Subsidiary has a Country Manager ^{a1}	
		Country Manager Located in NZ ^{a2}	
		Country Manager's Job Status ^{a3}	Categorical^{a2} (0=NA, 2=Yes, 3=No (please indicate location))
		Country Manager's Prior Work Experience ^b	
		<ul style="list-style-type: none"> • Host Country Experience <ul style="list-style-type: none"> ○ With same MNE ○ With other Corporation • Overseas Experience <ul style="list-style-type: none"> ○ With same MNE ○ With other Corporation 	Categorical^{a3} (1=Temporary Assignment (1-5 years) 2=Ongoing Employee 3=Short Term Contract (<i>less than 3 years</i>) 4=Other)
		Subsidiary Credibility^c	
		<ul style="list-style-type: none"> • Subsidiary history of delivering what it promised • Subsidiary significant value-added contribution to MNE • Subsidiary global competitiveness in the main area of operation • Strategic importance of subsidiary for the parent MNE 	Interval^b (0=N/A, 1=None, 2=Less than 5, 3=5-10, 4=more than 10)
		Subsidiary Product Scope^c	
		Subsidiary product range width relative to product range of MNE	Discrete Interval^c (0=N/A, 1=Strongly Disagree, 4=Neutral, 7=Strongly Agree)
Communication with HQ^c			
Subsidiary communication with counterparts and bosses at HQ			
Subsidiary Track Record^d			
Earlier successful projects provide leverage for further investment?	Discrete Interval^d (0=N/A, 1=Not at all, 2=Minor extent, 3=Moderate extent, 4=Major extent)		
Network and Relationship with HQ^d			
Personal contacts in HQ and investment support			

Table 3.2 continued: Subsidiary Developmental Context

Number in Instrument	Variable Name	Variable Components	Data Type and Coding
SC – 10 ^e	Subsidiary Strategy and Manager (Concept taken from Taggart (1996), White and Poynter (1984))	Scope-based Strategy across various markets^e <ul style="list-style-type: none"> • Marketing Satellite Business • Miniature Replica Business • Product Specialist • Strategic Independent 	Categorical^c (check box) (0=N/A, 1=Local Market, 2=Regional Market, 3=Global Market, 4=Internal Market)
SC – 11 ^f SC – 8 ^h SC – 9 ^f	MNE Strategy, Behaviour, and Nationality (Adapted from Birkinshaw et al. (1998), Birkinshaw and Morrison (1995), Harzing and Noorderhaven (2006a))	MNE International Strategy^f Global Integration (low scores on the following represent <i>Local Responsiveness</i>) <ul style="list-style-type: none"> • Subsidiary activity susceptible to global integration • New product introduction occur in all major markets simultaneously • Customers' needs standardised worldwide MNE Control Strategy Formal Control ^f <ul style="list-style-type: none"> • Subsidiary activity coordination through formal planning systems • Formalisation in HQ-subsidiary relationship • Continuous evaluation of results based on written reports Informal Control ^h <ul style="list-style-type: none"> • Subsidiary participation with MNE in international committees and task forces • Subsidiary participation with MNE in international management programs dealing with knowledge sharing • Subsidiary informal communication with MNE, i.e., personal contacts and relationships. 	Discrete Interval^f (0=N/A, 1=Strongly Disagree, 4=Neutral, 7=Strongly Agree) Discrete Interval^g (0=N/A, 1=Not at all, 2=Minor extent, 3=Moderate extent, 4=Major extent) Discrete Interval^h (0=N/A, 1=Lowest, 4=Neither High/Low, 7=Extremely High)

Table 3.2 continued: Subsidiary Developmental Context

Number in Instrument	Variable Name	Variable Components	Data Type and Coding
SC – 9 ⁱ SSM – 15 ^j SSM – 14 ^{k,l}	MNE Strategy, Behaviour, and Nationality (Adapted from Birkinshaw (1999), Birkinshaw et al. (1998), Birkinshaw and Riddlerstrale (1999), Harzing and Noorderhaven (2006a))	MNE Control Strategy	Discrete Intervalⁱ (0=N/A, 1=Strongly Disagree, 4=Neutral, 7=Strongly Agree)
		Expatriation ⁱ <ul style="list-style-type: none"> • Management through home country nationals • Management through third country nationals 	
		Openness towards Subsidiary Development^j	Discrete Interval^j (0=N/A, 1=Not at all, 2=Minor extent, 3=Moderate extent, 4=Major extent)
		Investment Support <ul style="list-style-type: none"> • Getting investment support from the parent is difficult • MNE investment support requires much negotiation • Investment support for projects not strategically aligned with the MNE objectives is resisted by the parent 	
		CIS – Ethnocentrism	Discrete Interval^k (0=N/A, 1=No, 2=Yes)
		<ul style="list-style-type: none"> • MNE favours innovation and development in home region • MNE resists innovation and development outside their home region 	
CIS - Sister Subsidiary Rivalry	Discrete Interval^l (0=N/A, 1=None, 2=Partial, 3=Full)		
<ul style="list-style-type: none"> • Divisions in other countries tend to oppose giving support to the subsidiary 			
Resource Support for Subsidiary Initiatives (in last 5 years)^{k,l}	<ul style="list-style-type: none"> • Resource support requested^k • Resource support received^l 		

Table 3.2 continued: Subsidiary Developmental Context

Number in Instrument	Variable Name	Variable Components	Data Type and Coding
SC – 11 ^m SSM – 1 ⁿ	<p>MNE Strategy, Behaviour, and Nationality (Adapted from Birkinshaw et al. (1998), Hedlund and Åman (1983), Hulbert and Brandt (1980), Jong and Dut (2010), Yip (1995), Yip and Hult (2012))</p>	<p>Entrepreneurial Culture^m</p> <ul style="list-style-type: none"> • MNE encourages subsidiary risk taking behaviour • MNE supports subsidiary entrepreneurial activity <p>MNE Nationalityⁿ Parent Country of Origin</p>	<p>Discrete Interval^m (0=N/A, 1=Strongly Disagree, 4=Neutral, 7=Strongly Agree)</p> <p>Categoricalⁿ (1=USA, 2=Australia, 3=Japan, 4=UK, 5=Netherlands, 6=Hong Kong, 7=China, 8=Taiwan, 9=Germany, 10=Italy, 11=Canada, 12=Other)</p>
SC – 6 ^o	<p>MNE-subsubsidiary Transactions (Adapted from Andersson and Forsgren (1994), Gupta and Govindarajan (1991), Harzing and Noorderhaven (2006a), and Monteiro et al. (2008))</p>	<p>Intra-MNE Knowledge Flows^o</p> <p>Inflows (from HQ)</p> <ul style="list-style-type: none"> • Product Design • Marketing • Distribution • Management Systems/Practices <p>Inflows (from other subsidiaries)</p> <ul style="list-style-type: none"> • Product Design • Marketing • Distribution • Management Systems/Practices <p>Outflows (to HQ)</p> <ul style="list-style-type: none"> • Product Design • Marketing • Distribution • Management Systems/Practices <p>Outflows (to other subsidiaries)</p> <ul style="list-style-type: none"> • Product Design • Marketing • Distribution • Management Systems/Practices 	<p>Discrete Interval^o (1=Lowest, 3=Neither High/Low, 5=Very High)</p>

Table 3.2 continued: Subsidiary Developmental Context

Number in Instrument	Variable Name	Variable Components	Data Type and Coding
SC – 7(a,b) ^p	MNE-subsidiary Transactions (Adapted from Harzing and Noorderhaven (2006a))	Inter-organisational Product Flows^p	Ratio^p (Percentage Value: 0-100) ²⁴
		<p>Product Inflows</p> <ul style="list-style-type: none"> • From HQ • From other MNE subsidiaries in subsidiary host country • From other MNE subsidiaries abroad • From external suppliers/customers in subsidiary host country • From external suppliers/customers abroad <p>Product Outflows</p> <ul style="list-style-type: none"> • To HQ • To other MNE subsidiaries in subsidiary host country • To other MNE subsidiaries abroad • To external suppliers/customers in subsidiary host country • To external suppliers/customers abroad 	
SSM – 7 ^q SSM – 15 ^r	Host Country Strategic Importance (Adapted from Birkinshaw and Hood (1998), Buckley and Casson (1976), Dunning (1993), Dunning and Lundan (2008b), Verbeke et al. (2007))	MNE Current Motives of Subsidiary Operations^q	Discrete Interval^q (1=None, 2=Minor Extent, 3=Moderate Extent, 4=Major Extent, 5=Sole)
		<p>Local Industry Dynamism^r</p> <p>Local market competition</p> <p>Growth Opportunities^r</p> <p>Host country recognised by MNE as a location for subsidiary to grow</p>	Discrete Interval^r (0=N/A, 1=Not at all, 2=Minor extent, 3=Moderate extent, 4=Major extent)

²⁴ Scale is ratio (i.e., 0-100%), but is converted to interval with three points: less than or equal to 25% (low); from 26% to 70% (moderate); and above 70% (high).

²⁵ The term is used as ‘resource-seeking’ from now on in the thesis.

Table 3.2 continued: Subsidiary Developmental Context

Number in Instrument	Variable Name	Variable Components	Data Type and Coding
SSM – 15 ^s	Host Country Strategic Importance (Adapted from Buckley and Casson (1976))	Export Opportunities^s Host country recognised by MNE as an export platform	Discrete Interval^s (0=N/A, 1=Not at all, 2=Minor extent, 3=Moderate extent, 4=Major extent)
SC – 4 ^t SC – 3 ^t SC – 2 ^t SC – 1 ^u	Subsidiary Characteristics (Adapted from Ambos and Ambos (2009), Ambos and Birkinshaw (2010), Berry et al. (2010), Birkinshaw and Hood (1998), Ghemawat (2001), Harzing and Noorderhaven (2006a))	<p>Resources relative to the MNE^t</p> <ul style="list-style-type: none"> • Research & Development • Innovation & entrepreneurship • Production/Manufacturing • Marketing & sales • Logistics • Human resource • Financial management • IT/Information Systems • Managing international activities <p>Capability relative to the MNE^t</p> <ul style="list-style-type: none"> • New product development • Cost control • Personnel development • Product quality • Innovation • Sales growth • Market share <p>Performance relative to MNE^t</p> <ul style="list-style-type: none"> • Return on investment • Profit • Productivity • Cash flow from operations <p>Subsidiary Isolation</p> <p>Subsidiary Isolation from MNE^u</p> <ul style="list-style-type: none"> • Geographic isolation • Cultural isolation • Economic isolation • Financial isolation • Administrative isolation • Knowledge isolation • Social isolation • Overall isolation 	<p>Discrete Interval^t (1=Lowest, 4=Neither High/Low, 7=Extremely High)</p> <p>Discrete Interval^u (0=N/A, 1=Strongly Disagree, 4=Neutral, 7=Strongly Agree)</p>

Table 3.2 continued: Subsidiary Developmental Context

Number in Instrument	Variable Name	Variable Components	Data Type and Coding
SC – 5 ^v SSM – 15 ^w	Subsidiary Characteristics (Concepts taken from Ambos and Ambos (2009), Andersson and Forsgren (1996), Berry et al. (2010), Harzing and Noorderhaven (2006a), Monteiro et al. (2008))	<p>Subsidiary Isolation from MNE</p> <p>Impact of Overall Isolation on^v</p> <ul style="list-style-type: none"> • Subsidiary Performance • Subsidiary Competence/Capability • Subsidiary Resources <p>Perceptions of Autonomy^w</p> <ul style="list-style-type: none"> • High autonomy will benefit subsidiary development • Low autonomy will damage subsidiary development 	<p>Discrete Interval^v (0=N/A, 1=Strongly Disagree, 4=Neutral, 7=Strongly Agree)</p> <p>Discrete Interval^w (0=N/A, 1=Not at all, 2=Minor extent, 3=Moderate extent, 4=Major extent)</p>

Demographics and Background

Demographics and background variables include subsidiary legal status, entry mode, age, size and industry (Table 3.3).

Table 3.3: Demographics and Background

Number in Instrument	Variable Name	Variable Components	Data Type and Coding
SSM – 2 SSM – 3	Demographics and Background (Adapted from (Buckley & Casson, 1998))	<p>Subsidiary Legal Status</p> <ul style="list-style-type: none"> • Branch • Subsidiary • Other <p>Subsidiary Entry Mode</p> <ul style="list-style-type: none"> • Greenfield • Acquisition • Merger • Franchise/Licensing • Joint Venture with local firm • Joint Venture with a foreign firm • Other 	<p>Categorical</p> <p>Categorical (allowing multiple selections)</p>

Table 3.3 continued: Demographics and Background

Number in Instrument	Variable Name	Variable Components	Data Type and Coding
SSM – 4 SSM – 5	Demographics and Background (Adapted from (Buckley & Casson, 1998))	Subsidiary Age <ul style="list-style-type: none"> • Less than 5 years • 5-10 years • 11-20 years • More than 20 years 	Categorical
		Subsidiary Size (number of employees) <ul style="list-style-type: none"> • Less than 50 • 50-200 • 201-500 • 501-1000 • More than 1000 	
		Subsidiary Industry²⁶ <ul style="list-style-type: none"> • Manufacturing • Services • Primary Industries 	

DATA ANALYSIS TECHNIQUES

The thesis mainly adopts quantitative analysis techniques. The tool used for the quantitative analysis is IBM SPSS Statistics (version 22). To achieve the thesis’s research objective concerning subsidiary classification, a technique is required which can derive a classification or a distinct grouping of subsidiaries from the data. To this end, elements involved in the grouping should have similar characteristics within a single group, but different characteristics across the groups. To achieve a classification a quantitative data reduction approach may be adopted such as factor analysis or cluster analysis (Enright & Subramanian, 2007). Factor analysis reduces a large number of original variables into smaller meaningful dimensions or factors. Reduction is achieved across variables

²⁶ This information came with the Kompas database, but was double-checked on the internet and updated.

(column-wise). Cluster analysis reduces observations (rather than variables) into different containers (row-wise), so that there is homogeneity within a container and heterogeneity across the containers. This technique is more suitable to achieve the thesis's subsidiary classification research objective.

Subsidiary roles studies using survey methods have used mainly the cluster analysis technique (see Harzing & Noorderhaven, 2006a, 2006b; Jarillo & Martínez, 1990; Taggart, 1997a, 1997c; Wang et al., 2009). Factor analysis is used mainly where data reduction across variables was required prior to cluster analysis (see Wang et al., 2009). This thesis uses the cluster analysis (i.e., two-step cluster analysis) technique to develop a classification, but the reason is more its relevance to the thesis's overarching conceptualisation than its frequent use in the MNE subsidiary research. The relevance of the technique is discussed as follows.

The overarching classification framework uses an unordered nominal/categorical variable called MNE management structures. Cluster analysis offers various clustering techniques, e.g. two-step, K-means (non-hierarchical), and hierarchical. The two-step clustering technique is used to handle complex data, for example, large datasets, and is the only technique among others that takes both categorical and continuous variables simultaneously into analysis. The technique uses the same algorithms as the other clustering techniques, except that it is more advanced and performs the analysis in two steps. The first step of cluster analysis follows a non-hierarchical algorithm and creates pre-clusters of responses. In the second step, the hierarchical algorithm is applied which takes the pre-clusters as cases to form clusters. Factor analysis is also appropriate on a large data-set, but fails to reduce data where there is an unordered categorical variable (like the MNE management structures variable). Factor analysis may use a polychoric correlation matrix technique, but only for cases where the data are binary (0/1) or ordinal

and not where the data are unordered categorical. Due to this reason it is established that the most appropriate statistical technique to achieve objective 1 is two-step cluster analysis.

To achieve the objective concerning subsidiary configuration, an analysis of variance is required, which can check if groups vary significantly amongst them. Such an analysis is required to test how the developmental context configures differently with different subsidiary types. A subsidiary roles study configuring a subsidiary strategy with their structure adopted the same technique that is analysis of variance (see Birkinshaw & Morrison, 1995). This technique has several methods across data normality. These include the parametric algorithms such as Tukey, and Games-Howell, as well as non-parametric algorithms such as Kruskal-Wallis, and Mann-Whitney U. The parametric tests assume that data are normally distributed, whereas the non-parametric tests are not based on normality assumptions. Therefore where the data are normally distributed parametric tests (e.g. Tukey or Games-Howell) may be used. Tukey may be used where equal variances are assumed, and where not the Games-Howell is appropriate. Where data are not normally distributed non-parametric tests (e.g. Kruskal-Wallis, and Mann-Whitney U) may be used.²⁷ Where there are two groups, Mann-Whitney U may be appropriate, and where more than two the Kruskal-Wallis. In addition to normality, the non-parametrics may be used also where the data has outliers.

The thesis adopts the appropriate analysis of variance test and tests for significant differences within the typology derived from the overarching subsidiary classification framework. The analysis of variance tests can identify how the groups on a particular dimension (e.g. local initiative) vary. It shows if, for example, group A has a significantly

²⁷ However, where the sample size is more than 50, parametric tests may still be used (Lumley, Diehr, Emerson, & Chen, 2002).

higher score on local initiative than the other groups etc. This analysis is conducted iteratively throughout the thesis research process. For example:

1. Prior to cluster analysis, it is checked if the management structures' dimensions (i.e., CHQ, RHQ/office, mandated subsidiary, DHQ, and independent management) differ across the other (continuous) dimensions of the overarching classification framework. With this the validity of the framework, and the assumption that subsidiaries vary in their roles and development across their management structures, is established.
2. The grouping derived from the overarching framework is checked for significant differences across the (continuous) dimensions they are based on. With this, the cluster membership is validated. For a dimension to qualify for a cluster membership, it should vary significantly across at least two clusters (Burns & Burns, 2008).
3. Finally, to achieve the objective concerning subsidiary configuration the analysis of variance is used again. Here all the dimensions of the developmental context are tested individually for significant differences across the subsidiary classification. This identifies key dimensions of importance [where at least two subsidiary types vary significantly], and establishes the relevance of contextual factors to various subsidiary types.

In both the surveys an open space is provided to respondents where they could offer additional comments. The benefit is that respondents can offer further explanations, and identify issues not captured in the closed questions (O'Cathain & Thomas, 2004). For surveys involving such questions the best approach to analysis is first to read the

comments provided, and see if they contribute to the overall study, and in particular to the closed questions. If the comments further elaborate on the closed questions then a formal qualitative technique like content analysis is appropriate (Fink & Kosecoff, 1996; Moser & Kalton, 1971). If they do not corroborate much, then it may be worthwhile reporting that the comments did not contribute much to the overall study (Thomas, McColl, Priest, & Bond, 1996). Whether the comments corroborated or not is discussed in the next chapter.

As the thesis's main technique is quantitative, a key consideration here is representativeness of the selected sample. If it is not representative of the population under investigation there may be a non-response bias (Rossi, Wright, & Anderson, 1983). It is important to check if the responses are biased towards respondents with particular demographic characteristics.

Chapter 2 theoretically links the concepts used in the study. It is important to explore what the empirical evidence indicates regarding the theoretical links and associations, and what are the key predictors. The most widely used (and probably the only) quantitative statistical test to check for dependence/associations is the correlations test. The correlations test indicates how two or more variables (if at all) are related (positively or negatively), and how strong their association (low or high) is. The thesis to test for such dependence employs a correlations test. Like analysis of variance, alternatives to this technique lie across the data normality. Where the data are normally distributed, appropriate correlations tests such as the Pearson product-moment correlation coefficient, are appropriate. Where the data are not normally distributed, the non-parametric tests such as Rank correlation coefficients (which include the Spearman's rank correlation coefficient and the Kendall tau rank correlation coefficient tests) may be used. The thesis employs the appropriate test based on such contingency.

Data summary is presented using arithmetic means, standard deviations and frequency distribution techniques. Reliability and confirmatory factor analysis tests are taken to check for internal consistency among items/measures. Little's MCAR test is done to check for randomness of missing data and to fill in missing values with the predicted values. The extrapolation method is used to check for non-response bias. Harman's single-factor test is used to check for common method variance.

Lastly the thesis adopts a strict standard for what it considers as statistically significant. It takes only those values as statistically significant where $p < 0.05$. This is a standard approach, which has been followed in the social, and natural sciences for a long time. A few of the studies today (especially in social sciences) have started to adopt some flexibility in terms of what can be considered statistically significant – the significance value is extended as far as $p < 0.1$. This thesis avoids such an approach and maintains a strict standard.

SUMMARY

The chapter operationalises the overarching subsidiary classification framework, and the subsidiary development context. The research design (including research paradigm, philosophy and other research-specific factors; sample development; data collection methods; and questionnaire design), research measurement, and data analysis techniques, were discussed. The relevance of these to the thesis objectives is also established. A database of population of foreign-owned subsidiaries in New Zealand is constructed.

A 3-point absolute rank measure representing low, moderate, and high capacities of subsidiaries on 4-point, 5-point, and 7-point Likert scales is developed. Such an

approach is adopted to facilitate the multifaceted concepts used in the thesis, reflect subsidiary absolute capacities, and better reflect the reality.

CHAPTER 4 – DATA ANALYSIS, DISCUSSION, AND IMPLICATIONS

This chapter analyses the data from the main survey: subsidiary strategy and management (SSM); and the follow-up survey, subsidiary configuration (SC). Through the use of descriptives, correlations, and variance techniques, the surveys' (quantitative) data are analysed. The implications of these results for theory are made.

With the main focus on subsidiary roles and development, this chapter fills the gaps identified in the previous chapters, and provides a basis to answer the thesis's research questions. Subsidiary strategy and management literature is updated, with some findings supporting, some extending, while others rejecting the literature. General theories are extended mainly with the identification of factors associated with: (i) the development and depletion of subsidiary resources/capabilities; (ii) subsidiary competencies through which they develop intra-MNE resource dependencies; and, (iii) the subsidiary network development and their associations with subsidiary roles and development.

The chapter is structured as follows:

1. A small section on the responses received from the surveys is presented.
This illustrates if the surveys received sufficient responses.
2. A section on the data screening is presented. Data screening involves analysis of the two surveys in terms of distribution, missing values, variances, construct reliability, and multi-collinearity. The purpose of screening is to assess if the data are reliable, valid, unbiased, and fit to make inferences and build theory.

3. The data analysis is presented. The analysis groups the surveys' data into:
(i) demographic/background variables; (ii) overarching subsidiary classification framework's variables; and, (iii) developmental context's variables. First, the descriptive analysis is undertaken. Inferential analysis using variance and correlation techniques then follows.
4. Implications for the general theories are made.
5. The chapter's summary is presented.

SURVEY RESPONSES

Out of the sample population of 952, the SSM survey yielded a response rate of 45.69%, with 435 responses in total. Out of 435, six responses were partial²⁸ and were therefore removed from the analysis, leaving 429 responses and a final response rate of 45.06%. This is a high response rate and with this, a key interest of the thesis (i.e., a nation-wide experience) can be considered as met. From the 429 respondents to the SSM survey, 246 agreed to participate in a follow-up survey. The 246 respondents were taken as the SC survey sample. Following data screening and inferential analysis,²⁹ the SC survey sample was checked for representativeness of the clusters formed using the SSM survey data and the sample demographics. The SC survey sample showed good representativeness of the SSM survey responses in terms of subsidiary clusters and demographics (see Table 4.1). With 83 responses, the SC survey yielded a response rate of 33.73%. Eight out of the 83 responses were partial and hence were removed from the analysis, reducing the final response to 75 and the response rate to 30.48%. The final response rates of both the surveys, as identified by the comparable studies of

²⁸ For both the surveys, partial responses are those where the respondents did not complete the surveys that is the survey had four pages but the respondent, for example, filled only one or two pages.

²⁹ This is cluster analysis, which revealed three clusters – further information is given on the clusters in the next chapter

multinational subsidiaries, are well above the usual response rates (see Harzing, 1997). A further comparison of the two surveys showed that both the surveys' responses were a good representation of each other in terms of clusters and demographics (see Table 4.2).

Table 4.1: Subsidiary Configuration Survey Sample Representativeness³⁰

Subsidiary Strategy and Management Survey Responses (N=429)			Subsidiary Configuration Survey Sample (N=246)		
Subsidiary Clusters					
Clusters	<i>F</i>	%	Clusters	<i>F</i>	%
Cluster 1	116	27.0	Cluster 1	58	23.6
Cluster 2	162	37.8	Cluster 2	95	38.6
Cluster 3	151	35.2	Cluster 3	93	37.8
Subsidiary Industry					
Industry	<i>F</i>	%	Industry	<i>F</i>	%
Primary Industries	5	1.2	Primary Industries	3	1.2
Manufacturing	187	43.6	Manufacturing	94	38.2
Services	237	55.2	Services	149	60.6
Subsidiary Age					
Age	<i>F</i>	%	Age	<i>F</i>	%
Less than 5 years	24	5.6	Less than 5 years	18	7.3
5-10 years	48	11.2	5-10 years	30	12.2
11-20 years	108	25.2	11-20 years	53	21.5
More than 20 years	249	58.0	More than 20 years	145	58.9
Subsidiary Size					
Size	<i>F</i>	%	Size	<i>f</i>	%
Less than 50	228	53.1	Less than 50	124	50.4
51-200	117	27.3	51-200	71	28.9
201-500	58	13.5	201-500	34	13.8
501-1000	11	2.6	501-1000	9	3.7
More than 1000	15	3.5	More than 1000	8	3.3
MNE Management Structures					
Management Structures	<i>F</i>	%	Management Structures	<i>f</i>	%
Parent Company (HQ)	44	10.3	Parent Company (HQ)	30	12.2
Regional Headquarters/Office	226	52.7	Regional Headquarters/Office	120	48.8
Branch (Non HQ/RHQ Offices)	18	4.2	Branch (Non HQ/RHQ Offices)	12	4.9
Network Control	15	3.5	Network Control	8	3.3
Independent Subsidiary	126	29.4	Independent Subsidiary	76	30.9

³⁰ The table shows that five primary industry subsidiaries responded out of the total 13 primary industry subsidiaries in the sample. This lies consistent in terms of primary industry representativeness to a previous large sample study, e.g. Scott-Kennel (2001). The relatively smaller number of foreign primary industry subsidiaries in New Zealand as compared to the services and manufacturing subsidiaries is mainly because the primary processing here is predominantly domestically-owned. As per the NZ policy the primary processing must take place in New Zealand – the policy encourages foreign investors to maximise processing of the New Zealand's resources (NZ-Legislation, 2005).

Table 4.2: SSM and SC Survey Responses

Subsidiary Strategy and Management Survey Responses (N=429)			Subsidiary Configuration Survey Responses (N=75)		
Subsidiary Clusters					
Clusters	<i>F</i>	%	Clusters	<i>F</i>	%
Cluster 1	116	27.0	Cluster 1	16	21.3
Cluster 2	162	37.8	Cluster 2	35	46.7
Cluster 3	151	35.2	Cluster 3	24	32.0
Subsidiary Industry					
Industry	<i>F</i>	%	Industry	<i>F</i>	%
Primary Industries	5	1.2	Primary Industries	2	2.7
Manufacturing	187	43.6	Manufacturing	29	38.7
Services	237	55.2	Services	44	58.7
Subsidiary Age					
Age	<i>F</i>	%	Age	<i>F</i>	%
Less than 5 years	24	6	Less than 5 years	3	4.0
5-10 years	46	11	5-10 years	8	10.7
11-20 years	109	25	11-20 years	21	28.0
More than 20 years	250	58	More than 20 years	43	57.3
Subsidiary Size					
Size	<i>F</i>	%	Size	<i>f</i>	%
Less than 50	227	53	Less than 50	33	44.0
51-200	117	27	51-200	22	29.3
201-500	58	14	201-500	15	20.0
501-1000	11	3	501-1000	3	4.0
More than 1000	16	3	More than 1000	2	2.7
Management Structures					
Management Structures	<i>F</i>	%	Management Structures	<i>f</i>	%
Parent Company (HQ)	44	10	Parent Company (HQ)	7	9.3
Regional Headquarters/Office	226	53	Regional Headquarters/Office	39	52.0
Branch (Non HQ/RHQ Offices)	18	4	Branch (Non HQ/RHQ Offices)	4	5.3
Network Control	15	4	Network Control	1	1.3
Independent Subsidiary	126	29	Independent Subsidiary	24	32.0

DATA SCREENING

Data from both the surveys are tested for *normality*. Normality testing is usually done to employ the appropriate statistical tests as some tests assume data are normally distributed while others do not. Using the Kolmogorov-Smirnov and Shapiro-Wilk tests (see Justel, Peña, & Zamar, 1997; Shapiro & Wilk, 1965), it is found that data in both the

surveys are not normally distributed. In both the datasets, for the majority of the cases Kolmogorov-Smirnov and Shapiro-Wilk tests returned significant ($p > 0.05$) values, indicating non-normal distributions. For situations where data are not normally distributed, or where data have outliers, non-parametric statistical tests are appropriate. It is also argued that parametric tests work equally well with non-normal data and show similar results. The argument is based on the Central Limit Theorem, which states that under certain conditions, the arithmetic means of data (i.e., sample size more than 50) are approximately normally distributed (see Lumley et al., 2002). This assumption is particularly relevant for studies where non-parametric options of the tests (to be applied) are not available, and where data transformations do not result in a linear distribution.

The thesis applies non-parametric tests mainly because of the availability of the appropriate non-parametric tests. The cluster analysis does not require/assume data normality (see Templ, Filzmoser, & Reimann, 2008). For correlations and variance analysis there are non-parametric options available. These are: (i) *Spearman rank correlations* (see Croxton, Cowden, & Klein, 1968); and, (ii) *Kruskal–Wallis one-way analysis of variance* (see Kruskal & Wallis, 1952).

Data Screening

A test of *non-response bias* is important for large surveys and particularly where the surveys involve sending reminders. Therefore in this analysis it is appropriate to test for non-response bias, because in both surveys reminders had to be sent and subsequently a considerable number of responses were received late. Potential respondents that do not respond to a survey may either be unable to fill the survey due to time constraints, or may be unwilling to provide information. This creates a potential bias in that it may imply that

non-respondents are attached to more active or more complex subsidiaries than the respondents.

The *extrapolation* method is used to check for non-response bias. This assumes that the speed of a response is a proxy for the willingness and ability to participate in the survey (Armstrong & Overton, 1977; Pace, 1939). Under this method, responses of both the surveys are grouped (into early and late responses) based upon the dates they are returned. For the SSM survey, the responses are divided into two groups. The majority of the responses (60.37%) were received after a reminder was sent. Post-reminder responses are compared with the pre-reminder responses, with the assumption that post-reminder responses are late responses and pre-reminder responses early responses. Means of all the items of the two groups are compared for statistically significant differences. The Kruskal–Wallis analysis of variance test shows highly non-significant differences among the mean scores of the two groups, indicating that the responses are not plagued by any non-response bias. The same procedure is followed for the SC survey. The Kruskal–Wallis analysis of variance test shows highly non-significant differences among the mean scores, hence also clearing the SC survey of any non-response bias.

Both the surveys sought additional qualitative comments from the respondents. Open-ended questions, such as ‘additional comments’, run the risk of low responses, as respondents do not often respond to such questions (Rossi et al., 1983). This thesis also encountered such an issue. Only 37 out of 429 respondents in the SSM survey, and two out of 75 respondents in the SC survey, provided additional comments. If the comments elaborate on the survey’s closed questions then they may be further analysed (Fink & Kosecoff, 1996; Moser & Kalton, 1971). If they do not corroborate much, then it is worthwhile reporting that the comments did not contribute much to the overall study. This implies that it is appropriate to exclude comments from the analysis if they do not

corroborate the overall research findings (Thomas et al., 1996). The analysis showed that the additional comments were less helpful as they were either about the instrument or were descriptive, obvious or less contributing. The comments were deemed neither as elaborating on the closed questions, nor as identifying related issues not captured in the closed questions. The qualitative comments were therefore deleted from this thesis's analysis.

As the surveys asked for company-level information from a single person (i.e., the subsidiary top manager), there was the possibility for a common method bias to emerge. To check for the existence of a common method bias, the conventional *Harman's single-factor* test to explore method variance is employed (Harman, 1967). The test assumes that if all variables using exploratory factor analysis are loaded on one factor, and the total variance emerging is more than 50%, then there is likely a problem of a common method bias. SSM survey data show a total variance of 12.54%. SC survey data show a total variance of 11.19%. The SSM and SC survey merged data-set³¹ shows a total variance of 13.4%. Variables used in the overarching framework show a total variance of 23.41%. All these variances are well below the 50% limit, and so the chances of the results being biased (by the test itself), if a test is employed, are considered none or minimal.

Data are reduced using the literature, reliability analysis, and confirmatory factor analysis. Constructs' items are merged. Reliability analysis (Cronbach's Alpha) is taken as the key technique. Where the alpha value is less than 0.6, confirmatory factor analysis is applied and factor loadings are reported (see Appendix A). For the initiatives' construct, data are reduced to three types of initiatives (local, global, and internal), and for autonomy data to two types (strategic and operational). This is based on both the literature review and the statistical tests.

³¹ To explore inter-correlations of the SC survey and the SSM survey variables, responses of respondents of both the surveys (i.e., 75 respondents) are merged.

A large number of responses with missing values for the construct ‘subsidiary manager’s professional characteristics’ was observed. The question was asked about managerial experience with the current organisation within and outside New Zealand, and the managerial experience with other organisations within and outside New Zealand. Out of the 429 respondents 391 qualified (where the subsidiary had a country manager) to answer the question, but complete answers from only 173 respondents could be obtained. The remaining 218 did not answer the question completely. A survey conducted (on five respondents) prior to the actual surveys did not show missing values on this question. Also in the actual surveys, a considerable number of respondents did answer the question completely. The issues with the design or correct interpretation of the question are therefore thought unlikely to have occurred.

An attempt is made to fill in the missing values with predicted values. *Little’s Missing Completely at Random (MCAR)* test (see Little, 1988) is conducted to see if values are missing in a random or non-random way. If the data are missing in a random way then the missing values can be replaced with predicted values produced by the MCAR algorithm. Using the *expectation maximization analysis* it is found that the data are not missing completely at random as the test showed a significance level of $p < 0.001$. This shows that managerial experience of subsidiary country managers cannot be predicted (and therefore missing values cannot be filled).

Analysis of the managerial experience question excluded responses where the question was not answered completely (i.e., all parts of the question were not answered). For the complete responses, a non-response bias test became necessary as: (i) the exclusion of partial responses could affect the survey representativeness; and, (ii) it needed to be checked if the respondents answering the four parts were biased towards a particular subsidiary cluster, industry, age, size, or management structure.

Representativeness of the responses on these dimensions was checked. The results showed good representativeness, thus clearing risk of a bias (see Table 4.3).

Table 4.3: Managerial Experience Responses Representativeness

Subsidiary Strategy and Management Survey Responses (N=429)			Respondents who answered the managerial experience's question completely (N=173)		
Subsidiary Clusters					
Clusters	F	%	Clusters	F	%
Cluster 1	116	27.0	Cluster 1	46	26
Cluster 2	162	37.8	Cluster 2	67	38.7
Cluster 3	151	35.2	Cluster 3	61	35.3
Subsidiary Industry					
Industry	F	%	Industry	F	%
Primary Industries	5	1.2	Primary Industries	3	1.7
Manufacturing	187	43.6	Manufacturing	80	46.2
Services	237	55.2	Services	90	52.0
Subsidiary Age					
Age	F	%	Age	F	%
Less than 5 years	24	6	Less than 5 years	10	5.8
5-10 years	46	11	5-10 years	21	12.1
11-20 years	109	25	11-20 years	35	20.2
More than 20 years	250	58	More than 20 years	107	61.8
Subsidiary Size					
Size	F	%	Size	f	%
Less than 50	227	53	Less than 50	88	50.9
51-200	117	27	51-200	49	28.3
201-500	58	14	201-500	24	13.9
501-1000	11	3	501-1000	6	3.5
More than 1000	16	3	More than 1000	6	3.5
Management Structures					
Management Structures	F	%	Management Structures	f	%
Parent Company (HQ)	44	10	Parent Company (HQ)	15	8.7
Regional Headquarters/Office	226	53	Regional Headquarters/Office	92	53.2
Branch (Non HQ/RHQ Offices)	18	4	Branch (Non HQ/RHQ Offices)	5	2.9
Network Control	15	4	Network Control	3	1.7
Independent Subsidiary	126	29	Independent Subsidiary	58	33.5

SURVEYS' DATA ANALYSIS

The results of the SSM and the SC surveys' data are analysed in two groups as follows. First, the descriptive analysis of the data is presented. Second, the inferential analysis is presented.

Descriptive Analysis

The descriptive analysis of the variables (as per the groups identified above) is presented as follows:

Demographics and Background Variables. Australia and the USA-based subsidiaries are predominant in New Zealand. Individual European countries have substantially fewer subsidiaries, but collectively Europe accounts for 30% of respondents compared with 27% Oceania, 27% North America (the USA and Canada), and 16% Asia. These findings are consistent with the previous large sample study on foreign subsidiaries by Scott-Kennel (2001), indicating no major changes in the investment country of origin. Proponents of regional strategy like Rugman, Verbeke, and Nguyen (2011) argue that MNEs mainly operate within their home regions rather than the triad (i.e., Asia, North America, and the EU). The authors argue that global firms rarely exist. A predominant origin from the USA, in particular, shows that global firms do exist or that (at least) in New Zealand the MNEs operating are predominantly global. A caveat here is that this thesis does not explore if the MNEs operating in New Zealand operate in the (whole) triad as well. It is also rather less realistic to assume that MNEs headquartered in the USA, and that have operations in New Zealand (Asia-Pacific), will not have operations in the EU. The same can be said about MNEs that are headquartered in the EU.

The majority (88%) of foreign-owned operations have the legal status of subsidiaries, which means that most MNE operations are New Zealand registered companies. There is roughly an equal share³² of subsidiaries whose origins are in the acquisition of some pre-existing businesses (47%), and those that are greenfield investments (42%). Earlier studies like Scott-Kennel (2001) show that the majority (two-thirds) of foreign subsidiaries in New Zealand are greenfield investments. Results here show that acquisitions have now exceeded the greenfield investments. Most subsidiaries (58%) have been established for more than 20 years, while 17% have been established within the last 10 years. These show the historical presence of foreign subsidiaries in New Zealand, and this presents an interesting case of subsidiary development over time. Subsidiaries are typically small operations in New Zealand. The majority (53%) have fewer than 50 employees (see Appendix B). This may be because the subsidiaries interface with a small New Zealand market.

Overarching Subsidiary Classification Framework's Variables. Descriptive analysis from the results of variables used in the overarching framework is presented as follows:

MNE Management Structures. The overall majority (71%) of the subsidiaries in New Zealand are managed hierarchically (Table 4.4) and the majority of these are owned by USA or European headquartered MNEs. Slightly over half (53%) of the subsidiaries are managed from a RHQ/office, with 59% of these located in Australia, 22% in New Zealand, and 12% in Singapore (see Appendix C). Also around 4% (18) subsidiaries are

³² Some subsidiaries have multiple entry modes, for example, (i) a different business established on an acquired business, (ii) started a joint venture with a company but later acquired by another company, (iii) some have joint ownership with multiple owners, (v) some had minor ownership at the start but later acquired the whole firm, and (vi) some started as a branch but later converted to a subsidiary or vice versa.

managed by mandated subsidiaries, 15 of which operate in Australia. This confirms the thesis's assumption (made in Chapter 1) that most of the management offices of subsidiaries in New Zealand will be based in its larger neighbour, Australia, primarily because of its relatively closer proximity to the major markets.

Table 4.4: MNE Management Structures

MNE Management Structures (N=429)	N	%
<i>Hierarchical</i>		
Corporate Headquarters	44	10%
Regional Headquarters/Office	226	53%
Mandated Subsidiary	18	4%
Divisional Headquarters (management under a network of different reporting channels rather than a single controlling office)	15	4%
<i>Heterarchical</i>		
Independent Management	126	29%

Studies emphasize much about the subsidiary capability vis-à-vis subsidiary power and mandates (Birkinshaw, 1996; Mudambi, Pedersen, et al., 2014). Studies also suggest the combined effect of subsidiary capability and host location (internal environment) over subsidiary roles (Bartlett & Ghoshal, 1986). A predominant management arrangement in a single economy does, however, suggest that subsidiary host location is an independent or at least a dominant determinant of subsidiary mandates. This is a key factor on which an MNE's decisions of assigning management mandates are based. This implies that where MNEs have subsidiaries in multiple countries in a region (rather than a subsidiary in a single country), irrespective of their capabilities, the individual host country's characteristics are the key determinants of who gets the management mandates. This assertion has key implications for the actor-network theory and the global production network literature.

The results show that some subsidiaries have RHQs/offices in the Americas (north and south), and Europe (see Appendix C), indicating that RHQs/offices can be assigned responsibilities for multiple regions or regions where the RHQs/offices are not located.

Little less than a third (29%) of subsidiaries in New Zealand are network organisations. Literature suggests that subsidiaries in terms of their management structures (hierarchical or heterarchical) have been studied separately. There are calls for the development of contingency models (such as the overarching framework of this thesis) where subsidiaries that are managed across hierarchy and heterarchy are studied together (see Wolf & Egelhoff, 2010, 2012). Having sufficient data from both the hierarchically and heterarchically managed subsidiaries (in this thesis) makes it possible to test the contingency-based overarching framework.

Geographical Scope. The majority (87%) of subsidiaries actively serve the New Zealand market. One-fifth of subsidiaries actively serve markets outside of New Zealand (Table 4.6). A local market focus (with low or no international focus) reflects a subsidiary locally responsive strategy (Meyer & Estrin, 2014; Prahalad & Doz, 1987). The results show evidence of only seven subsidiaries that follow an export or global strategy. These subsidiaries belong predominantly to the manufacturing industry and are managed heterarchically. Less than a third (126) follows a locally responsive strategy, belonging predominantly to the services industry (65%) and managed hierarchically (70%). Only four follow an international strategy (low or no local and global focus). Around 13% (44) of subsidiaries serve both the local as well as international markets to a major extent. Results leave around 58% (248) of subsidiaries, which serve local as well as international markets to a moderate extent.

Contributory Role. Overall, the contribution of subsidiaries (indicating their international mandates) to their MNEs is found to be low. To a major extent only around 9% (40) of subsidiaries supply inputs to their organisations internationally, and 5% do R&D and product management for their organisations internationally (Table 4.5). Given the large sample size, with the top fortune 500 subsidiaries having operations worldwide, it is unrealistic to have a considerable number of subsidiaries with such resources, predominantly in one host country. Therefore, this number of subsidiaries possessing resources that are most specialised in their MNEs is still significant.

Table 4.5: Subsidiary Geographical Scope and Contributory Role

Subsidiary Activity in New Zealand (n=429)	Not at All		Minor Extent		Moderate Extent		Major Extent		Sole		μ	SD
	f	%	f	%	f	%	f	%	f	%		
Serve New Zealand market	13	3.0	24	5.6	18	4.2	234	54.5	140	32.6	4.08	.927
Serve markets outside of New Zealand	131	30.5	135	31.5	79	18.4	77	17.9	7	1.6	2.29	1.129
Supply inputs to other parts of the organization internationally	181	42.2	116	27.0	92	21.4	38	8.9	2	.5	1.98	1.017
Research and Development for the organization internationally	265	61.8	103	24.0	39	9.1	21	4.9	1	.2	1.58	.866
Product management for the organization internationally	285	66.4	86	20.0	38	8.9	19	4.4	1	.2	1.52	.850

Forty subsidiaries engage to a major extent in the low value-added activity (supply inputs to MNE). 35% (14) of the subsidiaries follow a transnational strategy based on an all-high criteria (see Bartlett & Ghoshal, 1989; Meyer & Yu-Shan, 2014). Twenty-two

subsidiaries engage highly in high value-added activity (R&D). 27% (6) of these subsidiaries follow a transnational strategy. Twenty subsidiaries engage highly in medium value-added activity (product management for MNE). 15% (3) of these subsidiaries follow a transnational strategy.

Initiatives. Subsidiaries on average take local initiatives to a ‘moderate’ extent, and internal and global initiatives to a minor extent (Table 4.6). Studies on initiatives have given low focus to local market initiatives (see Schmid et al., 2014). Therefore, ideally, these should be given equal focus with the other initiatives. Less than a quarter (96) of subsidiaries takes local initiatives to a major extent. Less than a tenth (38) take global initiatives to a major extent. Less than 2% (7) take internal initiatives to a major extent. Four subsidiaries, two from each of the manufacturing and services industries (managed under RHQ), to a major extent, take all types of initiatives. This finding offers support to the proposition of Schmid et al. (2014) that there is a trade-off between market and internal initiatives in that the high occurrence of both would be rare.

Table 4.6: Subsidiary Initiatives

Subsidiary Initiatives (n=429)	Not at All		Minor Extent		Moderate Extent		Major Extent		μ	SD	Alpha
	f	%	f	%	f	%	f	%			
Offering new products/services in New Zealand	24	5.6	57	13.3	146	34.0	202	47.1	3.23	.882	
Developed new products/services in New Zealand to be sold internationally	224	52.2	91	21.2	66	15.4	48	11.2	1.86	1.051	
Enhancements to existing products/services	37	8.6	109	25.4	169	39.4	114	26.6	2.84	.917	
Market development	37	8.6	89	20.7	153	35.7	150	35.0	2.97	.950	
Expanding Research and Development activity	220	51.3	126	29.4	52	12.1	31	7.2	1.75	.930	0.726
Expanding company operations in New Zealand	73	17.0	107	24.9	124	28.9	125	29.1	2.70	1.065	
Transfer of production process to New Zealand	311	72.5	61	14.2	38	8.9	19	4.4	1.45	.832	
Acquisition of local companies	313	73.0	47	11.0	33	7.7	36	8.4	1.52	.954	
New technology adaptation	98	22.8	138	32.2	131	30.5	62	14.5	2.37	.990	

Autonomy. The results show that subsidiaries have: ‘moderate’ to ‘major’ autonomy for the majority of decisions; major to complete autonomy for some operational decisions including ‘day to day management’; and minor to moderate autonomy for some strategic decisions including ‘new product development’ and ‘financing’. The measure of overall autonomy shows that around 69% of subsidiaries report to have a major level autonomy (Table 4.7).

Table 4.7: Subsidiary Autonomy

Subsidiary Autonomy (n=429)	Not at All		Minor Extent		Moderate Extent		Major Extent		Complete		μ	SD	Alpha
	f	%	f	%	f	%	f	%	f	%			
Hiring senior personnel	30	7.0	28	6.5	69	16.1	185	43.1	117	27.3	3.77	1.129	
Outsourcing production/services	44	10.3	42	9.8	78	18.2	146	34.0	119	27.7	3.59	1.269	
New market development	37	8.6	29	6.8	86	20.0	165	38.5	112	26.1	3.67	1.183	
New product development	84	19.6	86	20.0	90	21.0	104	24.2	65	15.2	2.95	1.354	
Annual budget setting	12	2.8	23	5.4	94	21.9	228	53.1	72	16.8	3.76	.892	
Changes in the organization of activity in New Zealand	11	2.6	30	7.0	81	18.9	231	53.8	76	17.7	3.77	.909	0.877
Changes in standard operating procedures	16	3.7	62	14.5	96	22.4	155	36.1	100	23.3	3.61	1.105	
Changes in product/service design	56	13.1	95	22.1	101	23.5	110	25.6	67	15.6	3.09	1.273	
Financing (debt/equity)	109	25.4	109	25.4	86	20.0	95	22.1	30	7.0	2.60	1.271	
Day to day management	2	0.5	9	2.1	17	4.0	118	27.5	283	66.0	4.56	.713	
Choice of technology	50	11.7	98	22.8	110	25.6	117	27.3	54	12.6	3.06	1.213	
Subsidiary overall Autonomy	2	.5	23	5.4	110	25.6	256	59.7	38	8.9	3.71	0.720	

External Embeddedness. More than two-thirds of subsidiaries do not collaborate with other firms in New Zealand (Table 4.8), indicating a low level of external embeddedness. Five percent (20) of subsidiaries frequently collaborate with other firms in New Zealand.

Table 4.8: External Embeddedness

Statements (n=429)	Extent										μ	SD
	N/A		Not at All		Minor		Moderate		Major			
	f	%	f	%	f	%	f	%	f	%		
New Zealand operations form collaborative agreements with other New Zealand firms	23	5.4	98	22.8	201	46.9	87	20.3	20	4.7	1.96	.912

Subsidiary Developmental Context's Variables. Descriptive analysis of the data from the variables used in the subsidiary developmental context is presented as follows:

Subsidiary Strategy and Manager. With respect to the *subsidiary manager's professional characteristics*, results show that the majority (91%) of subsidiaries in New Zealand have a country manager (see Appendix D1). This is a significant number to refute the claim that the subsidiary country manager is an endangered species in developed countries. It is claimed that in such countries there is a lesser need for a strong subsidiary leader, subsidiary's political connections, and a subsidiary locally responsive strategy (see Birkinshaw, 1995; Birkinshaw & Pedersen, 2010). These claims link: (i) strong country management with the ability to reinforce a locally responsive strategy; and, (ii) weak or no country management with integration and getting dominated by other MNEs' units/head offices. The studies suggest that management under a RHQ or a matrix structure is replacing the subsidiary country management. Results here show that among those subsidiaries which do not have a country manager, around half follow a locally responsive strategy, with minimal or no integration with the MNE. This refutes the claim in (i) stated above. Also, the results show that while subsidiaries are predominantly managed under hierarchical structures, in particular the RHQ, country management still exists at large.

The results identify 14 subsidiaries (with their HQ based in the USA, Australia and European countries) that have a country manager, but the manager is not based in New Zealand. Among those, 10 managers sit in Australia,³³ one each in South Africa, and

³³ One survey was sent to Australia by the company operations in New Zealand – the survey was filled in by the manager responsible for New Zealand operations (in Australia) and returned via the subsidiary in New Zealand.

Japan, and the remaining two managers' locations are unspecified. Only one manufacturing subsidiary is managed heterarchically, while the remainder are managed hierarchically.

With respect to employment status country managers are mainly permanent employees. 89% percent of the managers indicate that they have an open-ended tenure. 7% are on secondment (see Appendix D2). With respect to prior experience (see Appendix D3), two-thirds of the country managers have more than 10 years of experience with other corporations in New Zealand, and less than a half have more than 10 years of experience with the same MNE in New Zealand. For both the same MNE overseas and other corporations overseas only around 10% of managers have more than 10 years of experience.

With respect to *subsidiary credibility*, results indicate a fair share of subsidiaries having considerable credibility in the eyes of the MNE (Table 4.9). Little less than half of the subsidiaries are of high strategic importance to the MNE. More than two-thirds have made significant value-added contributions to the MNE. More than half are globally competitive in their operations and have delivered what they promised to the MNE.

Table 4.9: Subsidiary Credibility

Subsidiary Credibility (n=75)	The subsidiary is regarded by the parent as a strategically important subsidiary		The subsidiary has a history of delivering what it has promised to the parent company		The subsidiary makes a significant value-added contribution to the corporation		The subsidiary is globally competitive in the main area of operation	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
<i>N/A</i>	1	1.3	1	1.3	-	-	4	5.3
<i>Strongly Disagree</i>	3	4.0	1	1.3	2	2.7	-	-
<i>Disagree</i>	5	6.7	2	2.7	2	2.7	5	6.7
<i>Somewhat Disagree</i>	4	5.3	3	4.0	3	4.0	2	2.7
<i>Neutral</i>	10	13.3	5	6.7	16	21.3	10	13.3
<i>Somewhat Agree</i>	18	24.0	11	14.7	12	16.0	11	14.7
<i>Agree</i>	22	29.3	25	33.3	18	24.0	28	37.3
<i>Strongly Agree</i>	12	16.0	27	36.0	22	29.3	15	20.0
<i>μ</i>	4.95		5.71		5.35		5.12	
<i>SD</i>	1.700		1.523		1.538		1.838	

The *subsidiary product scope* relative to the MNE is found to be narrow for little less than two-thirds of the subsidiaries (Table 4.10). Around three-quarters of subsidiary managers frequently *communicate with HQ* (Table 4.10).

Table 4.10: Subsidiary Product Scope and Communication with HQ

Rank	Senior managers in the subsidiary communicate with their counterparts and bosses in the head office / immediate parent units		The width of the subsidiary product range manufactured is narrow as compared to the total product range manufactured by the MNE units	
	<i>f</i>	<i>%</i>	<i>f</i>	<i>%</i>
<i>N/A</i>	2	2.7	7	9.3
<i>Strongly Disagree</i>	1	1.3	4	5.3
<i>Disagree</i>	4	5.3	13	17.3
<i>Somewhat Disagree</i>	1	1.3	12	16.0
<i>Neutral</i>	6	8.0	7	9.3
<i>Somewhat Agree</i>	10	13.3	7	9.3
<i>Agree</i>	20	26.7	11	14.7
<i>Strongly Agree</i>	31	41.3	14	18.7
<i>μ</i>	5.64		3.91	
<i>SD</i>	1.745		2.291	

With respect to *subsidiary track record*, slightly less than a quarter of respondents see a strong positive link between past success and future project approvals. Around 15% do not see a link, and around 60% see a partial link between the two variables (Table 4.11). The literature suggests that the track record of the subsidiary manager helps subsidiaries gain MNE resource support, stymies MNE resistance against their initiatives, and leads their initiatives to success (Birkinshaw & Riddlerstrale, 1999; Keupp, 2008). This is based on that it was assumed that the subsidiary track record is associated with MNE support for future projects. The overall findings here lend less support to the previous studies, and suggest a weak link between past success and future project

approvals. With respect to *network and relationship with HQ*, slightly less than a quarter of respondents strongly viewed that personal contacts with the MNE helped in getting MNE investment support. Around a quarter do not see a link. The remaining half see a weak positive link between the two variables (Table 4.11).

Table 4.11: Network and Relationship with HQ and the Subsidiary Track Record

Statements (n=429)	Extent										μ	SD
	N/A		Not at All		Minor		Moderate		Major			
	f	%	f	%	f	%	f	%	f	%		
Personal contacts in the parent company help in getting investment support	24	5.6	80	18.6	98	22.8	121	28.2	106	24.7	2.48	1.207
Earlier successful projects provide leverage in getting support for new projects	22	5.1	43	10.0	91	21.2	170	39.6	103	24.0	2.67	1.100

With respect to *scope-based strategy across various markets*,³⁴ results show that, serving internal markets is negligible. The results suggest that the miniature replica subsidiary is the predominant subsidiary type in New Zealand (Table 4.12). With respect to marketing satellite strategy (i.e., subsidiaries sell products/services produced by the MNE), less than two-thirds of the subsidiaries take this strategy in local market, slightly more than a third in the regional market, and around a tenth in the global markets. With respect to miniature replica strategy (i.e., subsidiaries sell products/services produced locally), three quarters of the subsidiaries take this strategy in the local market, a third in regional markets, and less than a quarter in the global markets. With respect to product specialist strategy (i.e., subsidiaries have the resources and freedom to produce and

³⁴ These are reconceptualised White and Poynter (1984) scope strategies – the basis of reconceptualisation is that recent studies (see Meyer & Estrin, 2014; Rugman, Verbeke, & Yuan, 2011) suggest subsidiary roles are broader than conceptualised previously, and therefore frameworks need to be reconceptualised. On that basis, the scope framework is reconceptualised in that it is assumed that the subsidiary role is not limited to the local market only. For example, a marketing satellite subsidiary may also export (the MNE produced products) to the regional markets, or a miniature replica subsidiary may also export (its own produced products) to the regional markets, rather than sell only to the local market as conceptualised originally. The results here support this simplistic reconceptualisation. The reconceptualisation excludes the scope’s ‘rationalised manufacturer’ subsidiary as it overlaps with the reconceptualised miniature replica subsidiary.

market new products/services), more than two-thirds take this strategy in the local market, slightly above a quarter in the regional markets, and less than a third in the global markets. With respect to strategic independent strategy (i.e., subsidiaries produce and market products/services not produced elsewhere in the MNE), more than a half take this strategy in the local market, less than a third in regional markets, and less than a fifth in the global markets.

Table 4.12: Scope-based Strategy across Various Markets

Subsidiary Activity (n=75)	Scope of	Local Market (NZ)		Regional Market (Asia - Pacific)		Global Market (World)		MNE internal market (other units of the MNE)		N/A	
		f	%	f	%	f	%	f	%	f	%
The subsidiary sells products/services produced outside NZ by the parent organization to the following markets		46	61	28	37	9	12	2	3	21	28
The subsidiary sells products/services produced in NZ to the following markets		56	75	26	35	15	20	5	7	14	19
The subsidiary has freedom and resources to produce new products/services for the following markets		51	68	21	28	16	21	4	5	19	25
The subsidiary produces products/services not produced elsewhere within the MNE for the following markets		41	55	23	31	13	17	3	4	28	37

MNE Strategy, Behaviour, and Nationality. With respect to *MNE international strategy*, slightly less than a tenth of subsidiaries indicate they take a globally integrated strategy, less than a fifth are locally responsive, and around a third take equally between the two strategies. Less than a half, however, indicate that their strategy lies somewhere in between integration and responsiveness, with a slight majority indicating the strategy balance is tilted more towards the responsiveness side (Table 4.13).

Table 4.13: MNE International Strategy

Int'l Strategy (n=75)	New product introductions occur in all major markets served simultaneously		MNE aims to standardize customer needs worldwide		The subsidiary business activities are susceptible to global integration	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
<i>N/A</i>	7	9.3	7	9.3	2	2.7
<i>Strongly Disagree</i>	6	8.0	4	5.3	2	2.7
<i>Disagree</i>	17	22.7	17	22.7	10	13.3
<i>Somewhat Disagree</i>	11	14.7	12	16.0	3	4.0
<i>Neutral</i>	12	16.0	8	10.7	18	24.0
<i>Somewhat Agree</i>	10	13.3	10	13.3	13	17.3
<i>Agree</i>	9	12.0	9	12.0	18	24.0
<i>Strongly Agree</i>	3	4.0	8	10.7	9	12.0
μ	3.28		3.55		4.52	
<i>SD</i>	1.942		2.114		1.796	

With respect to *entrepreneurial culture* in the subsidiary, results show that a little less than two-thirds of subsidiaries are encouraged by the parent MNEs to take on entrepreneurial activity or calculated risks (Table 4.14). This indicates that a fair share of MNEs encourage subsidiary development rather than restrict subsidiaries to the role assigned to them.

Table 4.14: Entrepreneurial Culture

Rank	MNE encourages calculated risk taking by NZ subsidiary		MNE supports entrepreneurial activity by NZ subsidiary	
	<i>f</i>	%	<i>f</i>	%
<i>N/A</i>	2	2.7	5	6.7
<i>Strongly Disagree</i>	4	5.3	3	4.0
<i>Disagree</i>	4	5.3	4	5.3
<i>Somewhat Disagree</i>	4	5.3	10	13.3
<i>Neutral</i>	14	18.7	8	10.7
<i>Somewhat Agree</i>	20	26.7	15	20.0
<i>Agree</i>	21	28.0	19	25.3
<i>Strongly Agree</i>	6	8.0	11	14.7
μ	4.64		4.52	
<i>SD</i>	1.706		2.023	

With respect to the *MNE control strategy* (see Appendices D4a, D4b, D4c) more than a half of subsidiaries are controlled via formal control methods. Less than a half are controlled via informal control methods and little less than a quarter via expatriation predominantly via the parent country nationals (PCNs). This finding on expatriates is consistent with Harzing et al. (2015), who show that the majority of expats are PCNs.

With regard to MNE's *openness towards subsidiary development*, results show that around 60% of subsidiaries find little or no difficulty in getting/negotiating *investment support* from their parent company. Two-thirds of subsidiaries, however, indicate that they face a considerable level of HQ *ethnocentrism* when they propose activities that are not strategically aligned with the MNE goals and objectives. This leaves around a third of subsidiaries who get support for projects not strategically aligned, which is both unusual and interesting. Results show a little more than a third of MNEs favour innovation in their home region. Resistance to innovation outside their home region, and resistance from sister divisions, is only predominant for about a tenth of subsidiaries (Table 4.15).

Table 4.15: Openness towards Subsidiary Development

Statements (n=429)	Extent										μ	SD
	N/A		Not at All		Minor		Moderate		Major			
	f	%	f	%	f	%	f	%	f	%		
Getting investment support from the parent company is difficult	21	4.9	138	32.2	116	27.0	116	27.0	38	8.9	2.03	1.070
Getting investment support for operations in New Zealand requires considerable effort to negotiate support	15	3.5	131	30.5	121	28.2	96	22.4	66	15.4	2.16	1.124
The parent company resists investment support for activities that are not strategically aligned with the corporation's goals internationally	26	6.1	61	14.2	67	15.6	84	19.6	191	44.5	2.82	1.299
The parent company favours innovation and development in their home region	18	4.2	129	30.1	94	21.9	86	20.0	102	23.8	2.29	1.240
The parent company resists innovation and development outside their home region	14	3.3	278	64.8	72	16.8	43	10.0	22	5.1	1.49	.908
Divisions in other countries tend to oppose giving support to operations in New Zealand	24	5.6	274	63.9	69	16.1	42	9.8	20	4.7	1.44	.914

With respect to *resource support for subsidiary initiative's* implementation, 23% of subsidiaries seek resource support from the MNE, 2% get full support, and 18% get partial support. The remaining are those who either do not seek support or who seek support, but it is declined (see Appendix D5). Overall this shows that MNE resource support to subsidiaries in New Zealand is low. With respect to *MNE nationality*, results are indicated in the demographic section earlier. How the country of origin influences the subsidiaries is explained in the inferential analysis section.

MNE-subsidiary Transactions. With regard to *intra-MNE knowledge flows* (see Appendices D6a, D6b, D6c, and D6d), knowledge outflows (to HQ and other subsidiaries) are high for less than a fifth of subsidiaries. For the remainder, the outflows are either low or moderate. Knowledge inflows vary in terms of flows from HQ versus other subsidiaries, and the knowledge domain (e.g. product development, MIS etc.). Knowledge flows are seen more from the HQ than from other subsidiaries, and the most in the 'management systems and practices' domain. Little less than two thirds of subsidiaries receive this knowledge from HQ to a large extent. Overall, to a major extent, less than a fifth of subsidiaries receive knowledge from other subsidiaries, and more than a third from the HQ.

With regard to *inter-organisational product flows* (see Appendix D7a, D7b), the overall product inflow and outflow in the subsidiary business network is low. Inflows incorporated in subsidiary final products/services are low for more than three-quarters of subsidiaries, but where inflows come from the HQ, around half the subsidiaries are recipients at moderate to high levels. This contradicts with Harzing and Noorderhaven (2006a, p. 179)'s claim that subsidiaries in New Zealand are more likely to source from external suppliers than the HQ. More than a half of the subsidiaries (predominantly to a

high extent) supply to external suppliers/customers in New Zealand. This shows that more than half of the subsidiaries in New Zealand contribute to local industry/firms. Around a third of these subsidiaries also receive inputs from external suppliers/customers in New Zealand.

Host Country Strategic Importance. With regard to *MNE current motives*,³⁵ of *subsidiary operations* (see Appendices D8a, D8b) the major motive of multinationals (77%) is market-seeking as around 6% have strategic asset-seeking motives, and around 14% resource-seeking motives. Others identify local customers/suppliers, access to regional markets, tourism, and access to global networks etc. as secondary motives. All the subsidiaries, except for 168 (which have only one motive: market-seeking) have predominantly one major motive and other secondary motives. This is consistent with the view that subsidiaries operate with various motives (see Benito, 2015; Narula & Cuervo-Cazurra, 2015; Nguyen, 2014).

A predominant market-seeking motive suggests that a considerable number of foreign subsidiaries remain focused on the activity for which they were created originally. Market-seeking was the predominant motive of subsidiary creation in New Zealand as reported by earlier studies (see KPMG, 1995; Scott-Kennel, 2001). However, while earlier studies found strategic asset-seeking is a second major motive in New Zealand, results here show resource-seeking as the second major motive instead, suggesting that over time the subsidiary motive of operations might have changed. Recently, Narula and Cuervo-Cazurra (2015) noted that motives evolve as strategies and may require revisions

³⁵ The motive taken here is the current motive of 'operation'. Motives of 'creation' are already well studied. Current motives are more relevant to the changing roles of subsidiaries, and changes in the host country environment.

if the desired outcome is not produced. The revision in subsidiary current motives in New Zealand is maybe because of the strategy shifts over a subsidiary life cycle.

With respect to *local industry dynamism*, slightly less than two-thirds of subsidiaries face ‘major’ level competition in the local market, indicating that New Zealand’s local industry is highly dynamic (Table 4.16). With regard to *growth and export opportunities*, results show that less than a half of the MNEs strongly viewed New Zealand as a potential export base and a growth location (Table 4.16).

Table 4.16: Industry Dynamism, and Growth and Export Opportunities

Statements (n=429)	Extent										μ	SD
	N/A		Not at All		Minor		Moderate		Major			
	f	%	f	%	f	%	f	%	f	%		
Opportunities to use New Zealand as an export base are not recognized sufficiently by the parent company	84	19.6	202	47.1	59	13.8	52	12.1	32	7.5	1.41	1.152
New Zealand is not seen as a location for the company to grow	8	1.9	183	42.7	96	22.4	76	17.7	66	15.4	2.02	1.139
New Zealand operations face competition in the local New Zealand market	11	2.6	12	2.8	36	8.4	112	26.1	258	60.1	3.38	.939

Subsidiary Characteristics. With respect to *resources*, the resource level varies more where it is relatively low value-added than where it is high value-added³⁶ (see Appendix D9). With regard to low value-added resources, e.g. financial management, human resources, marketing and sales, managing international activity, and IT information systems, subsidiaries do considerably well. However, with regard to high value-added resources, e.g. R&D, innovation and entrepreneurship, production/manufacturing, and logistics, the resource level is relatively low.

With regard to *capability*, subsidiaries do fairly well. Around three-quarters of subsidiaries possess considerable capability in terms of cost control and product quality.

³⁶ Related to R&D and manufacturing.

Slightly less than two-thirds possess considerable capability in terms of market share and innovation. A little more than half of subsidiaries possess high capability in personnel development and sales growth, and around a third in new product development (see Appendix D10). Except for one manufacturing (pulp, paper and converted paper product manufacturing) subsidiary, headquartered in Australia and managed under a RHQ, no subsidiary assesses their capability as low.

With regard to *performance*, subsidiaries do fairly well. Slightly more than half of subsidiaries perform well in terms of return on investment (ROI), profit, productivity, and cash flow (see Appendix D11). Except for two services industry (healthcare and store-based retail) subsidiaries headquartered in Australia, no subsidiary performs low.

With regard to *isolation from MNE*, slightly more than 70% of the subsidiaries face considerable geographical isolation, with around 44% administrative, and around a third having social isolation from their parent MNEs. Cultural, economic, financial, and knowledge isolations are low (see Appendix D12). With regard to *isolation effects* on subsidiary resources, capabilities, and performance (see Appendix D13), results show evidence of only a few subsidiaries that are affected. From moderately high to very high, around 20% of subsidiaries indicate that isolation affects their performance, 16% show it affects their resources, and a little less than a third show it affects their capabilities.

With respect to *perceptions of autonomy*, (Table 4.17), results show that only 5% of subsidiaries indicate that lack of autonomy negatively influences their operations, and only 8% indicate that an increased autonomy would benefit their operations.

Table 4.17: Perceptions of Autonomy

Statements (n=429)	Extent										μ	SD
	N/A		Not at All		Minor		Moderate		Major			
	f	%	f	%	f	%	f	%	f	%		
New Zealand operations would benefit if greater decision-making authority was placed in New Zealand	20	4.7	193	45.0	112	26.1	68	15.9	36	8.4	1.78	1.042
Lack of autonomy is a problem for operations in New Zealand	6	1.4	222	51.7	122	28.4	56	13.1	23	5.4	1.69	.909

Inferential Analysis

The inferential analysis involves the correlations analysis and the analysis of variance. The analysis is conducted in groups: (i) demographics and background variables; (ii) overarching subsidiary classification framework's variables; and, (iii) subsidiary developmental context's variables.

Demographics and Background Variables. An analysis of variance shows no differences in competence transfer (i.e., contributory role and knowledge outflows) across the subsidiary entry mode. This does not lend support to Mudambi, Piscitello, and Rabbiosi (2014) who suggest that subsidiary competence transfer varies across the entry mode. Inter-correlations (Table 4.18) of subsidiary *size* and *age* show that the two are positively associated, suggesting that older subsidiaries are also larger. Both the size and age of subsidiaries are negatively associated with HQ ethnocentrism, suggesting that as subsidiaries increase in size and age, they get immunized to HQ resistance for their development. However, age also reduces a subsidiary's chances of getting MNE resource support for initiatives and HQ knowledge. Research concludes that HQs help subsidiaries in terms of resources and capabilities at their start, but later on subsidiaries develop on their own (see Egeraata & Breathnacha, 2012). The argument here is therefore that with subsidiary age, MNEs do not discourage subsidiary involvement in innovations. They

also do not offer much resource support to the subsidiaries either, as the expectations from the subsidiary to meet their needs on their own increases as the subsidiaries age. This is taken with a caveat as this may not apply where subsidiaries are contributing.

Table 4.18: Intercorrelations: Demographics and Background Variables

	Variables	1	2	3	4	5	6	7	8	9	10	11	12	13
1	Age	1												
2	Size	0.106*	1											
3	CIS - Ethnocentrism	-0.102*	-0.19*	1										
4	Initiatives' Resource Support	-0.229*	0.098*	---	1									
5	Knowledge Inflows (from HQ)	-0.231*	---	---	---	1								
6	Growth Opportunities	-0.103*	---	---	---	---	1							
7	Resource-seeking Motive	---	0.101*	---	---	---	---	1						
8	Initiatives	---	0.274**	---	---	---	---	---	1					
9	Autonomy	---	0.324**	---	---	---	---	---	---	1				
10	Openness in Subsidiary Development	---		---	---	---	---	---	---	---	1			
11	Informal Control	---	0.244*	---	---	---	---	---	---	---	---	1		
12	TCN Expatriation	---	-0.272*	---	---	---	---	---	---	---	---	---	1	
13	MNE International Strategy (Global Integration)	---	-0.274*	---	---	---	---	---	---	---	---	---	---	1

*($p < 0.05$); ** ($p < 0.01$); --- (either no significant correlation or the relation is presented in the relevant table)

It is also found that MNE's expectations from the subsidiary to grow further fades as the subsidiaries age. This is consistent with the product life-cycle theory (see Vernon, 1966), because when subsidiaries reach a saturation/stability stage expectations of further improvements decrease.

Larger subsidiaries tend to show more resource-seeking motives than small subsidiaries. This could be because resource-seeking subsidiaries (e.g. farming business) are typically large sized (Ghemawat, 2001). An association also indicates that subsidiary's motives of creation enhance/change as they grow. This is consistent with Narula and Cuervo-Cazurra (2015), and Benito (2015), who suggest that subsidiaries

revise motives with shifts in strategies and vice versa, and also lends support to our earlier assertion about increases in resource-seeking motives in New Zealand over time.

Large subsidiaries are high in initiatives (all types), autonomy (all types), MNE openness in subsidiary development, and resource-seeking (from MNE for initiatives). There is much debate about subsidiary autonomy vis-à-vis size (see Hedlund, 1981; Jakobsen & Rusten, 2003; Johnston & Menguc, 2007; Peng & Beamish, 2014). However, little is studied about the autonomous action (the initiative) and size. Overall, the factors such as initiative, autonomy, MNE openness and support all confirm that subsidiaries do evolve over time, and the cases of devolvement over time are likely to be rare.

Large subsidiaries are likely to be controlled informally, than via TCN expatriation. This negative link with expatriation is consistent with Peng and Beamish (2014), who use RDT logic (i.e., large subsidiaries possess more resources and so have importance in the MNE) as an argument base, just as some other studies (e.g. Hedlund, 1981; Johnston & Menguc, 2007; Pfeffer & Salancik, 1978) do. This is fine and it does make sense to assume that large subsidiaries possess more resources. It is, however, also about the value and applicability of the resource to the MNE that matters rather than just the quantity alone. Large subsidiaries do provide higher returns, but subsidiaries possessing various advantages (which can be converted to firm-specific advantages) equally matter. This has implications for the studies using RDT logic, which simply assume that firms with a large pool of resources would make other organisations dependent. This is not necessarily true. Recent research suggests that to develop resource dependencies the resource must be valuable and applicable to the MNE (see Mudambi, Pedersen, et al., 2014). A small R&D contributing facility in a technologically advanced economy can be more important for the MNE than a large sales unit in a less technologically advanced economy. Also at times MNEs favour particular subsidiaries,

irrespective of their resources or the market opportunities (see Dörrenbächer & Gammelgaard, 2006).

Large subsidiaries are less likely to follow a global integration strategy, suggesting a predominant locally responsive strategy. A locally responsive strategy requires high levels of autonomy (Jarillo & Martínez, 1990; Meyer & Estrin, 2014). Large subsidiaries are autonomous (as indicated above) as they have a large human resource to manage (Egelhoff, 1982). The key finding here is that the MNE strategy is linked to subsidiary size. It would be less surprising to say that the three variables (i.e., size, autonomy and strategy) are both antecedents and outcomes of each other.

Overarching Subsidiary Classification Framework's Variables. Analysis of variance (see Appendix E1)³⁷ in *geographical scope* across industry indicates that subsidiaries belonging to the services industry have a significantly higher focus on local market than the subsidiaries belonging to the primary industry and the manufacturing industry. Subsidiaries belonging to the manufacturing industry have a significantly higher focus on local markets than subsidiaries from the primary industry, and a significantly higher focus on international markets than the services industry subsidiaries. Subsidiaries belonging to the primary industry have a significantly higher focus on international markets than the manufacturing subsidiaries and the services sector subsidiaries. These results fill gaps in the subsidiary strategy literature, as studies have mainly focused on the manufacturing industry and avoided other industry subsidiaries (Enright & Subramanian, 2007; Manolopoulos, 2008). Overall, the subsidiary research tells little about the subsidiaries from services or primary industries. These subsidiaries need to be included

³⁷ Analysis of variance for variables used in the overarching framework (i.e., geographical scope, initiatives, autonomy, contributory role, and external embeddedness) across 'management structures' is conducted in the next chapter as there the overarching framework is tested. Here only variance is analysed across industry and some other categorical variables.

in future studies samples for the international business and global strategy literature to advance in the right direction.

Correlational analysis (Table 4.19) shows that local market focus is negatively associated with international market focus and exporting. The conventional I-R framework identifies two strategies (local responsiveness and global integration as two opposing strategies) (see Prahalad & Doz, 1987) suggesting that responsiveness is negatively associated with integration. International market focus does not necessarily reflect integration, but it is more about subsidiary global mandates or exports. Recently Meyer and Estrin (2014) suggest that MNE global strategy involves a third dimension, exporting. The authors assert that exporting like integration has a trade-off with local responsiveness. The findings here support the new IRE framework in that the local market focus is negatively associated with international market focus.

Local market focus is negatively associated with resource-seeking motives, strategic asset-seeking motives, global initiatives, contributory roles, managerial overseas experience with other corporations, subsidiary resources and capabilities, and knowledge outflows to HQ. Local market focus is positively associated with market-seeking motives, HQ ethnocentrism, and industry dynamism. International market focus is positively associated with resource-seeking motives, strategic asset-seeking motives, autonomy (both types), global initiatives, contributory role, exporting, managerial overseas experience with other corporations, subsidiary credibility, knowledge outflows to HQ, and subsidiary resources. International market focus is negatively associated with isolation's negative influences on subsidiary resources and capabilities, market-seeking motives, and industry dynamism.

Table 4.19: Intercorrelations: Geographical Scope

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
1 Local Market Focus	1																		
2 International Market Focus	0.535**	1																	
3 Resource-seeking Motive	-0.316**	0.345**	1																
4 Strategic-asset seeking Motive	-0.203**	0.276**	---	1															
5 Market-seeking Motive	0.524*	-0.399**	---	---	1														
6 Global Initiative	-0.254**	0.382**	---	---	---	1													
7 Contributory Role	-0.369**	0.399**	---	---	---	---	1												
8 Subsidiary Manager's Overseas experience with other Corporations	-0.298**	0.298**	---	---	---	---	---	1											
9 Subsidiary Resources	-0.336**	0.509**	---	---	---	---	---	---	1										
10 Subsidiary Capability	-0.255**	---	---	---	---	---	---	---	---	1									
11 Knowledge Outflows to HQ	-0.23*	0.265*	---	---	---	---	---	---	---	---	1								
12 Export Opportunity	-0.159**	0.125*	---	---	---	---	---	---	---	---	---	1							
13 CIS - Ethnocentrism	0.134**	---	---	---	---	---	---	---	---	---	---	---	1						
14 Industry Dynamism	0.289**	-0.148**	---	---	---	---	---	---	---	---	---	---	---	1					
15 Autonomy (both types)	---	0.168**	---	---	---	---	---	---	---	---	---	---	---	---	1				
16 Subsidiary Credibility	---	0.268*	---	---	---	---	---	---	---	---	---	---	---	---	---	1			
17 Isolations' Negative Influences on Subsidiary Resources and Capability	---	-0.25*	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1		

*(p<0.05); ** (p<0.01); --- (either no significant correlation or the relation is presented in the relevant table)

Little is known about the link of subsidiary strategy with subsidiary competence-creation. The general understanding is that locally responsive subsidiaries do develop competences, but as they are less integrated their competences may not be easily transferable to MNE (see Cantwell & Mudambi, 2005; Rugman, Verbeke, & Nguyen, 2011). However, what is surprising is that resources and capabilities of locally responsive subsidiaries are perceived as inferior to that of the MNEs and that they may further decline as responsiveness increases. The above findings link the strategy and their respective determinants of development. The findings suggest that development of subsidiaries inclined towards global integration or international strategies is determined

predominantly by the determinants such as subsidiary choice (e.g. global initiatives) or HQ assignments (e.g. autonomy). Whereas development of subsidiaries inclined towards local responsiveness is determined predominantly by local environmental factors (e.g. industry dynamism). Existing studies, e.g. Filippov and Duysters (2014), have tested these developmental determinants, but the contingencies as to what factors (i.e., strategies) are associated with which development determinants is not yet explored. The results here show that there are contingencies as to various determinants of development.

There is recognition that strategy is linked to motives (see Benito, 2015; Narula & Cuervo-Cazurra, 2015). Which strategy with which motive is, however, less known. The results above show the contingencies, such as global integration is linked positively to both exploration (strategic asset-seeking) and exploitation (resource-seeking motives), but negatively to market-seeking (exploitation). Also studies, e.g. Verbeke, Li, and Goerzen (2009), recognise that different motives require different capabilities and resources. Results here show that besides resources and capabilities it is also a particular strategy which is linked to a particular motive.

With regard to *contributory role*, an analysis of variance in subsidiary contribution across industry returns no significant results, indicating that manufacturing industry subsidiaries are not the only contributing types. This again suggests that subsidiary studies must go beyond taking manufacturing subsidiaries' samples only. Correlations analysis (Table 4.20) shows that the contributory role is positively associated with resource-seeking and strategic asset-seeking motives, but negatively to market-seeking motives. This has implications for RDT, which is made later in the 'implications for theory' section.

Table 4.20: Intercorrelations: Contributory Role

	Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Contributory Role	1														
2	Resource-seeking Motive	0.378**	1													
3	Strategic-asset seeking Motive	0.483**	---	1												
4	Market-seeking Motive	-0.291**	---	---	1											
5	Strategic Autonomy	0.177**	---	---	---	1										
6	Operational Autonomy	0.099*	---	---	---	---	1									
7	Local Initiative	0.218**	---	---	---	---	---	1								
8	Global Initiative	0.525**	---	---	---	---	---	---	1							
9	Subsidiary Manager's Overseas experience with other Corporations	0.234*	---	---	---	---	---	---	---	1						
10	Subsidiary Resources	0.445**	---	---	---	---	---	---	---	---	1					
11	Knowledge Outflows to HQ	0.388**	---	---	---	---	---	---	---	---	---	1				
12	Knowledge Outflows to Subsidiaries	0.239*	---	---	---	---	---	---	---	---	---	---	1			
13	Informal Control	0.277*	---	---	---	---	---	---	---	---	---	---	---	1		
14	Subsidiary Credibility	0.385**	---	---	---	---	---	---	---	---	---	---	---	---	1	
15	Parent Resource Support Received	0.133**	---	---	---	---	---	---	---	---	---	---	---	---	---	1

*(p<0.05); ** (p<0.01); --- (either no significant correlation or the relation is presented in the relevant table)

Contributory role is positively associated with strategic and operational autonomy, although, links with autonomy as indicated by the beta values are very weak, but still significant. This finding has implications for the view that as subsidiaries grow in size (to a certain level) their autonomy starts to decrease (see Hedlund, 1981; Johnston & Menguc, 2007; Peng & Beamish, 2014). The results here show that the autonomy of the contributing subsidiaries (which are among the most important ones in the MNE) rises with the increase in their specialised resources. Considering the limited nature of correlations analysis, this does not refute the theory, but the finding here does suggest that the theory needs further testing, particularly in terms of resource value and applicability to MNE rather than the resource size.

Contributory role is positively associated with local and global market initiatives. The beta value for the latter is large, indicating the high importance of global initiatives for subsidiary roles and development. However as per results contributory role is not linked with internal initiative. The contribution here, therefore, is that initiatives as in the literature (see Birkinshaw et al., 1998; Cavanagh & Freeman, 2012) are positively associated with the subsidiary contributory role. However, it is only the local and (in particular) the global initiative rather than the internal initiative which are linked to subsidiary contribution. With this finding an answer sought by Cavanagh and Freeman (2012) as to how different types of initiatives influence subsidiary contributory roles is offered. Future research may explore in more detail as to why an internal initiative is not associated with the contributory role. Contributing subsidiaries already possess value-added resources. Internal initiatives are about bidding internally for MNE resources and functions, which contributing subsidiaries are usually sufficient in.

Contributory role is positively associated with informal control, subsidiary credibility, outflows to HQ, outflows to other subsidiaries, and subsidiary resources. These findings are interesting, but less surprising. The contributory role is also positively associated with managerial international experience with other corporations. This also has implications for RDT, which will be made later in this chapter.

With regard to *autonomy*, correlational analysis (Table 4.21) shows that autonomy (both strategic and operational) is positively associated with all types of initiatives. Increases in autonomy (both types), however, negatively influence perceptions about the benefits of further autonomy. This suggests that subsidiaries, after gaining a certain level of autonomy, perceive that further autonomy will be less beneficial to subsidiary development.

Table 4.21: Intercorrelations: Autonomy

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1 Strategic Autonomy	1																		
2 Operational Autonomy	0.69**	1																	
3 Resource-seeking Motive	0.127**	---	1																
4 Strategic-asset seeking Motive	0.138**	0.101*	---	1															
5 Market-seeking Motive	---	-0.102*	---	---	1														
6 Local Initiative	0.377**	0.306**	---	---	---	1													
7 Global Initiative	0.399**	0.32**	---	---	---	---	1												
8 Internal Initiative	0.262**	0.214**	---	---	---	---	---	1											
9 Perceptions of Autonomy	-0.32**	-0.265**	---	---	---	---	---	---	1										
10 Openness Towards Subsidiary Development	0.247**	0.242**	---	---	---	---	---	---	---	1									
11 Industry Dynamism	0.243**	0.221**	---	---	---	---	---	---	---	---	1								
12 External Embeddedness	0.146**	0.171**	---	---	---	---	---	---	---	---	---	1							
13 Subsidiary Resources	0.371**	0.269*	---	---	---	---	---	---	---	---	---	---	1						
15 Subsidiary Capability	0.289*	---	---	---	---	---	---	---	---	---	---	---	---	1					
15 MNE International Strategy (Global Integration)	---	-0.275*	---	---	---	---	---	---	---	---	---	---	---	---	1				
16 Formal Control	-0.229*	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1			
17 PCN Expatriation	-0.307**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1		
18 TCN Expatriation	---	-0.334**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	
19 Isolations' Negative Influences on Resources, Capability, and Performance	-0.383**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1

*(p<0.05); ** (p<0.01); --- (either no significant correlation or the relation is presented in the relevant table)

The autonomy literature least considers the subsidiary view of autonomy vis-à-vis development. There is recognition that subsidiaries strive for autonomy and that autonomy is cyclical in that it can increase and later on decrease (see Birkinshaw, 2014). Much of the subsidiary literature sees autonomy from the HQ perspective; little is known about whether subsidiaries strive for autonomy or integration as they achieve a certain level of autonomy. The findings suggest that subsidiaries strive for autonomy from the start. As they develop, their autonomy increases (and/or vice versa), to a stage where subsidiaries realise that further autonomy alone is not sufficient for their development.

Autonomy (both operational and strategic) is positively associated with HQ openness towards subsidiary development, industry dynamism, external embeddedness and resources. Operational autonomy is positively associated with subsidiary capabilities. These findings are consistent with the literature (see Andersson & Forsgren, 1996; Birkinshaw, 1999, 2014; Birkinshaw et al., 1998).

Operational autonomy is negatively associated with global integration, suggesting a positive link with local responsiveness. No link of integration with strategic autonomy is found. Earlier results showed that international market focus is positively associated with autonomy (both types) and exporting, which suggests that exporting is partially or indirectly linked to strategic autonomy. The results suggest that the link of autonomy with strategy is multifaceted in that exporting is positively linked to autonomy (both types), local responsiveness to operational autonomy, and strategic autonomy is not linked to integration or responsiveness. These findings have implications for the IRE model of Meyer and Estrin (2014).

Strategic autonomy is negatively linked to formal control, and PCN expatriation, and operational autonomy is negatively linked to TCN expatriation. This link of strategic autonomy with high-level control is less surprising. It is quite surprising that TCN even exacerbates the subsidiary operational autonomy, which is needed by subsidiaries to operate. These findings contradict Kawai and Strange (2014), who positively link autonomy and performance, moderated by expatriation. First, an association of autonomy with performance is not found; second, expatriation is negatively associated with both types of autonomy. There is no consensus as to the link between autonomy and performance. Some studies find a positive link between autonomy and performance, when the focal subsidiary also receives HQ attention (see Ambos & Birkinshaw, 2010). Some show that subsidiary autonomy obstructs MNE performance as a whole (see

Bartlett & Ghoshal, 1998). Some find a positive link of performance with operational autonomy only (see McDonald et al., 2008). Others show that a reduced level of autonomy leads to reduced performance (see Marulanda, Rodríguez, Barber, & Darder, 2015). Results here do not show any link of performance with either operational or strategic autonomy, suggesting that there are multiple antecedents of performance than the autonomy alone.

Also strategic autonomy is negatively associated with negative influences of isolation on subsidiary resources, capabilities and performance. This is interesting as it shows that strategic autonomy can moderate negative effects of isolation over the subsidiary. Earlier it was found that international market scope is negatively associated with isolation effects on subsidiaries. Not refuting the claims that distance matters in international business (see Ambos & Ambos, 2009), results here suggest that some characteristics of subsidiaries dictate if distance (for subsidiaries) matters or not.

Strategic autonomy is positively associated with resource-seeking motives, and strategic asset-seeking motives. Operational autonomy is positively associated with strategic asset-seeking motives, but negatively with market-seeking motives. The finding here is that subsidiaries taking predominantly a market-seeking motive are the lowest in autonomy. As per Verbeke et al. (2009) different motives require different capabilities and roles. Results here suggest that different motives also require different types and levels of autonomy.

With respect to *initiatives*, an analysis of variance across industry (see Appendix E1) indicates that subsidiaries belonging to the manufacturing industry are significantly higher in global market initiatives than the services industry subsidiaries. This suggests that manufacturing subsidiaries are more into exporting and have broader roles than the

services sector subsidiaries. Correlational analysis (Table 4.22) shows that various types of initiatives variously influence subsidiary development.

Table 4.22: Intercorrelations: Initiatives

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1 Local Initiative	1																		
2 Global Initiative	0.347**	1																	
3 Internal Initiative	0.346**	0.196**	1																
4 Resource-seeking Motive	---	0.32**	---	1															
5 Strategic-asset seeking Motive	---	0.478**	---	---	1														
6 Market-seeking Motive	---	-0.29**	---	---	---	1													
7 Subsidiary Resources	---	0.498**	---	---	---	---	1												
8 Knowledge Outflows to HQ	---	0.284*	---	---	---	---	---	1											
9 Informal Control	---	---	0.234*	---	---	---	---	---	1										
10 Subsidiary Credibility	0.24*	0.30**	---	---	---	---	---	---	---	1									
11 Internal Isolation	---	-0.24*	---	---	---	---	---	---	---	---	1								
12 Openness towards Subsidiary Development	0.165**	0.115*	---	---	---	---	---	---	---	---	---	1							
13 Industry Dynamism	0.13**	-0.15**	0.19**	---	---	---	---	---	---	---	---	---	1						
14 TCN Expatriation	-0.23*	---	---	---	---	---	---	---	---	---	---	---	---	1					
15 PCN Expatriation	-0.23*	-0.25*	---	---	---	---	---	---	---	---	---	---	---	---	1				
16 Subsidiary Performance	0.27*	---	0.25*	---	---	---	---	---	---	---	---	---	---	---	---	1			
17 Subsidiary Capability	0.26*	0.25*	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1		
18 Isolations' Negative Influences on Resources, Capability, Performance	---	-0.39**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	
19 Isolations' Negative Influences on Performance	-0.31**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1

*($p < 0.05$); ** ($p < 0.01$); --- (either no significant correlation or the relation is presented in the relevant table)

Global initiatives are positively associated with resource-seeking and strategic asset-seeking motives, but negatively with market-seeking motives. This suggests that market-seeking as opposed to other motives is less (positively) linked to subsidiary development, although initiatives involve seeking markets (see Birkinshaw, 1997, 2014). Global initiatives reflect the subsidiary's own strategy (see Birkinshaw, 2014). It has

some similarity with exports (although initiative is broader than simply selling), which reflects the MNE global strategy (see Meyer & Estrin, 2014). Earlier it was identified how motives link to the MNE strategy, and here it shows how motives link to the subsidiary's own strategy.

Global initiatives are positively associated with subsidiary resources. Earlier it was found that the contributory role and global initiatives are strongly correlated. Here the results show that global initiatives strongly link to resources too. These associations indicate the high importance of global initiatives (over other initiatives) for subsidiary development in that global initiatives lead to subsidiary resource development to a level where they become specialised. Global initiatives are also positively associated with knowledge outflows to HQ, and negatively with isolation from MNE, again indicating a high relevance of global initiatives for subsidiary development. Local and global initiatives are positively associated with MNE openness towards subsidiary development. This is consistent with Birkinshaw (1999), but here the initiatives' 'types' associated with MNE openness are also identified.

Local and internal initiatives are positively associated with industry dynamism (or local competition), whereas global initiatives are negatively associated. The positive association with local and internal initiatives suggests that with a high level of local competition subsidiaries have to take extra local market initiatives and bid internally for MNE resources and functions. Such local competition shifts the subsidiary focus more towards the local market, leading to low occurrence of global initiatives. Birkinshaw et al. (1998) found a negative association of initiatives (as a whole) with local competition. The study examined the relationship of local competition with a composite initiative variable. Here the key finding is that not all types of initiatives are negatively associated with local competition. It is only the global initiative which is negatively associated. To

avoid a faulty understanding of the concept and its relationships, the subsidiary initiatives' studies should consider the multifaceted nature of the initiative concept, rather than treating the initiative as a whole or a composite variable. These findings also confirm the assertions made above that local market focus/responsiveness link to subsidiary development is more via the local environmental factors than the other factors. A reason that the internal initiative is linked to local environmental factors is that internal initiatives (configuring or expanding operations) are about bidding internally to expand subsidiary local operations, although they also require a level of integration with the MNE (see Birkinshaw, 2014).

Internal initiatives are positively associated with informal control whereas the other initiatives have no link to informal control. This indicates the contingency as to when the internal initiative is likely to be supported that is when the subsidiary is controlled informally. Whereas the local initiative is negatively associated with TCN and PCN expatriation and the global initiative negatively associated with PCN expatriation. These findings again indicate the negative link of expatriation with subsidiary development, confirming this thesis's assertions made earlier. The results suggest that the MNE control strategy has links to subsidiary development in that subsidiaries controlled via expatriation have low opportunities to develop. Informal control facilitates internal initiatives. However, where MNE sends an expatriate manager from the home country the subsidiary local and global initiatives diminishes, and where the MNE sends a third country expatriate the local initiative diminishes. These findings add to the scant literature on the subsidiary manager role in subsidiary development.

Local and global initiatives are positively associated with subsidiary credibility. A high credibility indicates that MNE has high confidence in subsidiary capabilities (see Birkinshaw, 1999), which is key to the success of subsidiary internal initiatives

(Birkinshaw, 2014). While results show that initiatives (local and global) are positively associated with credibility, no association of credibility with internal initiatives is found. This is because the MNE proposal evaluation criteria particularly for internal initiatives, is more objective. For example, a local subsidiary bidding internally for bringing the MNE manufacturing facility from say the UK to New Zealand will not simply win because the subsidiary has been delivering to the MNE what was expected from it. All subsidiaries are supposed to meet or exceed the MNE expectations. Internal initiatives involve the MNE and so their own cost-benefit analysis. The case of local and global initiatives is rather different. Such initiatives do not necessarily involve or affect the MNE (operations) as do the internal initiatives in which subsidiaries bid for reconfiguring, removal or reassignment of charters within the MNE.

Internal and local initiatives are positively associated with subsidiary performance. Local and global initiatives are positively associated with subsidiary capability. These findings are consistent with Ambos and Birkinshaw (2010), and Birkinshaw (1999), although again here it is also identified which initiative types are associated and which are not, rather than the generic information provided as these studies do. Subsidiary size is positively associated with all types of initiatives. This finding partly supports the Schmid et al. (2014) finding, which proposes that market initiatives are more prevalent in large subsidiaries. However, it contradicts their other proposition that organisational (internal) initiatives are more likely in small subsidiaries. The results here show no link between small size and internal initiatives.

Global initiative is negatively associated with negative influences of isolation over subsidiary resources, capability, and performance, whereas local initiative is negatively associated with negative influences of isolation over subsidiary performance only. These findings confirm the assertion above that subsidiary characteristics do determine if

distance matters to subsidiaries or not. The results suggest that isolation from the MNE and its negative effects on subsidiary resources, capabilities, and performance can be moderated by the subsidiary's own strategy, such as with initiatives (local and in particular global). Existing studies (e.g. Ambos & Håkanson, 2014a; Ambos & Ambos, 2009; Harzing & Noorderhaven, 2006a; Monteiro et al., 2008) have mainly studied the negative influences of isolation over subsidiaries, and have put no focus on how these effects can be moderated.

Based on the above it is asserted that the multifaceted nature of initiatives (i.e., local, global or internal) should be recognised and their various interactions with MNEs and subsidiary characteristics are studied separately. Existing studies tend to take initiatives as a single composite variable, but initiatives variously interact with subsidiary characteristics and strategy (see Ambos et al., 2010; Ambos & Birkinshaw, 2010; Cavanagh & Freeman, 2012). The results suggest that a composite initiative variable can be misleading from many aspects. Relative to other types of initiatives, global initiatives have the most positive influence on subsidiary development. Local initiatives also link positively to subsidiary development. Based on this, the suggestion of Schmid et al. (2014) that market initiative should be given a higher research focus than the organisational (internal) initiatives is supported here.

With respect to *external embeddedness* correlational analysis (Table 4.23) shows that subsidiaries operating with strategic asset-seeking motives or market-seeking motives are likely to be externally embedded, although the beta values are rather small. These findings are less surprising. The link of external embeddedness with strategic asset-seeking can be explained simply as subsidiaries collaborate with other firms when they seek to adapt to their resources and processes (see Gammelgaard et al., 2011). Such are the motives of strategic asset-seeking subsidiaries (i.e., access to local technology and

R&D etc.). However, with market-seeking, subsidiaries look at customers, sales and market share (see Benito, 2015), which offers the subsidiaries opportunities to interact with various customers and suppliers.

Table 4.23: Intercorrelations: External Embeddedness

	Variables	1	2	3	4	5	6	7	8	9	10	11
1	External Embeddedness	1										
2	Strategic-asset seeking Motive	0.141**	1									
3	Market-seeking Motive	0.098*	---	1								
4	Resource Support for Initiatives	0.171**	---	---	1							
5	Openness towards Subsidiary Development	0.114*	---	---	---	1						
6	Local Initiative	0.22**	---	---	---	---	1					
7	Internal Initiative	0.1*	---	---	---	---	---	1				
8	Subsidiary Capability	0.218**	---	---	---	---	---	---	1			
9	Subsidiary Performance	0.525**	---	---	---	---	---	---	---	1		
10	Subsidiary Resources	0.234*	---	---	---	---	---	0.357**	0.477**	---	1	
11	Knowledge Outflows to HQ	0.445**	---	---	---	---	---	---	---	---	0.263*	1

*(p<0.05); ** (p<0.01); --- (either no significant correlation or the relation is presented in the relevant table)

Externally embedded subsidiaries are both likely to seek and receive resource support for initiatives, and find their MNE open in their development. External embeddedness can be seen as a source for subsidiaries to transfer (locally acquired) knowledge across the MNE (Andersson et al., 2014). A direct link with competence transfer here is, however, not found. Research finds external and internal embeddedness positively associated (see Achcaoucaou et al., 2014; Ciabuschi, Holm, & Martín, 2014; Santangelo, 2009). The results do not show external embeddedness associated with subsidiary contributory role, knowledge flows, or global integration. Although there are three subsidiaries that are highly externally embedded and highly contributing too, this number out of 429 is too small to lend support to the studies claiming that externally

embedded subsidiaries tend to be highly contributing too. Recently Najafi-Tavani et al. (2015) found that link of subsidiary influence with its competence transfer is weaker when the subsidiary external embeddedness is high, and stronger when the internal embeddedness is high. From a developmental perspective, this study (besides partly supporting the assertion above) suggests that internal embeddedness matters more for subsidiary influence and competence transfer than the external embeddedness.

No direct correlations of external embeddedness, with subsidiary performance, capabilities, and resources are found. This also contradicts with studies claiming positive links of local embeddedness with subsidiary competence (e.g. Filippov & Duysters, 2014; Pedersen, 2006) and performance (see Andersson et al., 2002; Holm et al., 2005). An indirect link here to external embeddedness, however, may be hypothesized. External embeddedness is positively associated with local and internal initiatives. Local and internal initiatives are positively associated with subsidiary performance, and local initiatives with subsidiary capabilities. Subsidiary capability is positively associated with resources and performance. Resources are positively associated with the subsidiary contributory role and knowledge outflows. It therefore can be argued that the link of subsidiary external embeddedness to the subsidiary contributory role or competence-creation is rather indirect than direct as the other studies suggest. It can be theorised that subsidiaries externally embedded take locally-focused initiatives. With these they develop resources and capabilities to a level where they become distinctive or specialised in the MNE. Subsidiaries then transfer these competences to the MNE. Based on this, it is asserted that the key determinant of competence-creation vis-à-vis external embeddedness is the initiative. This link also validates this thesis's theory-based overarching framework in terms of its conceptualisation.

Subsidiary Developmental Context's Variables. With respect to the *country manager's* role, Bartlett and Ghoshal (2003) identify three roles: (i) senses/interprets threats and opportunities in the local market; (ii) develops subsidiary resources and capabilities; and, (iii) contributes/participates actively in the MNE global strategy. An analysis of variance (Table 4.24) shows that where there is a country manager, sensing, interpreting and responding to threats and opportunities are not only significantly higher in the local market, but also in the global and the internal markets. Subsidiaries are significantly higher in capabilities and contributory roles. With this, to the best of knowledge, this thesis is the first one to offer empirical evidence of the country manager's roles as hypothesized by Bartlett and Ghoshal (2003), and as well it shows that the role is broader than hypothesized.

Table 4.24: Subsidiaries with Country Manager versus Subsidiaries without Country Manager

Dimensions	Country Manager			
	'Subsidiaries with a Country Manager (Y) versus Subsidiaries without a Country Manager (N)'			
	Mean Rank (N)	Mean Rank (Y)	H	Sig
Local Initiative	136.69	218.58	17.072	0.000
Global Initiative	150.66	217.36	10.392	0.001
Internal Initiative	150.60	217.37	10.993	0.001
Contributory Role	178.62	214.92	7.129	0.008
Subsidiary Capability	15.33	39.46	8.248	0.004
Strategic Autonomy	130.01	219.17	19.057	0.000
Operational Autonomy	145.71	217.79	12.410	0.000
Parent Resource Support Requested	175.91	215.15	4.866	0.027
Parent Resource Support Received	170.19	215.65	5.124	0.024
Openness towards Subsidiary Development	159.91	216.55	7.335	0.007
Growth Opportunities	158.28	216.70	7.931	0.005
Network and Relationship with HQ	147.49	217.64	10.906	0.001

H: Chi-Square; --- (no significant difference)

Analysis of variance identifies additional characteristics of the country manager. Where subsidiaries have a country manager the subsidiaries possess significantly higher levels of autonomy (both strategic and operational) than where there is no country manager. Subsidiaries are higher in seeking and receiving MNE resource support for initiative implementation. Subsidiaries have higher growth opportunities and MNEs are more open in their subsidiary development. The use of personal contacts at the MNE is also higher where there is a country manager.

An analysis of variance (Table 4.25) as to where the subsidiary has a country manager located in the host country versus where the subsidiary has a country manager based overseas is conducted. Results show that subsidiaries having a country manager located in the host country have significantly higher autonomy (both operational and strategic), are controlled more informally, and are less (negatively) influenced by isolation from the MNE in terms of subsidiary capability.

Table 4.25: Locally-based Subsidiary Manager versus Overseas-based Subsidiary Manager

Dimensions	Country Manager			
	'Locally based Country Manager (L)' versus 'Overseas based Country Manager (O)'			
	Mean Rank (L)	Mean Rank (O)	H	Sig
Strategic Autonomy	199.74	122.71	7.232	0.007
Operational Autonomy	199.66	125.04	6.745	0.009
Informal Control	35.8	13.63	4.902	0.027
Isolations' Negative Influences on Subsidiary Capability	33.35	52.88	3.923	0.048

H: Chi-Square; --- (no significant difference)

These findings are new mainly because literature has not yet identified subsidiaries that have overseas-based designated country managers. Therefore, besides

the characteristics identified above a key contribution here is that subsidiaries can have overseas-based designated country managers. These findings have implications for RBV and RDT which are made later in this chapter.

Overall, the results show that the subsidiary country manager is not an endangered species. Although subsidiaries today are predominantly managed hierarchically, strong country management still exists. This claim is informed by empirical evidence of a predominant country management in a single developed economy (i.e., New Zealand), and the empirical support for the hypothesised role of the country manager by Bartlett and Ghoshal (2003). Additional characteristics of country managers are identified. No links of country management with a particular strategy, industry, or organisational structure, are found. Overall the results lend less support to the claims of Birkinshaw (1995), and Birkinshaw and Pedersen (2010), regarding the subsidiary country manager.

Correlational analysis (Table 4.26) shows that country managers' overseas experience within the MNE is negatively associated with local experience with the same and other corporations. Overseas experience within the MNE is positively associated with overseas experience with other corporations. Overseas experience with other corporations is negatively associated with local experience with the same corporation. This simply suggests that some subsidiaries predominantly follow a local hiring policy, while others either are sent expatriates or seek internationally experienced managers.

Where subsidiary managers have predominantly overseas experience with the same corporation, the isolation from the MNE is likely to be low. Where subsidiary managers have predominantly local experience with other corporations the outflows to HQ are likely to be high. Where subsidiary managers have predominantly overseas experience with other corporations, the subsidiary contributory role and outflows to HQ and to other subsidiaries are likely to be high. These findings are new to the best of

knowledge and therefore add to the scant literature on the subsidiary manager's role in subsidiary development. These findings also have implications for the RDT which will be made later.

Table 4.26: Intercorrelations: Country Manager's Prior Managerial Experience

	Variables	1	2	3	4	5	6	7	8
1	Prior Managerial Experience (with same Corporation) gained in NZ	1							
2	Prior Managerial Experience (with same Corporation) gained Overseas	-0.24*	1						
3	Prior Managerial Experience (with other Corporation) gained in NZ	---	-0.53**	1					
4	Prior Managerial Experience (with other Corporation) gained Overseas	-0.34**	0.441**	---	1				
5	Internal Isolation	---	-0.262*	---	---	1			
6	Knowledge Outflows to HQ	---	0.265*	---	0.235*	---	1		
7	Knowledge Outflows to Subsidiaries	---	---	---	0.279*	---	---	1	
8	Contributory Role	---	---	---	0.234*	---	---	---	1

*($p < 0.05$); ** ($p < 0.01$); --- (either no significant correlation or the relation is presented in the relevant table)

Correlational analysis (Table 4.27) shows that *subsidiary credibility* is positively associated with subsidiary resources, capabilities, performance, communication with HQ, exports, and the contributory role. These findings are mainly consistent with the prior studies (for example see Birkinshaw, 1999, 2014; Birkinshaw et al., 1998). Subsidiary credibility is negatively associated with the market-seeking motive. This finding suggests that MNEs have low confidence in subsidiaries operating predominantly with market-seeking motives. The implication of this finding is that subsidiaries operating with a market-seeking motive have low opportunities to develop.

Table 4.27: Intercorrelations: Subsidiary Credibility

Variables	1	2	3	4	5	6	7	8
1 Subsidiary Credibility	1							
2 Subsidiary Resources	0.29*	1						
3 Subsidiary Capability	0.377**	---	1					
4 Subsidiary Performance	0.512**	---	---	1				
5 Communication with HQ	0.356**	---	---	---	1			
6 Export Opportunity	0.24*	---	---	---	---	1		
7 Contributory Role	0.385**	---	---	---	---	---	1	
8 Market-seeking Motives	-0.25*	---	---	---	---	---	---	1

*($p < 0.05$); ** ($p < 0.01$);

--- (either no significant correlation or the relation is presented in the relevant table)

Correlational analysis shows that where the subsidiary's *product scope* is narrow relative to the MNE the subsidiary is highly globally integrated ($r = 0.289$, $p < 0.05$), suggesting that where the subsidiary's product range is broad it is locally responsive. This suggests that product scope is linked to MNE strategy. This finding supports the hypothesized grouping of Birkinshaw and Morrison (1995). The study groups I-R's autonomous strategy with the scope's miniature replica strategy in terms of product scope and responsiveness.

Earlier studies link *parent-subsidiary communication* with the development of innovations within the MNE, subsidiary contributory role, and the initiatives (Birkinshaw, 1999; Birkinshaw et al., 1998; Ghoshal, 1986). No link of HQ-subsidiary communication with subsidiary initiatives or the contributory role is seen. Communication is only part of the process, or a factor which facilitates subsidiaries to transfer their specialised resources across the MNE, and/or seek approval for initiatives. The reason why earlier studies find links of communication to subsidiary development

characteristics is probably the regression analysis used in the studies where (based on a model) the influence of one variable is controlled by the influence of another, and links between variables are created. It is perhaps only that subsidiaries with developmental characteristics communicate more with HQ (as they are less isolated from the MNE), rather than that communication per se brings development to the subsidiary.

With respect to subsidiary *track record*, correlational analysis (Table 4.28) indicates that there are moderating variables between subsidiary past success and future project approvals.

Table 4.28: Intercorrelations: Subsidiary Track Record

	Variables	1	2	3	4	5	6	7	8
1	Subsidiary Track Record	1							
2	Knowledge Inflows from HQ	-0.276*	1						
3	Market-seeking Motives	-0.32**	---	1					
4	PCN Expatriation	-0.271*	---	---	1				
5	Industry Dynamism	0.322**	---	---	---	1			
6	Network and Relationship with HQ	0.468**	---	---	---	---	1		
7	CIS - Ethnocentrism	0.248*	---	---	---	---	---	1	
8	Investment Support (Strategic alignment with MNE Objectives)	0.283*	---	---	---	---	---	---	1

*($p < 0.05$); ** ($p < 0.01$);

--- (either no significant correlation or the relation is presented in the relevant table)

For example, the link of past success to future approvals is negative where subsidiaries are predominantly competence-exploiting, operate with market-seeking motives, and are managed by parent country expatriates. The perception is positive where subsidiaries face high-level local competition and perceive personal contacts as catalysts for future approvals. Also, it is a bit surprising that the perception is positive where

subsidiaries face high HQ ethnocentrism, and where projects not strategically aligned with the MNE objectives are resisted.

Earlier in Chapter 2, strategic alignment and CIS issues were linked with the agency theory. The basis of the link was that HQs resist subsidiary initiatives as these may be perceived as the subsidiary's own agenda. Due to this resistance, subsidiary managers have to put a great deal of effort into issue selling to HQ officials (see Monteiro, 2015). The results show support to the Mudambi and Pedersen (2007) proposition, which suggests that agency theory is more appropriate where subsidiaries are competence exploiting. Competence exploiting subsidiaries here show no link with past success and future approvals, indicating their relationships with HQ as more of principal-agent type.

Image perception theory suggests that based on a person's prominent indicators, assessors develop broader (and future) perceptions about the person's behaviour (Keupp, 2008; Staw, 1975). Based on this, where the subsidiaries have shown past success MNEs expect that they will perform better in the future as well. MNEs perceive such performing subsidiaries as being on the right track, and that any deviations (e.g. a new activity) in subsidiary scope may risk the potential benefits the subsidiary is offering to the MNE. MNEs therefore critically take up the performing subsidiary's issue selling or any activity that may be perceived as not strategically aligned with the corporation's objectives. All these findings indicate that there are a number of contingencies between past success and future approvals, and the link between the two is not as straight forward as some studies, e.g. Keupp (2008), propose.

With respect to *networks and relationships with HQ*, correlational analysis (Table 4.29) indicates contingencies and suggests a moderating role of networks in terms of getting investment support from the MNEs rather than a direct relationship (between

networks and investment support) as some studies suggest (e.g. Dutton et al., 1997; Keupp, 2008).

Table 4.29: Intercorrelations: Network and Relationship with HQ

	Variables	1	2	3	4	5	6	7	8	9	10
1	Network and Relationship with HQ	1									
2	Resource-seeking Motives	0.17**	1								
3	Strategic-asset seeking Motives	0.17**	---	1							
4	Contributory Role	0.187**	---	---	1						
5	Local Initiative	0.116*	---	---	---	1					
6	Global Initiative	0.177**	---	---	---	---	1				
7	Parent Resource Support Requested	0.123*	---	---	---	---	---	1			
8	Parent Resource Support Received	0.145**	---	---	---	---	---	---	1		
9	CIS - Ethnocentrism	0.166**	---	---	---	---	---	---	---	1	
10	MNE Investment Support	-0.14**	---	---	---	---	---	---	---	---	1

*(p<0.05); ** (p<0.01);

--- (either no significant correlation or the relation is presented in the relevant table)

The role of personal contacts in getting investment support from parent MNEs is perceived to be positive where subsidiaries take resource-seeking and/or a strategic asset-seeking motive. The relationship is also positive where subsidiaries have a contributory role, take local and global initiatives, and request and receive MNE resource support for initiative implementation. With respect to motives and contributory roles the findings are new (as indicated earlier). Others are less surprising in that network use and initiative success can be either outcomes or antecedents of each other. However, interestingly, here no link of internal initiative with network use is seen. This is because internal initiatives can lead to conflicts of interest within the MNE. For internal initiatives, the focal

subsidiary is basically either seeking to expand in the host location or seeking relocation of HQ or other subsidiaries' functions to its location.

There are some negatives in using networks and relationships. First, as per results, an increased use of networks and relationships within the MNE leads to HQ ethnocentrism. This suggests that an increased use of personal contacts in the MNE alerts the HQ officials regarding subsidiaries that they might be using their personal contacts for their rent-seeking activities at the cost of the MNE, and/or seeking/getting advantages out of merit. Second, there is a negative association with the MNE openness to subsidiary development, where there is an increased used of internal networks and relationships. Overall, the findings suggest that internal networks are useful where subsidiaries possess advantages (i.e., contributory role) or characteristics that can be reciprocated. Networks alone may at times be insufficient.

With regard to *scope-based strategies* (see White & Poynter, 1984), an analysis of variance in strategy across management structure shows that heterarchically managed subsidiaries follow the strategic independent strategy in the regional market significantly higher than the subsidiaries managed hierarchically (see Appendix E2). These results add further to the hierarchy/heterarchy characteristics in that subsidiaries managed heterarchically have broader regional mandates.

With respect to industry, results show that primary industries are significantly higher in taking a product specialist strategy in the global market than both the manufacturing and the services industry subsidiaries (see Appendix E1). This indicates that subsidiaries belonging to primary industries have more resources and freedom to produce and market new products/services in the global market. Again, this indicates the high relevance of primary industry subsidiaries to the subsidiary development studies.

Overall, results show that subsidiaries vary in terms of their role and strategy across the way they are managed. Subsidiaries managed heterarchically are associated with broader strategies, whereas subsidiaries managed hierarchically are associated with narrower strategies. This confirms the assumption made in this thesis that management structures are a key determinant of subsidiary role and strategy. Here the assumption is tested using an existing framework. The assumption will be tested further using the overarching framework in the next chapter. Subsidiary strategy varies across industry in that subsidiaries belonging to the primary industry show broader strategies than those from other industries.

Based on the descriptives (earlier) and the inferential analysis here, it is suggested that the scope framework may be reconceptualised. The scope strategy typology was based on empirical evidence collected (from Canada) in the early 1980s, with some subsidiaries identified as operating within the local market scope only. Since then, with the rise of internationalisation strategy and the ‘born global’ (see Crick, 2009; Freeman, Hutchings, & Chetty, 2012; Knight, Madsen, & Servais, 2004), and ‘born regional’ (e.g. Fisch & Oesterle, 2003; Lopez, Kundu, & Ciravegna, 2009; Rugman & Almodóvar, 2011; Rugman, Verbeke, & Nguyen, 2011)³⁸ firms, export orientation of the locally focused firms has (arguably) increased. The results here show that subsidiaries following strategies of firms identified in the original scope framework as locally-focused export (to a varying extent) to the regional and global markets too. It therefore would be interesting to explore if subsidiaries today fit easily into the original scope-based typology.

³⁸ These studies suggest that MNEs are born regional rather than born global and go as far as saying that born global firms rarely exist. The regional perspective adopted by proponents of born regionals is that MNEs rarely serve outside their home regions or at least do not simultaneously serve the triad (Asia, North America, and EU) (see Rugman, Verbeke, & Nguyen, 2011).

Analysis of variance in *international strategy* across management structures shows that subsidiaries managed hierarchically are significantly higher in global integration than those managed heterarchically (see Appendix E2). Earlier studies, e.g. Wolf and Egelhoff (2012) characterise network organisations as heterogeneous in terms of integration. Here the results identify heterogeneity in international strategy across the two structures. The addition to literature here is that subsidiaries managed hierarchically take a more integrated strategy.

With regard to *expatriation*, results show that PCNs are predominant relative to the TCNs.³⁹ With regard to the role of expats in knowledge flows, Harzing et al. (2015) (claiming to have offered the first evidence) show that knowledge flows from HQ to subsidiaries are significantly higher where subsidiaries are headed by expatriates than where they are not. The results here show only a partial support (Table 4.30).

Table 4.30: Intercorrelations: Expatriation

	Variables	1	2	3	4	5	6	7	8
1	TCN Expatriation	1							
2	PCN Expatriation	---	1						
3	Knowledge Inflows from Subsidiaries	0.277*	---	1					
4	Market-seeking Motives	---	0.201*	---	1				
5	Entrepreneurial Culture	-0.25*	---	---	---	1			
6	Perceptions of Autonomy	0.278*	0.244*	---	---	---	1		
7	Subsidiary Resources	-0.32**	---	---	---	---	---	1	
8	Isolations' Negative Influences on Subsidiary Capability	---	0.244*	---	---	---	---	---	1

*(p<0.05); ** (p<0.01);

--- (either no significant correlation or the relation is presented in the relevant table)

³⁹ T-test [p<0.001; PCNs ($\mu = 3.61$); TCNs ($\mu = 2.75$)]

Knowledge inflows are positively associated with expats only where the flows are from other subsidiaries rather than the HQ, and where the expat is a TCN. This finding suggests that knowledge inflows involving the expats are not exceptionally high as the only pattern emerging is the inflows from other subsidiaries. Results also identify the expats (i.e., TCNs) who are involved in higher inflows.

From a developmental perspective it would be more interesting if the knowledge outflows are significantly higher. As indicated earlier, expatriation is negatively linked to initiatives. TCN is negatively associated with resources. This suggests that expats take a less entrepreneurial and developmental role and are risk averse. This is further substantiated with other correlations, e.g. TCN management is negatively associated with subsidiary entrepreneurial culture. This may be because the probable aim of expats is more aligning the subsidiary activity to the HQ in the short duration they are assigned the subsidiary responsibility.

PCN expatriation is more predominant where subsidiaries have market-seeking motives. So far, as per the results, market-seeking suggests a link to subsidiaries sharing low developmental characteristics. This suggests that HQs have a similar understanding of the expat role, as they assign expats where the subsidiary is less contributing and where the potential loss of assigning a temporary manager is low. In this regard, it would be interesting if future studies explore motives of HQs in terms of assigning expats, and their perceptions of the role of expats versus on-going permanent employees.

Subsidiaries managed under PCNs are negatively affected in terms of their capabilities, due to the isolation from the MNE. Subsidiaries where expatriation is predominant have a high desire for autonomy. This is in line with the earlier finding suggesting a negative link of expatriation with autonomy. This lends more support to the assertion above that HQs assign expats to subsidiaries with narrow roles.

Overall, based on the findings and the discussion made previously it is asserted that expatriation does not favour subsidiary development. As opposed to some studies, e.g. Gong (2003) who talk about the positive role of temporarily assigned expats in transfer of knowledge in the MNE, the results here lend more support for other studies. These include Black and Gregersen (1992), and Black and Gregersen (1999), who claim that expatriates are less capable of completing their overseas assignments, and less loyal to the MNE. The key implication here is that the MNEs are aware of the expat role, and they assign expats to mainly narrow scope subsidiaries. The overall findings have implications for RBV, which will be made later.

Earlier studies link *HQ control* with constraining or monitoring subsidiary activity (see Harzing & Noorderhaven, 2006a; O'Donnell, 2000), which may be seen as obstacles in subsidiary development (Birkinshaw & Riddlerstrale, 1999; Monteiro, 2015). Results here suggest that control can also have some positives for the subsidiary. Subsidiary credibility increases both where the subsidiary is managed informally ($r = 0.279$, $p < 0.05$) and formally ($r = 0.265$, $p < 0.05$). With informal control methods, e.g. participation in international committees and informal communication through personal contacts, HQs become aware of the subsidiary activity and capability. HQs also become aware of subsidiary capability with their formal control methods, e.g. the use of ERP systems, which makes the subsidiary activity and performance transparent to the HQ.

Analysis of variance shows that subsidiaries managed heterarchically are significantly higher in getting the parent's *investment support* rather than the subsidiaries managed hierarchically (see Appendix E2). This finding is inconsistent with Wolf and Egelhoff (2010)'s proposition that subsidiaries managed formally have more opportunities to develop than the network organisations. The finding here implies that

network organisations have more opportunities to develop than the formally managed subsidiaries.

Correlational analysis shows that subsidiaries who receive investment support from the parent MNE rather easily do not aspire to high levels of autonomy ($r = -0.4$, $p < 0.001$), let alone view autonomy as a major driver of subsidiary development. Both investment support and autonomy are positively linked to subsidiary competence (as indicated earlier). While autonomy is important for competent subsidiaries, the finding here suggests that parent investment support is more preferred. This finding again has implications for studies (see Ambos et al., 2011; Chiao & Ying, 2013; Gammelgaard et al., 2012) that focus less on the subsidiary's perception of autonomy and more on the benefits of autonomy.

With respect to *CIS – ethnocentrism* and *sister subsidiary rivalry*, favouring innovation in the home region is positively associated with resisting innovation outside the home region ($r = 0.49$, $p < 0.001$) and resistance by the sister subsidiary divisions ($r = 0.292$, $p < 0.001$). This shows that MNEs do show ethnocentric behaviour as earlier studies indicate. Where a subsidiary perception of resistance from the MNE or sister subsidiaries is moderate to high, the MNEs predominantly (based on percentage) belong to the USA and Australia, rather than Japan or Korea which (based on a similar criteria) Harzing et al. (2015) associate ethnocentrism with. This shows that the general perception of ethnocentrism and centralisation with Asian MNEs may be biased.

Analysis of variance in *CIS – ethnocentrism* shows that where subsidiaries belong to the manufacturing industry, the parent MNEs have a significantly higher preference for innovation in their home region than where subsidiaries belong to the services industry (see Appendix E1). This again is a new finding because until now subsidiary studies have linked ethnocentrism with either the country or the MNE. Research shows that firms vary

in terms of their innovation processes across industry. Services firms are less formal in their innovation processes as their innovation outcomes are partly determined by the customers, and they are open in adopting alternative procedures rather than sticking to a predefined formal procedure as in the manufacturing firms (Ettlie & Rosenthal, 2011). Less formality in procedures implies less HQ control and more firm freedom. A higher preference of innovation in the home region suggests that HQ wants to control what ‘new’ a subsidiary may adopt in terms of strategy, products, and procedures, and that it wants the subsidiary to stick to the proven methods and procedures developed at the HQ (see Birkinshaw & Riddlerstrale, 1999). Services firms are mainly sales units. It is logical to assume that their continuous interaction with customers (as opposed to the rather periodic contact with customers in manufacturing) (Ettlie & Rosenthal, 2011) allows them some freedom to decide their own short term or long term strategy at least in the market they serve. With respect to this finding, an implication for the agency theory can be later made.

Correlational results (Table 4.31) show that CIS - ethnocentrism and sister subsidiary rivalry are positively associated with subsidiary isolation from the MNE. Both the variables are also positively associated with the negative influences of isolation on subsidiary resources. Isolation is negatively associated with subsidiary resources.

Table 4.31: Intercorrelations: Corporate Immune System

	Variables	1	2	3	4	5
1	CIS – Ethnocentrism	1				
2	Sister subsidiary Rivalry	0.328**	1			
3	Internal Isolation	0.276*	0.356**	1		
4	Subsidiary Resources	---	---	-0.23*	1	
5	Isolations' Negative Influences on Subsidiary Resources	0.277*	0.27*	---	---	1

*(p<0.05); ** (p<0.01);

--- (either no significant correlation or the relation is presented in the relevant table)

These findings are consistent with Monteiro et al. (2008) who link subsidiary isolation with low subsidiary capability. The findings are explained as follows:

1. A key determinant of subsidiaries forming centres of excellence is the parent MNE investment support (Frost et al., 2002). Results (earlier) indicated a positive link of contributory role with the parent MNE support received for initiatives. Isolated subsidiaries obviously do not contribute to the MNE. The resources these subsidiaries therefore develop are likely to be less compatible with the overall resource-base of the MNE (Keupp, Palmié, & Gassmann, 2011). Low contribution and less compatibility of subsidiary resources with the MNE resource-stock, are perhaps reasons MNEs become ethnocentric towards the isolated subsidiaries. The same applies for sister subsidiary rivalry as less isolated subsidiaries take isolated subsidiaries less deserving of the MNE investment support.
2. Subsidiaries operating in highly dynamic environments tend to get disintegrated from the internal network (Holm et al., 2003). Earlier the results also supported this claim. Also it is found that: (i) industry dynamism is positively linked to external embeddedness; and, (ii) the relationship of subsidiary resource development with both external embeddedness and industry dynamism is moderated by the local market initiative, as opposed to Andersson et al. (2014) who suggest a direct relationship of the variables.

Based on the above it can be argued that internal embeddedness matters more for subsidiary development than the external, so that highly locally-focused subsidiaries, tend

to get isolated from the MNE. This isolation then leads the MNE towards ethnocentrism for the focal subsidiary. With low investments from the MNE, together with isolation from the internal knowledge network, subsidiary resources get depleted. This argument suggests that isolation and resource/capability are both antecedents and outcomes of each other, as opposed to Monteiro et al. (2008) who suggest that isolation is an outcome of low capability. The key contribution here is that isolation from the MNE leads to subsidiary resource depletion. There is an implication for the network model of the MNE which is made later.

Analysis of variance in *resource support received* shows that subsidiaries managed via the CHQ receive significantly less resource support for initiatives than subsidiaries managed via the RHQ or DHQ (see Appendix E3). This finding suggests that it is not preferable for subsidiaries to interface with the CHQ directly as opposed to some studies (see Ambos & Birkinshaw, 2010; Delany, 2000; Nell et al., 2011a) propose. The studies should consider the possibility that subsidiaries managed under the intermediaries may benefit more than those interfacing with the CHQ directly. This finding provides support to this thesis's assumption that management structures are a key determinant of subsidiary roles and development.

With respect to *entrepreneurial culture*, where the subsidiaries are encouraged for entrepreneurial activity by the HQ, there is enhancement of subsidiary resources ($r = 0.261, p < 0.05$) and capabilities ($r = 0.233, p < 0.05$). These findings are consistent with Birkinshaw et al. (1998). No link of entrepreneurial culture with subsidiary initiatives is found. This finding lends some support to Schmid et al. (2014) who claim that not all initiatives are necessarily entrepreneurial. It also, however, suggests that initiatives may be more than simply what the MNEs view as entrepreneurship as some of the initiatives

may be viewed as simply out of the MNEs' business scope and objectives, or taken without the knowledge and formal approval of the HQ (Birkinshaw, 1998, 2014).

With respect to *MNE nationality*, results show some interesting differences between subsidiaries belonging to the LMEs (Anglo-Saxon countries) and the CMEs (non-Anglo-Saxon countries) (Table 4.32).

Table 4.32: Analysis of Variance: MNE Nationality

Dimensions	MNE Nationality			
	'LME' versus 'CME'			
	Mean Rank (LME)	Mean Rank (CME)	H	Sig
Subsidiary Size	226.03	196.27	6.968	0.008
Internal Initiative	225.77	196.7	6.5	0.011
Parent Resource Support Requested	224.26	199.27	6.169	0.013

H: Chi-Square; --- (no significant difference)

LME subsidiaries are significantly larger in size, higher in internal initiatives, and request parent resource support for initiatives to a higher extent than the CME subsidiaries. This lends support to Yip (1995), and Yip and Hult (2012), who argue that subsidiary roles are not just determined by the MNE strategy, but also by a number of (less focused) firm-specific factors, e.g. MNE nationality. Here the results offer empirical support and extend the argument that MNE nationality also determines subsidiary development. No support is found for the claim of studies (see Hedlund & Åman, 1983; Jong & Dut, 2010) that CME subsidiaries are more decentralised, and responsive, than the LME subsidiaries.

Analysis of variance shows significant differences in *knowledge outflows* across the management structures. Subsidiaries managed heterarchically are significantly higher in outflows to HQ than the subsidiaries managed hierarchically (see Appendix E2). Bartlett and Ghoshal (1989) hypothesize a high frequency of resource exchange in the

heterarchical structures. Wolf and Egelhoff (2012) propose that internal resource transfer is better conducted under a formal structure than the lateral. Here the results suggest where (i.e., for lateral structures) the outflows are predominant. The results suggest that network organisations are more likely competence creating than the subsidiaries managed formally. The results also suggest that the proposition that knowledge transfer and development issues can be better handled in formally managed subsidiaries than the network organisations (see Wolf & Egelhoff, 2010) is weak. An implication for RDT can be made (later).

Correlational analysis (Table 4.33) shows that *knowledge outflow to HQ* is negatively associated with market-seeking motives. This again supports the assertion made earlier that a market-seeking motive is linked to under-developed subsidiaries. Outflow to HQ is positively associated with subsidiary resources and strategic autonomy. Link of outflows with autonomy and resources lends support to the RDT that firms possessing resources have high autonomy and legitimacy (see Drees & Heugens, 2013).

Table 4.33: Intercorrelations: Knowledge Outflows to HQ

	Variables	1	2	3	4
1	Knowledge Outflows to HQ	1			
2	Market-seeking Motives	-0.24*	1		
3	Subsidiary Resources	0.308**	---	1	
4	Strategic Autonomy	0.243*	---	---	1

*(p<0.05); ** (p<0.01);

--- (either no significant correlation or the relation is presented in the relevant table)

Analysis of variance (see Appendix E1) in *inter-organisational product flows* shows that subsidiaries belonging to primary industries are significantly higher in product

inflows from local suppliers, and product outflows to overseas suppliers, than the subsidiaries belonging to the services industry. Subsidiaries belonging to the manufacturing industry are significantly higher in product outflows to overseas subsidiaries, and overseas suppliers than, the subsidiaries belonging to the services industry. Subsidiaries belonging to the services industry are significantly higher in product outflows to local subsidiaries than the manufacturing subsidiaries. These findings show that all the subsidiaries (from the three industries in New Zealand) contribute in some ways. Manufacturing subsidiaries have more of an export orientation, services subsidiaries are locally-focused, and primary industry subsidiaries have a dual orientation.

Analysis of variance across (hierarchical) management structures (see Appendix E3) shows that subsidiaries managed via the matrix structure are significantly higher in product outflows to local subsidiaries than the subsidiaries managed via the CHQ or the RHQ. There are a range of studies suggesting how knowledge transfer is conducted effectively in a matrix structure (see Dellestrand, 2011; Galbraith, 2000; Joyce, McGee, & Slocum, 1997; Wolf & Egelhoff, 2010; Wolf & Egelhoff, 2012). In contrast, there is also an argument that matrix structures do not facilitate knowledge transfers effectively due to their complex multiple reporting systems (see Bartlett & Ghoshal, 1989, 1990). The caveat is that the earlier studies have not focused on a range of hierarchical structures, e.g. RHQs and CHQs, and have focused mainly on the matrix structure. The contribution here is that among the hierarchical structures the subsidiaries managed under the matrix structure are highest in intra-organisational product flows.

With regard to *MNE current motives of subsidiary operations*, an analysis of variance (see Appendix E2) shows that subsidiaries managed heterarchically are significantly higher in pursuing resource-seeking motives than the subsidiaries managed

hierarchically. Subsidiaries managed hierarchically are significantly higher in pursuing market-seeking motives than the subsidiaries managed heterarchically. Market-seeking and resource-seeking are exploitative motives, and the strategic-asset an explorative motive (Meyer, 2015; Narula & Cuervo-Cazurra, 2015). Wolf and Egelhoff (2012) propose that exploration is more appropriate for network organisations and exploitation for the hierarchical organisations. The basis of the argument is the assumption that network organisations are limited in implementing existing practices, which are needed for exploitation (see Baum, Li, & Usher, 2000). Results here contradict that and show that laterally managed subsidiaries also engage heavily in exploitative motives, with around two-thirds also having a predominant market-seeking motive. It is, therefore, also appropriate to distinguish the MNE management structures in terms of exploitation. Results suggest that subsidiaries managed laterally are more focused on learning, whereas subsidiaries managed formally are focused on sales.

Further analysis (see Appendix E3) into formal structures shows that subsidiaries managed via the matrix structure are significantly higher in pursuing strategic asset-seeking motives than the subsidiaries managed via the CHQ, RHQ or the mandated subsidiaries. Subsidiaries managed via the matrix structure are significantly lower in pursuing market-seeking motives than the subsidiaries managed via the CHQ, RHQ or the mandated subsidiaries. Wolf and Egelhoff (2012) propose that the matrix is ideal where there is a simultaneous need for exploration and exploitation. Based on the results here, subsidiaries managed under a matrix structure are both involved in explorative and exploitative motives. This thesis therefore lends the first of empirical support for the proposition that matrix structures may suit subsidiaries having both the exploitative and explorative motives. Meyer (2015) argues that it should be recognised that FDI's typically involve both the exploitation and exploration motives and wonders why some firms take

a strategic asset-seeking motive. This thesis offers insights on that by linking motives to various subsidiary characteristics.

Correlational analysis (Table 4.34) shows positive associations of subsidiary resources with resource-seeking, and strategic asset-seeking motives, but negative with the market-seeking motive. These have implications for the RBV (made later).

Table 4.34: Intercorrelations: MNE Motives of Subsidiary Operations

	Variables	1	2	3	4
1	Subsidiary Resources	1			
2	Market-seeking Motives	-0.34**	1		
3	Strategic-asset seeking Motives	0.392**	---	1	
4	Resource-seeking Motives	0.31**	---	---	1

*($p < 0.05$); ** ($p < 0.01$);

--- (either no significant correlation or the relation is presented in the relevant table)

Nguyen (2014) hypothesizes that the market-seeking motive is the dominant motive of manufacturing subsidiaries compared to the services industry subsidiaries. The study, however, does not find a significant difference. Variance analysis (see Appendix E1) across industry here suggests that a positive link does exist, but the other way around. Market-seeking motive is significantly higher in services industry subsidiaries than the manufacturing industry subsidiaries. Also subsidiaries belonging to primary industries are significantly higher in resource-seeking than the manufacturing industry subsidiaries and the services industry subsidiaries. The market-seeking motive is significantly lower in the primary industry subsidiaries than the subsidiaries belonging to the manufacturing industry or the services industry. These findings are new as only recently studies, e.g. Nguyen (2014), have explored the phenomenon (i.e., motives versus industry). Also with respect to the MNE management structures, some new subsidiary characteristics (related to subsidiary motives) can be added to those identified by Wolf and Egelhoff (2012).

Correlational analysis (Table 4.35) shows that *industry dynamism* is negatively associated with the contributory role and subsidiary performance. While a highly dynamic environment helps a subsidiary develop resources and capabilities, the dynamicity disintegrates the subsidiary internally (Holm et al., 2003). Due to these contingencies industry dynamism and the contributory role are negatively associated (Birkinshaw et al., 1998). The results support the literature, but no direct relationships of industry dynamism with resources and capabilities are found. This lends support to this thesis's assertion made earlier that subsidiary development determinants are linked to subsidiary strategy. Such a link is ignored in literature. Subsidiaries having an international market focus are more likely to develop via the subsidiary choice or HQ assignment than the local environmental factors, which are linked (positively) to local market focus. Earlier the results showed that local market focus is negatively linked to subsidiary resources and contributory roles. This partially explains why industry dynamism is not linked to subsidiary resource and capability development.

Table 4.35: Intercorrelations: Industry Dynamism

	Variables	1	2	3	4
1	Industry Dynamism	1			
2	Subsidiary Performance	-0.244*	1		
3	Contributory Role	-0.276**	---	1	
4	External Embeddedness	-0.356**	---	---	1

*($p < 0.05$); ** ($p < 0.01$);

--- (either no significant correlation or the relation is presented in the relevant table)

With regard to the link of industry dynamism with subsidiary performance, a high-level competition challenges the subsidiaries for their survival. Subsidiaries under high

local competition are restricted to a local market focus. Under such situations, subsidiaries take local and internal initiatives to respond to the threats and opportunities in the local market. With these initiatives, subsidiaries may reach the desired performance levels. Subsidiaries, which do not take initiative, perform poorly (Ambos & Birkinshaw, 2010; Birkinshaw & Hood, 1997). Results indicated earlier that local and internal initiatives are positively associated with performance. What is most critical in a highly dynamic environment is therefore the initiative. Local competition and external embeddedness are positively associated. Results indicate that from amongst the subsidiaries that are highly externally embedded, more than three-quarters also face high-level competition.

An analysis of variance across industry (see Appendix E1) shows that subsidiaries belonging to the services industry face higher level local competition than the manufacturing and the primary industry subsidiaries. This finding simply indicates that services industry subsidiaries operate in a more dynamic environment than the subsidiaries from other industries, and therefore their development is more likely to be determined by the local environmental factors than the other developmental determinants. This is a key finding (again) indicating the high relevance of the (ignored) services industry subsidiaries in the subsidiary literature.

Correlational analysis (Table 4.36) shows positive associations of exporting (export opportunities) with MNE openness towards subsidiary development, MNE resource support for initiatives requested and received, the contributory role, subsidiary resources, and growth opportunities.

Table 4.36: Intercorrelations: Export and Growth Opportunities

Variables	1	2	3	4	5	6	7
1 Export Opportunities	1						
2 Growth Opportunities	0.181**	1					
3 Openness towards Subsidiary Development	0.28**	---	1				
4 Resource Support Requested	0.168**	---	---	1			
5 Resource Support Received	0.109*	---	---	---	1		
6 Contributory Role	0.133**	---	---	---	---	1	
7 Subsidiary Resources	0.248*	---	---	---	---	---	1

*($p < 0.05$); ** ($p < 0.01$);

--- (either no significant correlation or the relation is presented in the relevant table)

A link of contributory role and exporting is less surprising as contributing subsidiaries are technically exporting subsidiaries (Birkinshaw et al., 1998). Some studies, e.g. Meyer and Estrin (2014) hypothesize (and find support for) that a strong local human resource is negatively linked to subsidiary export strategy. Other studies focus on resource development vis-à-vis entry mode (see Erikson, 2009). Little is known of a link between exports and subsidiary resource development. The findings here have implications for RBV (made later).

Analysis of variance (see Appendix E2) across management structures shows that the MNE view of export and growth opportunities varies. The view is more positive where subsidiaries are managed heterarchically than hierarchically. Exports is an ignored factor in the subsidiary research. Emphasizing its importance, Meyer and Estrin (2014) propose that the IR framework be extended to IRE with a third dimension (i.e., exports). The results here show how the MNE strategy potentially varies across hierarchy and

heterarchy. With regards to growth opportunities, the findings are consistent with Hite and Hesterly (2001) and Wolf and Egelhoff (2012).

Analysis of variance (see Appendix E1) across industry shows that the growth view is more positive where subsidiaries belong to the services industry than the manufacturing industry. The export view is more positive where the subsidiaries belong to the manufacturing industry rather than the services industry. Both these findings are consistent with the previous assertions that subsidiary roles and development are contingent upon management structures and industry. The results imply that the heterarchically managed subsidiaries show higher opportunities to develop than the hierarchically managed subsidiaries, and the services industry and primary industry subsidiaries are as dynamic as the manufacturing industry subsidiaries. With these findings further additions to the subsidiary characteristics associated with industry and management structures are made.

Overall *subsidiary resources* are not directly linked to *subsidiary performance*. However, where the resource is low value-added (e.g. sales, financial management), the relationship with performance is positive. Studying the link of subsidiary performance with financial management capability, Nguyen and Rugman (2014) find a positive association between the two variables. Results here show a similar relationship of performance with the financial management resource ($r = 0.556, p < 0.001$)⁴⁰, indicating that resources are as linked to performance as capability. The contribution here is that performance is linked to low value-added resources (rather than high-value added), in particular the financial management resource.

An analysis of variance (see Appendix E2) in the subsidiary resources shows that heterarchically managed subsidiaries possess a higher level of resources than the

⁴⁰ Only the financial management resource is discussed here and not the others, as this thesis uses an aggregate measure of resource.

subsidiaries managed hierarchically. This finding adds further to the characteristics of network organisations. So far the findings suggest that heterarchically managed subsidiaries have higher opportunities to develop than the hierarchically managed subsidiaries.

Monteiro et al. (2008) link knowledge *isolation* with subsidiary performance, capability, and knowledge flows, so that knowledge flows occur among highly capable subsidiaries, and that knowledge isolated subsidiaries perform low. The correlational analysis (Table 4.37) here shows capability and performance positively associated, but a link of capability with knowledge flows is not found. This suggests that capability is not an antecedent of knowledge flows. Capability is, however, positively associated to resource, which is positively associated with knowledge outflows to HQ. While the boundaries between a subsidiary resource and capability are rather blurred, the results suggest that the determinant of knowledge outflows is a subsidiary resource rather than its capability. However, this relationship of resource is only with the outflows to HQ and not to the subsidiaries.

Table 4.37: Intercorrelations: Knowledge Flows and Capability

	Variables	1	2	3	4	5	6	7	8
1	Internal Isolation	1							
2	Subsidiary Performance	---	1						
3	Subsidiary Capability	---	0.357**	1					
4	Subsidiary Resources	---	---	0.477**	1				
5	Knowledge Inflows from HQ	---	---	---	---	1			
6	Knowledge Outflows to HQ	---	---	---	0.308**	---	1		
7	Knowledge Inflows from Subsidiaries	---	---	---	---	0.404**	---	1	
8	Knowledge Outflows to Subsidiaries	---	---	---	---	0.262*	0.646**	0.487**	1

*($p < 0.05$); ** ($p < 0.01$);

--- (either no significant correlation or the relation is presented in the relevant table)

Results suggest that a key determinant and/or outcome of knowledge flows is the reciprocity in knowledge exchange. According to social exchange theory relationships are developed using a subjective cost-benefit analysis. Satisfaction is achieved, and dependencies developed, with reciprocity (Blau, 1964; Emerson, 1976; Homans, 1961; Stafford, 2008). Results show that inflow from MNE subsidiaries is positively associated with outflow to MNE subsidiaries. As knowledge flows between subsidiaries show no association with subsidiary performance, capability, or resources, this indicates that the key determinant of knowledge flows between subsidiaries is reciprocity.

A very strong positive link between outflows to HQ and outflows to other subsidiaries is found. Focal subsidiaries possessing a high level of resources transfer knowledge to HQ. The HQ identifies subsidiary competences, and then to maintain an overall competitive advantage, obliges the focal subsidiary to transfer innovation and knowledge across the MNE. This latter argument is consistent with Dellestrand (2011), except that here the link is not being limited to the DHQ, only as the author suggests. The same assertion can be made for knowledge exploiting subsidiaries. A positive association of inflows from HQ with inflows from other subsidiaries is found. This indicates the role of HQ in transferring best practices, knowledge and skills across the MNE. Lastly, inflows from HQ are positively associated with outflows to other subsidiaries. This indicates reverse knowledge transfers (see Ambos et al., 2006; Lemański, 2014; Rabbiosi, 2011). Subsidiaries first draw on MNE resources, and then transfer the enhanced competences back to the MNE. All these findings indicate that knowledge flows are not as simplistic as determined by a focal subsidiary capability alone. Acknowledging that some MNEs may be more efficient in internal knowledge transfers, the broader assertion here is that a subsidiary is least likely to be knowledge isolated as opposed to how some

studies suggest. The HQs engage heavily in internal knowledge transfers. If there is isolation it is perhaps only a matter of a degree.

With respect to claims linking subsidiary roles and geographical isolation (see Harzing & Noorderhaven, 2006a), results show no support. Correlational analysis does not show any association of geographical isolation with subsidiary roles (knowledge flows) let alone with subsidiary performance, capability, or resources. For claims linking cultural isolation with subsidiary knowledge flows (see Ambos & Ambos, 2009), no support is found either.

An analysis of variance (see Appendix E2) across management structures shows that subsidiaries managed hierarchically are more affected in terms of their capabilities due to isolation than the subsidiaries managed heterarchically. Wolf and Egelhoff (2012) propose that network organisations are appropriate where there is small cultural and geographical distance between the subsidiary and the MNE, and the matrix structure where the distance is large. No significant differences in cultural and geographical distances across the two structures are found. The finding here shows ways (i.e., capability) in which distance affects hierarchically managed subsidiaries. The finding also weakens the claim of Wolf and Egelhoff (2010) who propose that subsidiaries managed under formal structures have more development opportunities than the subsidiaries managed heterarchically. The reverse seems to be true.

A further analysis (see Appendix E3) within hierarchy shows that subsidiaries managed under the CHQs are more affected in terms of their resources due to isolation than the subsidiaries managed under the RHQs or subsidiaries managed under the mandated subsidiaries. Results identify a formal management structure (from amongst the different formal structures) under which subsidiary resources due to isolation get depleted the most. This again offers support to the assertion made earlier that subsidiaries

interfacing the CHQ directly, as opposed to what the studies (e.g. Delany, 2000; Nell et al., 2011a) say, do not necessarily benefit more than the subsidiaries managed under the intermediaries. Besides isolation being a matter of a degree, it is the MNE management structures under which subsidiaries experience isolation that varies.

With regard to *perceptions of autonomy* an analysis of variance (see Appendix E2) as to which subsidiaries strive for autonomy shows that subsidiaries managed hierarchically strive for autonomy more than the subsidiaries managed heterarchically. Hierarchically managed subsidiaries are formally controlled. Earlier results indicated a negative association of autonomy with formal control. This suggests that the higher the formal control, the lower the autonomy, and the higher the perceived benefits of autonomy. Although heterarchy has been linked in prior studies with high autonomy and hierarchy with low autonomy (see Birkinshaw & Morrison, 1995), an examination as to the subsidiary view of autonomy vis-à-vis their development has not been conducted. The contribution here is the identification of a structure (i.e., hierarchical) under which autonomy is seen more as a subsidiary developmental determinant.

Implications for Theory

The inferential analysis leads to a range of new findings, which have implications for the general theories used in the thesis (i.e., the RBV, the RDT, and the network model) and the agency theory. The implications are illustrated here as follows:

Resource-based View. Results show that the subsidiary resource develops if the subsidiary engages in exports and serves international markets. Earlier studies link the development of resources and capabilities with subsidiary product and value-added scope (see Dörrenbächer & Gammelgaard, 2006). Recent subsidiary research, such as Meyer

and Estrin (2014), identify exports as an MNE global strategy. The results here show that market scope is linked to the development of resources in that subsidiaries taking export strategies develop resources and those with narrow market scope have low resource development opportunities.

There is recognition that distance matters in subsidiary research in that large distance negatively influences subsidiary roles and development (Ambos & Håkanson, 2014a; Ambos & Ambos, 2009; Harzing & Noorderhaven, 2006a; Monteiro et al., 2008). What the results show is that subsidiary resource and capability depletion (due to large distance) is less likely where the subsidiary is high in exports, autonomy, initiatives, international experience (of the subsidiary manager), and the subsidiary is managed laterally than formally. Research so far has not studied as to how negative influences of internal isolation can be moderated.

Results show that where the subsidiary manager is an expatriate the subsidiary resource is likely to get depleted. Prior research, e.g. Peng and Beamish (2014), link expatriation to subsidiary size and argue that small subsidiaries having low (human) resources, are put under expatriates. What the results show here is that expatriation affects resource 'qualitatively' and that too is irrespective of the subsidiary size.

Results show that resource development in the MNE is linked to the MNE management structures, so that where the subsidiary is managed laterally than formally, the resource development is more likely to occur. Prior research has not studied as to how resource development links to various organisational structures. Only recently some studies (Wolf & Egelhoff, 2010) made modest discussions as to the (hypothesised) limitations (which the results here contradict) of the lateral structure with regard to subsidiary development.

Resource Dependence Theory. Resource dependence in the MNE is linked to MNE internationalisation motives. Results show that both the subsidiaries operating with exploration and/or exploitation motives can develop resources with which they can develop internal resource dependencies. However, where the exploitation motive is market-seeking, a resource dependency is less likely to occur. Earlier studies, e.g. Gaffney, Kedia, and Clampit (2013), link subsidiary motives with resource dependence in the external market. The contribution here is regarding the internal resource dependence vis-à-vis the internationalisation motives.

Resource dependence in the MNE is linked to local and global market initiatives, in that the two types of initiatives lead to subsidiary resource development to the extent that they become most specialised in the MNE. No link of internal initiative to such resource development is found. Prior research has found links of contributory roles with initiatives as a whole (Birkinshaw et al., 1998; Cavanagh & Freeman, 2012). However, such links with various types of initiatives are not yet explored (Cavanagh & Freeman, 2012). Here it is identified which initiative leads to internal resource dependence and which does not.

Resource dependence in the MNE is linked to subsidiary manager's characteristics. Where a designated country manager exists to where a manager does not exist, and/or where the manager has international experience with other organisations to where the manager has little or no international experience, the subsidiary is likely to develop resources through which they can develop internal resource dependencies. This to the best of knowledge is the first of findings linking subsidiary managers' professional characteristics with resource dependencies in such detail. Prior studies, e.g. Dörrenbächer and Geppert (2009), link managerial characteristics to subsidiary development in terms of how the characteristics link to subsidiary initiatives. Other studies identify subsidiary

manager's roles (see Bartlett & Ghoshal, 2003) with one as contributing to the global strategy. Other than this, subsidiary research has largely ignored the subsidiary manager (Schmid et al., 2014).

Resource dependence in the MNE is linked to MNE management structures. Where a subsidiary is managed laterally than formally, the development of resources through which internal dependencies can be created are more likely to occur. Under such the overall knowledge-transfers are also more likely to be higher. Prior research has only hypothesized as to which structure of the MNE facilitates knowledge flows better (see Bartlett & Ghoshal, 1989, 1990; Donaldson, 2009; Galbraith, 2000; Wolf & Egelhoff, 2012). There is, however, no consensus, nor an actual comparison made (Wolf & Egelhoff, 2010). What is identified here is the structure under which the subsidiary resource dependence is more likely to occur.

Network Conceptualisation of the MNE. The results show that a subsidiary collaboration with its external network does not directly bring subsidiary competence-creation. The subsidiaries need to take a high level of local and internal initiative to reap the benefits of the external network. Prior research links external embeddedness with subsidiary contributory role (see Achcaoucaou et al., 2014; Santangelo, 2009), without putting much focus on the mechanisms through which subsidiary competences could be developed and then transferred to the MNE. What the overall results here imply to the network model is that where the subsidiaries are embedded in the local network, subsidiary competences develop through initiatives (local and internal).

The primary determinant of subsidiary resource development is the MNE internal network. Earlier studies either look at the networks individually (see Frost et al., 2002; Gupta & Govindarajan, 1991), or emphasize dual embeddedness (see Achcaoucaou et al.,

2014; Ciabuschi et al., 2014; Narula, 2014). And although there is recognition that subsidiary external embeddedness matters for the MNE if it brings benefits to the MNE (see Andersson et al., 2007), then order in which the network is more critical (internal or external) for subsidiary development is not yet examined.

Agency Theory. Subsidiaries belonging to the manufacturing industry are more likely to have principal-agent relationships than the subsidiaries belonging to the services sector. This finding is new as the subsidiary research as a whole lacks focus on the services industry (Manolopoulos, 2008), although the industry is a key contextual contingency to subsidiary roles and development (Enright & Subramanian, 2007). Such comparisons with respect to agency theory rarely exist.

SUMMARY

This chapter conducted a detailed analysis of the variables of the two surveys. The analysis involved descriptive, correlation, and variance analysis. Overall, the purpose of this analysis was to build theory, and develop a basis to answer the thesis's research questions (for the subsequent chapter), and a reasoning/justification as to what the research question answers imply and why are these answers. The findings update the subsidiary strategy and management literature, particularly the scant literature on the subsidiary country manager and the MNE management structures. The key findings are: the lateral structure is more linked to subsidiary development than the formal structure; and the country manager is a key driver of subsidiary development. The findings on management structures offer support to the thesis's overarching framework's assumptions that subsidiary roles and development vary across their management structures.

The findings have various implications for the general theories selected in the thesis (i.e., the RBV, RDT, and the network model). These theories were extended mainly with the identification of factors associated with: (i) the development and depletion of subsidiary resources/capabilities; (ii) subsidiary competences through which they develop intra-MNE resource dependencies; and, (iii) the subsidiary network development and their associations with subsidiary roles and development. Besides this, the findings also have an implication for the rather less used theory in the thesis (i.e., agency theory). The implication was that subsidiaries belonging to the manufacturing industry are more likely to have principal-agent relationships than the services industry subsidiaries.

Besides new findings the analysis also confirmed some of the existing literature findings, and either extended (i.e., identified contingencies) or rejected the findings. Overall this was useful. Research suggests that the literature needs to be updated, and studies repeated periodically to avoid superfluous generalisations. Such updated knowledge about how management practices change over time, and how different findings emerge in different empirical contexts, is important for management science research (see Harzing et al., 2015).

CHAPTER 5 - SUBSIDIARY CLASSIFICATION AND CONFIGURATION

This chapter looks at the two research objectives of the thesis, one concerning a subsidiary classification, and the other its configuration with a developmental context. Based on the two objectives two research questions are developed. Research question (i) is interested in the development of a subsidiary classification on a multidimensional framework. The question is based on two issues: (a) the need for a simultaneous recognition of subsidiary roles and development for a classification; and, (b) the need for recognising the MNE heterarchical and various hierarchical models (under which subsidiaries operate) as key factors influencing subsidiary role development. The thesis grounds the MNE management structures concept in the RBV as a heterogeneous firm-level resource (used to effectively coordinate and integrate MNE activity globally), as well as a subsidiary level resource, which influences subsidiary evolution in a variety of ways. Research question (ii) is interested in identifying ways in which a developmental context varies among different subsidiaries.

Drawing on all the recognised streams of subsidiary strategy and management literature (for an overview of the streams see Birkinshaw & Pedersen, 2010) an overarching classification framework is developed. The framework is based on the assertion that subsidiary roles are complex, determined by multiple factors including the subsidiary's own strategy and their level of development, and that such complexity can be best captured with a holistic overarching framework. With this, the framework moves away from the common approaches followed in the existing studies. The studies classified subsidiaries either using, *the MNE classification* [e.g. global, transnational, multi-domestic, international (see Bartlett & Ghoshal, 1989; Meyer & Yu-Shan, 2014)], *the MNE strategy* [e.g. integration-responsiveness (see Jarillo & Martínez, 1990; Meyer &

Estrin, 2014; Prahalad & Doz, 1987)] or the *MNE process* [e.g. the scope of activity (see White & Poynter, 1984)]. The existing knowledge of subsidiaries therefore is strictly of those that can be found in an MNE (Enright & Subramanian, 2007; Yip, 1995; Yip & Hult, 2012).

The framework also moves away from another common approach followed in the subsidiary roles studies where the subsidiary classification is based either on theory (see Gupta & Govindarajan, 1991; Taggart, 1997a) or empirics (see Bartlett & Ghoshal, 1986; White & Poynter, 1984). The overarching framework aims at identifying alternate subsidiary types and is based on both theory (micro and macro) and empirics.⁴¹ This thesis conceptualises subsidiary types into three generic developmental capacities (i.e., low, moderate, and high). The cluster analysis then (based on the original empirical evidence) decides the number of subsidiary types and their characteristics. Earlier studies limited the subsidiary types to a maximum of four, irrespective of whether the classification was based on theory or empirics. Where the frameworks are closed, and based on theory, there is a need to bring consistency between the data and the a priori framework. On a two by two matrix a researcher would usually want four or less clusters⁴². Similarly, where the classification is based on empirics only there can be generalisability issues. The approach adopted in the overarching framework avoids a particular clustering solution with a preferred number of clusters, and also grouping subsidiaries on issues identified only from the data patterns emerging from the analysis. Here it is not being argued that the two approaches above are wrong. The point is that the approach adopted here is better as it is more reflective of reality, appropriate for the multidimensional framework, less restricting in the (desired) number of types, and better allows a framework's extension.

⁴¹ This (as explained in Chapter 2) is also partly because of the subsidiary conceptualisation difficulties on a multifaceted multidimensional framework, in that the matrix-based method of conceptualisation on a multidimensional framework will be unnecessarily and unrealistically large.

⁴² See Taggart (1997a, p. 63), and Harzing and Noorderhaven (2006a, p. 173).

As indicated earlier, prior to conducting the SC survey, the overarching framework was tested. Three clusters transpired. Clusters' variance in the dimensions on which they are based was analysed and the cluster membership validity was established. A sampling frame was then derived for the SC survey. All this information was kept in the background and only briefly outlined in Chapters 3 and 4. Here in this chapter the clusters are explained in terms of their differences with each other, and then are translated into meaningful subsidiary types. The (theory-based) overarching framework is extended with the (empirics-based) subsidiary classification. Following this, based on the literature and the theoretical inferences made in Chapter 4, the possible developmental paths and the strategy shifts in the subsidiary types are discussed. The subsidiary classification is then configured with their developmental contexts. Through analysis of variance, ways in which the developmental context varies across the subsidiary classification, are identified. The subsidiary types are elaborated on. The discussion on the classification and configuration is extended. Key contributions are highlighted.

A key assumption of the thesis is that subsidiary roles, level of development, characteristics, and strategies vary across the various management structures under which the subsidiaries operate. Support for this assumption is given already in Chapter 4, indicating that subsidiaries vary across heterarchy and hierarchy and also within the hierarchical management structures. In Chapter 4, exploring subsidiary variance across MNE management structures using the variables of the overarching framework was deliberately avoided. The intention was to conduct that analysis here in this chapter. The rationale of this was to test the assumption that subsidiaries vary across management structures (on the framework's dimensions) as well as to check the validity of the framework. If significant variances for the majority of the dimensions transpire, then the a priori framework and its underlying argument are validated.

This chapter begins with testing variances across the MNE management structures. This is then followed by a section which looks at the subsidiary classification and answers research question 1. A section on subsidiary configuration answering research question 2 then follows. A section elaborating on the contributions vis-à-vis research issues is then presented. The chapter ends with a summary section.

MNE MANAGEMENT STRUCTURES

Analysis of variance in subsidiaries (roles and development) across management structures shows that variance exists both across hierarchy and heterarchy and within hierarchy. The variance is explored across autonomy (strategic and operational), initiatives (local, global, and internal), geographical scope, external embeddedness, and the contributory role. These are discussed as follows:

Hierarchy versus Heterarchy

Across hierarchy and heterarchy results (see Appendix E2) it shows that heterarchically managed subsidiaries are significantly higher in strategic autonomy, operational autonomy, (R&D) contributory role,⁴³ local initiative, global initiative, and the international market scope, than the hierarchically managed subsidiaries. Wolf and Egelhoff (2010) argue that heterarchically managed organisations have strong limitations

⁴³ Earlier results showed that autonomy, initiative, and contributory role were positively associated with each other; here they share characteristics too. These findings contradict some arguments that high strategic autonomy leads to internal isolation (see Keupp et al., 2011), which overlooks that autonomy can be both granted and earned. Subsidiaries gain discretion over strategic decisions to effectively operate in their markets. It is, however, also expected that subsidiaries will transfer competences to the MNE. Earlier studies, e.g. Andersson and Forsgren (1996), link autonomy positively with external embeddedness and negatively with integration. Later studies, e.g. Andersson et al. (2007), suggest that subsidiaries with strong external networks should be integrated enough to transfer the technology to the MNE. Results here show that the link of autonomy with MNE strategy is less straight-forward in that a high level of autonomy is linked to internal embeddedness too. This is supported only in a recent study that is Najafi-Tavani et al. (2015), which shows that subsidiary autonomy increases only with internally embedded competence-transfer.

in the MNE in that they can face a number of problems (e.g. in intra-MNE knowledge transfer, trust building in the MNE, and subsidiary development), which the hierarchically managed subsidiaries would not. The empirical evidence from this thesis does not support their propositions:⁴⁴

1. With respect to *intra-MNE knowledge transfers*, the results show that heterarchically managed subsidiaries are higher in contributory role⁴⁵, as well as knowledge outflows (as indicated in Chapter 4) than the hierarchically managed subsidiaries. This suggests that heterarchical subsidiaries are not just better competence-creators, but the MNE coordination is less affected in a heterarchical structure.
2. With respect to *trust*, earlier in Chapter 4 no variance was found in subsidiary credibility across hierarchy and heterarchy. The claim of Wolf and Egelhoff (2010), that trust-building is easier in hierarchically managed subsidiaries than the heterarchically managed subsidiaries is therefore not supported.
3. With respect to *subsidiary development* issues, the assumption can be assessed against: (i) the established determinants of subsidiary development (e.g. autonomy, initiatives, and local environment dynamism) (see Birkinshaw & Hood, 1998; Filippov & Duysters, 2014; Pedersen, 2006); (ii) the dimensions of the overarching framework (since it draws mainly on subsidiary development literature); and, (iii) some

⁴⁴ This analysis compares heterarchy with hierarchy as a whole, rather than an individual formal structure with heterarchy.

⁴⁵ With the contributory role link further support to the RDT implication (made earlier) is given. The heterarchically managed subsidiaries are more competence-creating and likely to develop intra-MNE resource dependences than the hierarchically managed subsidiaries. Also for the RBV, the heterarchically managed subsidiaries possess higher level of resources than the formally managed subsidiaries.

other variables on which the authors base their assertions. The discussion is as follows:

- a. As above, heterarchically managed subsidiaries are higher both in local as well as global initiatives than the hierarchically managed subsidiaries. With this, it is evident that heterarchically managed subsidiaries have higher opportunities to develop than the hierarchically managed subsidiaries.
- b. Heterarchically managed subsidiaries are higher in autonomy than the hierarchically managed subsidiaries. This is less surprising, but the implication here is that autonomy is the HQ determinant of subsidiary development. This indicates that heterarchically managed subsidiaries benefit more in terms of their autonomous actions and freedom than the hierarchically managed subsidiaries.
- c. Earlier in Chapter 4, no variance across hierarchy/heterarchy on industry dynamism was found. No variance is found here in the external embeddedness, internal initiative and the local market scope. These variables relate to the subsidiary local environment determinism. No variance suggests that across hierarchy/heterarchy subsidiaries do not differ in their level or opportunity to develop in the local market. This too is a contribution as it indicates the contingency as to where the management structure influences the subsidiary roles and where it does not.

Now the arguments of Wolf and Egelhoff (2010, p. 158) are further assessed. The authors' statements are put in italics below:

1. *Network organisations are less exposed to a formal guidance, and less visible (to MNE) in terms of their capabilities than the hierarchically managed subsidiaries.* Results show that network organisations are higher in contributory role and knowledge outflows than the hierarchically managed subsidiaries. The implications are that where a subsidiary possesses valuable resources, the subsidiary does not operate unnoticed by the MNE, irrespective of the structure. The authors implicitly assume that heterarchy means isolation, for which the data in this thesis demonstrate is not necessarily the case. MNEs today have greatly improved their coordination systems with subsidiaries highly visible to the MNE (Birkinshaw, 2014).
2. *Initiatives, vertical relationships and communication are more favoured by a hierarchical than a heterarchical structure.* As per results, while the hierarchical structures obviously raise vertical relationships, HQ-subsidary communication does not differ significantly between hierarchical and heterarchical structures (see Chapter 4), and initiatives are actually more prevalent in the heterarchical structures.

Wolf and Egelhoff (2010), and Wolf and Egelhoff (2012) argue that there is little a priori knowledge of the heterarchical structures, and the hierarchical have been an ignored research area for quite a long time. Yet they base their arguments on the subsidiary roles and development studies which rarely discuss the organisational structures. There is one study that is Birkinshaw and Morrison (1995), which (linking hierarchy with low and heterarchy with high autonomy) studies how autonomy varies among subsidiaries. Other than this, a detailed discussion rarely exists. It would perhaps be more justifying if the authors had supported their argument with original empirical evidence. There are no prior studies integrating MNE strategy-structure, MNE process, and the evolution of roles streams of literature. The authors' inferences are therefore less justifying. This thesis's results have validity in two ways:

1. The results are based on a large sample with sufficient representation of hierarchy and heterarchy showing that 70% of subsidiaries are managed under the formal and 30% under the lateral structure. The data have also been tested comprehensively for reliability and validity. There is therefore some confidence in the results.
2. Wolf and Egelhoff (2010)'s and Wolf and Egelhoff (2012)'s central argument is that MNE complexity and heterogeneity has increased over the years. The authors argue that a hierarchical structure has more potential to address such complexity than the heterarchical structure. Earlier studies suggest heterarchy is better (Birkinshaw & Morrison, 1995; Hedlund, 1986, 1993, 1994a). The results here support these studies and show that heterarchical structures suit subsidiary development.

With a focus on development at the subsidiary level, the hierarchy/heterarchy debate is extended as follows:

- a. *Heterarchically managed subsidiaries have broader roles, and development opportunities than the hierarchically managed subsidiaries.* Earlier studies mainly look at the coordination of activity in the MNE (see Bartlett & Ghoshal, 1989, 1990; Hedlund, 1986, 1993, 1994b), with a few also making propositions about subsidiary development (see Wolf & Egelhoff, 2010), but not showing which structure favours subsidiary development.
- b. *Ways in which subsidiaries vary are indicated.* A range of variables are identified here and in Chapter 4.
- c. *The subsidiary developmental determinants of variations across hierarchy and heterarchy are 'headquarters', and 'subsidiary choice' rather than the 'local environmental'.* With respect to local environmental determinism, subsidiaries do not vary in their roles and development irrespective of whether they are managed formally or informally. Earlier studies, e.g. Bartlett and Ghoshal (1989), Donaldson (2009), and Wolf and Egelhoff (2012), argue as to which structure (lateral or matrix) favours a transnational strategy. The results here suggest that no structure (CHQ, RHQ, mandates, DHQ, lateral) is better where the subsidiary follows a locally responsive strategy.

Based on the points above the assumptions of Wolf and Egelhoff (2010)'s are not supported. The results suggest that the authors' assessment about heterarchy with respect to subsidiary development is weak. Also the authors make broad inferences about hierarchy, yet do not discuss the range of options (e.g. mandates, RHQ etc.) in a hierarchical model. It is logical to assume that subsidiary development can vary within hierarchy too. This is discussed as follows.

Inter-hierarchical Models' Comparison

Analysis of variance within hierarchy (see Appendix E3) indicates variance across only two determinants (i.e., local market scope and the contributory role). The variation is indicated only between the subsidiaries managed under a matrix structure (i.e., DHQ) and the subsidiaries managed under the RHQ/office, CHQ, and the mandated subsidiaries. With regard to local market focus the subsidiaries managed under the DHQ are significantly lower than the subsidiaries managed under the RHQ/office, the CHQ, and the mandated subsidiaries. With regard to the contributory role, however, the subsidiaries managed under the DHQ are significantly higher than the subsidiaries managed under the RHQ/office, the CHQ, and the mandated subsidiaries.

This finding suggests that a matrix structure is not the best model to implement a transnational strategy as opposed to what the proponents of the matrix structure, e.g. Donaldson (2009) and Wolf and Egelhoff (2012), argue. A transnational strategy is operationalised with a high local and high internal/international market focus (see Meyer & Yu-Shan, 2014). This means that for a subsidiary to take a transitional strategy it must be high on both responsiveness and integration (see Bartlett & Ghoshal, 1989), as well as exports (see Meyer & Estrin, 2014). Earlier the results show that characteristics of subsidiaries taking a transitional strategy are more linked to heterarchy. These

subsidiaries are higher in international market focus and competence creation than the hierarchically managed subsidiaries, but do not differ from them in terms of the local market focus. The subsidiaries managed under a matrix are lower in local market focus than the subsidiaries managed under other formal structures. This shows that (compared to other formally managed and the laterally managed subsidiaries), the subsidiaries managed under a matrix structure do not predominantly take a transitional strategy.

Definitely, what suits best versus what is predominant can be two different issues. But it is also likely to be subjective if one is to assume that the predominant measure (here) is weak. A key indicator here is the subsidiary level of development and their competence transfers. If heterarchically managed subsidiaries are more competence-creating and possess a higher level of resources and capabilities than the hierarchically managed subsidiaries, then it is logical to assume that the heterarchical structure could be better for both the MNE and the subsidiary.

Among the hierarchical structures, from a subsidiary role and developmental perspective, the subsidiary of interest is the one managed under a matrix structure. This is because of the higher contributory role. Earlier the results showed that subsidiaries managed under a DHQ were significantly higher in product outflows (to local subsidiaries), and in strategic asset-seeking motives than the other formally managed subsidiaries. Wolf and Egelhoff (2012) argue that the matrix structure facilitates knowledge transfer within the MNE. Dellestrand (2011) shows that DHQs transfer innovations across the MNE. The results here support the arguments, although the assertions made here are based on a comparison of various hierarchical structures, which is lacking in the studies cited above.

Subsidiary Competence or the Management Structure?

So is it the management structure? This question is not a straightforward one that can be answered. There are many factors simultaneously at play, which determine subsidiary roles and development vis-à-vis management structures. These are discussed as follows:

1. Some structures are better facilitators of knowledge, resources, and capability transfers. It was discussed earlier how studies vary in their assumptions as to which structure facilitates such transfers best. The results here identify a structure (i.e., the lateral structure), which is better than the others.
2. MNE management structures are perhaps contingent upon particular subsidiary characteristics. It is possible that a subsidiary, which operates with a particular motive or possesses a particular characteristic, is managed under a particular structure. The results show that subsidiaries under a matrix or a lateral structure predominantly take resource-seeking and strategic asset-seeking motives, whereas others take market-seeking motives. This could be one contingency.
 - a. It is important to note that the country context under which a subsidiary operates may influence the subsidiary organisational structure. Judge and Li (2012) for example, propose that where a subsidiary operates in a rule-based governance environment (such as in many developed economies), the subsidiary organisational structure is largely influenced by its broader role, and where it operates in a relation-based governance environment (typically

emerging or transitional economies), the structure is determined by the macro institutional factors. As this thesis uses evidence from a predominantly rule-based economy (i.e., New Zealand), in line with the above, it is appropriate to infer here that it is the particular motives and characteristics of a subsidiary that determine which management structure is appropriate for the subsidiary.

3. Heterarchically managed subsidiaries are older and larger than the hierarchically managed subsidiaries (see Appendix E2). This has implications for the selection of a particular structure, and a possible answer to the question of Wolf and Egelhoff (2010) concerning what determines selection of a particular structure. HQ-subsidiary relationships may become more informal as the subsidiary ages or becomes larger.
4. Subsidiaries vary in their competences. A highly contributing subsidiary is likely to be controlled informally (as the results indicate here). Such subsidiaries are important. It is important to encourage them, reward them (to increase their motivation), and allow them some influence in the MNE.

The premise is that it is a combination of various factors based on which MNEs decide what structure suits a subsidiary. Obviously putting a small sales facility under a lateral structure would not lead the subsidiary to competence-transfers in a short period of time. The purpose so far has been to identify a structure which best suits the subsidiary roles and development. Based on the results the ideal structure for subsidiaries is the lateral structure, which is based on people and relationships, and less on policies and procedures. Under the lateral structure subsidiaries are expected to be both open in their relationships, and to respect the corporation's policies, goals, and objectives (Bartlett et

al., 2005). The following three conclusions can be drawn from the hierarchy/heterarchy debate:

1. Among formal structures, subsidiaries managed under a matrix have broader roles and higher opportunities to develop than the subsidiaries managed under other formal structures.
2. Some structures (e.g. network and matrix) facilitate subsidiary further development, others (e.g. CHQ, RHQ, mandates) less.
3. Subsidiaries are managed under: (i) a network structure (heterarchical) where the subsidiary is old, large, given high autonomy, encouraged to export and take initiatives, and expected to transfer the competences to the MNE as a whole; and, (ii) a matrix where the subsidiary possesses competences, and the MNE seeks to transfer the competences internally, but also control the subsidiary formally.

With the identification of such determinants some insights are offered as to the contingencies sought by Wolf and Egelhoff (2010, p. 168) regarding the selection of a particular structure. Previous research has not studied the link between management structures and subsidiary roles and development. There have been modest discussions about control (see Birkinshaw & Morrison, 1995; Harzing & Noorderhaven, 2006a; O'Donnell, 2000). Other studies have been less explicit in the identification of the structures. Wolf and Egelhoff (2010), for example, make assertions about the hierarchical structures as a whole without putting any focus on the various types of hierarchical structures (e.g. RHQ, mandated subsidiaries). Also, subsidiary studies at large do not consider the possibility of various influences the various management structures put on

subsidiary development and discuss mainly the CHQ. The results here suggest that a more explicit focus/identification of the various MNE structures is important as subsidiaries vary in their characteristics and strategies within formal and across formal and informal structures.

A range of characteristics have been identified across management structures on which subsidiaries vary. These are summarised in Tables 5.1, and 5.2. With this finding, the assumption that subsidiaries vary in their roles and development across management structures is empirically confirmed. It is, therefore, safe to assert that the a priori dimension, 'MNE management structures', is a tested and a valid dimension, and the overarching framework a valid and reliable framework to classify subsidiaries in any empirical context.

Table 5.1: Contributions: Hierarchy versus Heterarchy

Management Structures’ Characteristics		Literature	Novelty
Heterarchy	Hierarchy		
<i>Transnational Strategy</i>	<i>Multi-domestic Strategy</i>	Bartlett and Ghoshal (1989) hypothesize that transnational strategy is best implemented laterally. Donaldson (2009) argue such is better implemented under a matrix.	Yes. Examination across a range of structures is conducted. It is empirically shown under which structure the transnational strategy is predominant.
<i>High Parent Support</i>		-	Yes
<i>High Knowledge Outflows to HQ</i>		Bartlett and Ghoshal (1989) propose a high frequency of resource exchange in lateral structures. Wolf and Egelhoff (2012) propose such can be better handled hierarchically.	Yes. A structure linked most to resource exchanges, and the predominant pattern of exchange are identified.
<i>Resource-seeking Motives</i>	<i>Market-seeking Motives</i>	Wolf and Egelhoff (2012) propose that network organisations have limitations in taking exploitative motives.	Yes. It is shown that such is not true, in fact, what differentiates lateral and formal structures is the type of exploitation.
<i>High Export, and International Focus</i>		-	Exports are under emphasized in the MNE subsidiary literature. Meyer and Estrin (2014) argue that ‘exports’ is a separate dimension to the integration and responsiveness framework. There is novelty in analysing the export strategy across hierarchy and heterarchy.
<i>High Growth</i>		(Hite & Hesterly, 2001; Wolf & Egelhoff, 2012)	No. Has been discussed earlier. It is only confirmed here.
<i>High Level Resources</i>		-	Yes
	<i>Capabilities Affected with Internal Isolation</i>	Wolf and Egelhoff (2012) propose: where distance is large hierarchical structure is better.	Yes/ Results show how distance affects hierarchically managed subsidiaries.
	<i>High Need for Autonomy</i>	-	Yes. Subsidiary perception of autonomy is under researched.
<i>High Autonomy</i>		(Birkinshaw & Morrison, 1995)	No. Such discussion exists. It is only confirmed here.
<i>High Local and Global Initiative</i>		-	Yes as a whole, and in terms of the identification of the initiative types.
<i>High Contributory Role</i>		-	Yes, in terms of ‘specialised’ resource transfer to the MNE as a whole.

Table 5.2: Contributions: Inter-hierarchical Models' Comparison

Formal Structures' Characteristics				Literature	Novelty
Hierarchy					
<i>CHQ</i>	<i>RHQ/Office</i>	<i>Mandates</i>	<i>Matrix</i>		
<i>Low MNE Resource Support for Initiative</i>				-	Yes. As opposed to the general view, it shows that management under an intermediary can (in some ways) favour subsidiary development more.
			<i>High Product Outflows to Local Subsidiaries</i>	-	Yes. This is a comparison within hierarchy. Such is lacking in literature.
<i>Exploitation Motives</i>	<i>Exploitation Motives</i>	<i>Exploitation Motives</i>	<i>Exploration Motives</i>	Wolf and Egelhoff (2012) propose that matrix is ideal where there is a simultaneous need for exploration and exploitation.	Yes. Empirical support is offered to a recently discussed phenomenon.
<i>Resource Affected with Internal Isolation</i>				Wolf and Egelhoff (2012) propose where distance is large hierarchical structure is better.	Yes. Results show under which formal structure subsidiary is affected the most.
			<i>High Contributory Role</i>	-	Yes. This a comparison within hierarchy, and about 'specialised' resource transfer to the MNE as a whole.
<i>High Local Market Focus</i>	<i>High Local Market Focus</i>	<i>High Local Market Focus</i>		-	Yes. As such an investigation within hierarchy remains absent.

SUBSIDIARY CLASSIFICATION

This section elaborates on the three clusters produced by the cluster analysis, and answers research question 1. First, a summary of the clusters in terms of their mean scores is provided. This will indicate which clusters have a high or low score in a relative sense and a low, moderate or high in an absolute sense. Following this, the clusters' memberships (in terms of the dimensions in which the clusters vary significantly) are

checked. While in cases where there are more than two clusters, it is not obligatory for each cluster to differ from the other clusters on every dimension, although the maximum the variations, the better (Burns & Burns, 2008). A dimension on which at least two clusters do not vary does not reflect a good cluster membership. Deletion of such a dimension from the framework is recommended.

The clusters here show excellent cluster membership. Out of the three, two clusters do not differ on global initiative and two others on external embeddedness. Other than this, all differences are highly significant. For a summary of clusters see Table 5.3.

Table 5.3: Clusters' Summary

Overarching Framework Dimension	Clusters' Summary								
	Mean Score			Clusters' Differences					
	Cluster 1 - (N=116)	Cluster 2 - (N=162)	Cluster 3 - (N=151)	Clusters 1 and 2		Clusters 1 and 3		Clusters 2 and 3	
	μ	μ	μ	h	sig	h	sig	h	sig
Geographical Scope									
<i>Local</i>	4.08	4.52	3.62	27.923	.000	13.304	.000	72.801	.000
<i>International</i>	2.08	1.76	3.01	7.026	.008	44.844	.000	91.69	.000
Contributory Role	1.45	1.27	2.3	4.929	.026	66.033	.000	122.538	.000
Initiative									
<i>Local</i>	2.48	3.06	3.25	43.383	.000	74.707	.000	7.338	.007
<i>Global</i>	1.41	1.51	2.9	2.988	.084	136.988	.000	158.75	.000
<i>Internal</i>	1.55	1.9	2.14	17.751	.000	38.051	.000	6.594	.010
Autonomy									
<i>Strategic</i>	2.56	3.64	3.98	129.001	.000	172.875	.000	25.179	.000
<i>Operational</i>	2.81	3.97	4.23	133.964	.000	162.536	.000	13.423	.000
External Embeddedness	1.75	2.07	2.01	9.631	.002	6.34	.012	0.365	.546

As a next step each of the clusters' capacity (see Table 5.4) is then ranked in a relative sense into A, B, C (where A refers to the highest and C to the lowest capacity), and in an absolute sense into low, moderate, high (based on the criteria devised earlier in Chapter 3). An analysis of variance shows that cluster 1 subsidiaries are significantly smaller than cluster 2,⁴⁶ and cluster 3⁴⁷ subsidiaries. A chi-square test shows that cluster

⁴⁶ H = 28.047; p>0.001; M (1) = 113.22; M (2) = 158.31

⁴⁷ H = 44.416; p>0.001; M (1) = 101.78; M (3) = 158.75

1 and cluster 2 subsidiaries predominantly belong to the services industry, and cluster 3 to the manufacturing industry.⁴⁸ Cluster 3 subsidiaries are predominantly managed heterarchically and under matrix structure and clusters 1 and 2 are managed hierarchically (i.e., under CHQ, RHQ or mandated subsidiaries).⁴⁹

Table 5.4: Clusters' Capacity Ranked

Clusters' Capacity Ranked						
Overarching Framework Dimension	Relative Ranking (A, B, C)			Absolute Ranking (Low, Moderate, High)		
	Cluster 1	Cluster 2	Cluster 3	Cluster 1	Cluster 2	Cluster 3
Geographical Scope	C	B	A	Moderate	Moderate	Moderate
Contributory Role Initiative	B	C	A	Low	Low	Low
<i>Local</i>	C	B	A	Moderate	High	High
<i>Global</i>	C	B	A	Low	Low	Moderate
<i>Internal</i>	C	B	A	Low	Low	Moderate
Autonomy						
<i>Strategic</i>	C	B	A	Moderate	High	High
<i>Operational</i>	C	B	A	Moderate	High	High
External Embeddedness	C	A	B	Low	Moderate	Moderate

In an absolute sense (based on the generic subsidiary development classification criteria devised in Chapter 2) cluster 1 subsidiaries fall under the under-developed subsidiary category as they do not show a high-level capacity on any of the dimensions. Whereas, cluster 2 and cluster 3 subsidiaries fall under the moderately developed subsidiary types as both the subsidiary types are low in one or more dimensions each. In a relative sense, however, cluster 3 subsidiaries show the highest level and opportunity to develop, followed by the cluster 2 subsidiaries. These findings are discussed in the

⁴⁸ p<0.01

⁴⁹ p<0.001

subsequent sections. First, a section on the overarching framework is presented followed by the developmental classification section.

The Overarching Framework

It is important here to recap some of the discussions made earlier to highlight the novelty of the overarching framework. As discussed earlier, previous frameworks claimed novelty in two aspects: (i) the frameworks were based on two unique concepts; and, (ii) the frameworks addressed a unique research question, although most of the questions were empirical rather than theoretical (Enright & Subramanian, 2007). Every role framework is therefore relevant. However, the studies rarely compare how their new dimensions are superior to those used in the previous frameworks (Morschett et al., 2015). The frameworks lack theoretical basis with their dimensions often arbitrary (Schmid, 2004). Every new role framework is largely disconnected to the previous ones (Hoffman, 1994). It is therefore less clear as to which dimension is crucial for international management (Morschett et al., 2015). Besides this, the frameworks are mainly based on two dimensions. An appropriate approach would be basing a framework on multiple dimensions rather than just two. With such an approach the subsidiary role can be fixed against multiple characteristics (Enright & Subramanian, 2007; Morschett et al., 2015). The overarching framework addresses much of these issues. These are discussed as follows:

1. The framework is multidimensional and the dimensions are multifaceted.
2. The framework is based on a better approach in that it is based on both theory and empirics. The theory leads to a generic developmental conceptualisation, which the empirical evidence specify/extend. Earlier

frameworks are either drawn on theory or empirical evidence. With the overarching framework's approach, neither the data needs to be adjusted to bring consistency with the a priori framework, nor are the resultant subsidiary types specific to a particular empirical context.

3. The overarching framework is well-connected with the previous frameworks. It draws on all the streams of the subsidiary strategy and management literature. It moves away from the common approach followed in the existing studies, where the subsidiary is either classified on the MNE strategy or process. MNE and subsidiary strategy and characteristics are integrated and novel subsidiary types are identified.
4. The framework is centred on an issue that is subsidiary evolution, which is grounded here in rich macro theories (i.e., RBV, RDT, network model). With this, the basis of the dimensions' selection is more theoretical and less arbitrary.
5. A key dimension of the framework is MNE management structures, which the thesis explicitly identifies as a crucial one in international management.
6. The framework being multidimensional based on multifaceted concepts has better potential for micro-theory development. Recent research emphasises the use of multilevel/multifaceted concepts (see Cavanagh & Freeman, 2012; Schmid et al., 2014; Strutzenberger & Ambos, 2014). Since earlier studies have mainly been taking concepts as a whole and while such reveals little, it is also confusing. With multifaceted concepts, the aspects are explored in more detail. For example, some subsidiaries can be high in local initiatives but low in global; while others can be high

in global but low in internal. Such a finding would not emerge if the subsidiary initiatives are taken as a single broad concept. Similarly, some subsidiaries can be contributing in low value-added activities (e.g. supplying inputs), while others are contributing in high value-added activities (e.g. R&D). Taking multiple dimensions also has merits. There is growing recognition that the factors the subsidiaries are exposed to occur together rather than in isolation (Bouquet & Birkinshaw, 2008). For example, there is not just the MNE strategy but also the simultaneous subsidiary own strategy taking place. Subsidiary development is the result of the combined interaction of the three environments (i.e., local, global, internal) (Birkinshaw, 2014). Subsidiaries should be dual-embedded (Ciabuschi et al., 2014), rather than with the local context only (Andersson & Forsgren, 1996). All these studies ask for a greater detail and enhanced micro-theory in subsidiary research.

A Developmental Classification

There are several benefits of a subsidiary classification. For one, the classification shifts the focus from a monolith MNE to a subsidiary, and gives a broader picture of the MNE operations in terms of how various subsidiaries based in various countries, belonging to various MNEs, play various roles. The roles can be as narrow as a small local sales activity, to a specialised broad research facility supplying inputs to the MNE as a whole, to a large subsidiary serving regional/global markets (Birkinshaw & Pedersen, 2010; Morschett et al., 2015; Mudambi, Pedersen, et al., 2014; Nohria & Ghoshal, 1994). By classifying subsidiaries on various and/or unique dimensions, one gets an idea of the common and unique strategy/characteristics of the subsidiaries. What the overarching

framework offers is a developmental classification. This classification has the following two aspects:

1. It is based on MNE strategy, the subsidiary's own strategy, MNE process, and the subsidiary characteristics. For example, a subsidiary initiative is broadly understood as a manifestation of the subsidiary's own strategy (Birkinshaw, 1997, 2014). It can also be an HQ assignment (e.g. HQ transferring a key facility to the focal subsidiary host country). Similarly, autonomy can be taken as a subsidiary characteristic as well as an MNE control strategy. Contributory role reflects a subsidiary characteristic (i.e., their level of resources), as well as a process through which the MNE develops as a whole.
2. The classification's underlying argument is that subsidiaries develop over time and take on broader roles or positions in the MNE (Birkinshaw & Hood, 1997; Chen et al., 2013; Filippov & Duysters, 2014). The results support this argument too that subsidiary development is linked to subsidiary age.

The three-part classification shows that subsidiaries vary in terms of their role and development in that there are subsidiaries showing the highest level of capacity to subsidiaries showing the lowest. There is no subsidiary type that is consistent in terms of a single rank along all the dimensions of the framework. This shows that where subsidiaries are classified over multiple dimensions then a predominant all-high, all-moderate or an all-low capacity subsidiary type does not emerge [as opposed to what can be seen in the existing two-dimensional dichotomous (low-high) frameworks]. The

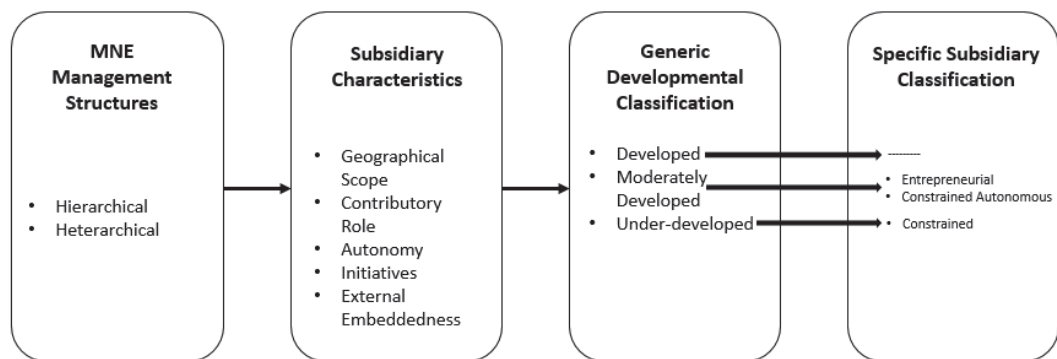
subsidiary capacities vary so that a subsidiary will be high in one area, but low in the other. The theoretical implication of this is that a subsidiary contributory role, for example, will be influenced positively with global initiative (as the results indicate). However, it is not necessary that a subsidiary having a high level of global initiative will be high in contributory role too. This is one key limitation of the existing frameworks as they seek evidence of the subsidiaries which fit their a priori framework. Several researchers have voiced disquiet about the existing typologies (see Enright & Subramanian, 2007; Haugland, 2010; Morschett et al., 2015; Rugman, Verbeke, & Yuan, 2011). Here it shows that such an approach is unlikely to work on multiple dimensions. This was one of the assumptions (regarding pre-conceptualising) which was made earlier in Chapter 2. This assumption is supported here.

It is therefore appropriate to look at the predominant pattern. Cluster 3 subsidiaries show a balance of moderate and high capacity, cluster 2 low and high, and cluster 1 low and moderate. From a developmental perspective, therefore (as per results), the most interesting subsidiary type is the cluster 3 subsidiary, but it would be more interesting if a fully developed subsidiary was found. Earlier studies have noted that while developed subsidiaries, such as centres of excellence, and world/product mandate subsidiaries do exist, they are rather few in number (Young, Hood, & Peters, 1994). Subsidiary development studies mostly find the developed subsidiary category the lowest in number, as compared to other subsidiary types. While an investigation into a fully developed subsidiary (as in this thesis) on a broad range of dimensions is limited, based on results here, a similar inference may be made that while fully developed subsidiaries may exist, they would be rather few.

The overarching framework is now complete (see Figure 5.1). As no developed subsidiary type is found, the overarching framework leaves the developed subsidiary

space blank. It does not refute/contradict the possibility of a fully developed subsidiary. Here this may be taken as a contextual issue. If the framework is used for another context, it is possible that a fully developed subsidiary might emerge. Jarillo and Martínez (1990), for example, using the IR framework did not find a subsidiary in Spain with low integration and low responsiveness. Taggart (1997c), on the other hand, did find such a subsidiary type in UK, and argued that the emergence of such a subsidiary was a reflection of the difference in strategies of the Spanish and the UK subsidiaries.

Figure 5.1: The Overarching Framework (Complete)



The subsidiary types are now discussed further. A developmental path for these subsidiaries is conceptualised.

Entrepreneurial. Cluster 3 subsidiaries can be referred to as ‘Entrepreneurial’ subsidiary types. These subsidiaries have a decent market scope and initiative level. The subsidiaries are highly autonomous, and low to moderate in external embeddedness and contributory role. The key distinction of the entrepreneurial subsidiary is their initiative level, which is higher both in an absolute and relative sense to the other subsidiary types. For mainly this reason, this subsidiary type is named as entrepreneurial. This subsidiary

is relatively highest, but in an absolute sense low in contributory role. For this reason, this subsidiary is classified as moderately developed.

Birkinshaw (2014) identifies subsidiaries that are highly proactive in the three markets as having the highest opportunities to develop. What distinguishes such subsidiaries from the usual subsidiaries (that undertake the parent role assigned to them) is their high-level entrepreneurial orientation. Another aspect here is the external embeddedness, which is moderate. As the two concepts (i.e., initiative and external embeddedness) have not been a subject of studies interested in subsidiary classification, this category of subsidiaries is an alternate one but also one that can be found in any empirical context. The high level autonomy aspect places this subsidiary among the subsidiaries of existing studies, which are classified as high-high on the two dimensions. For example, the 'Active' subsidiary in Jarillo and Martínez (1990). However, the low competence-creation and moderate market scope brings them down to a low-high class as of some other studies like White and Poynter (1984) and Gupta and Govindarajan (1991). Overall, this is the most interesting subsidiary type in New Zealand.

Earlier (as opposed to Achcaoucaou et al., 2014; Santangelo, 2009), who suggest a direct link between contributory role and external embeddedness, it was (based on the results) theorised that the two variables are not directly associated, but rather moderated by the local initiative. Global initiative was found positively correlated to contributory roles, resources, capability, and knowledge outflows. This subsidiary is moderate in global initiative. These subsidiaries are predominantly managed either heterarchically or under a matrix structure. Around a quarter are managed hierarchically, but this is predominantly in the manufacturing industry. Based on the results, the two structures are linked to non-market-seeking motives, and the manufacturing subsidiaries to high resource development opportunities. Based on this, a developmental path can be proposed

here as follows. This subsidiary type needs to enhance its own strategy and take a higher level of global as well as local market initiative. The subsidiaries are less likely to face resistance from the HQ on their initiatives. Through initiatives, these subsidiaries can further develop their resources, increase their contributory role, and transform to a fully developed subsidiary.

Constrained Autonomous. Cluster 2 subsidiaries can be referred to as 'Constrained Autonomous'. These subsidiaries have a decent market scope, are highly autonomous and are managed predominantly hierarchically, but are low to moderate in external embeddedness and low in contributory role, and global and internal initiative. What differentiates these subsidiaries from the entrepreneurial is their low-level internal and global initiatives. These subsidiaries are predominantly services industry subsidiaries, managed hierarchically, locally-focused, and they operate in highly competitive local environments. Earlier the results indicated that subsidiaries sharing such characteristics predominantly operated with a market-seeking motive, which was found linked to a low level of development.

The subsidiaries are termed as constrained autonomous, which reflects that they have high autonomy but their autonomy is limited to the local market only. Based on their characteristics these subsidiaries can be closely matched to some subsidiaries in literature such as Autonomous (high responsiveness, and low integration). The caveat here is that these subsidiaries are moderate in external embeddedness. One might assume a highly locally-focused subsidiary would also be highly externally embedded. Also one may expect that these subsidiaries with respect to their moderate external embeddedness would show moderate level internal contribution (see Achcaoucaou et al., 2014; Santangelo, 2009). Such is not the case here and this makes this subsidiary slightly

alternate to the other locally-focused or dual-embedded subsidiaries in literature. This subsidiary counts slightly higher in number than the entrepreneurial subsidiary type, and from a developmental perspective is the most interesting one following the entrepreneurial subsidiary.

Clearly, these subsidiaries have lower opportunities to develop than the entrepreneurial subsidiaries. Their development paths therefore are different to the entrepreneurial subsidiaries. These subsidiaries need to capitalise on the highly competitive local market in which they operate, and embed more deeply. These subsidiaries (predominantly managed formally) are also likely to face a high level resistance from the MNE if they shift their focus from the local market. MNEs' view of the host country as a potential location for growth is predominant for these subsidiaries. A quarter of these subsidiaries are managed heterarchically, but these are predominantly services subsidiaries. A third of these subsidiaries belong to the manufacturing industry with a good number managed heterarchically. There are therefore two developmental paths for these subsidiaries. The contingency is as follows:

1. Where the subsidiaries belong to the manufacturing industry and/or are managed heterarchically, the subsidiaries have a broader opportunity to develop than where the subsidiaries are services and/or are managed hierarchically. The subsidiaries need to be active in seeking MNE facilities for transfer to the local market and/or seek MNE support for increasing the size of their local operations. These subsidiaries need to be more explorative, and engage in exports. Following this path these subsidiaries (not misaligning with the MNE goals and objectives) will likely transform to a more developed subsidiary type.

2. Services subsidiaries and/or subsidiaries managed hierarchically can do more than just sales. What they can do is innovate or develop such competences on which they can bid internally for mandates. For example, develop a unique IT management system, which can be integrated internally, and then bid for its use throughout the MNE. The subsidiary can develop internal resource dependences, reputation and gain credibility in this way, even with their constrained autonomy and formal HQ control. There have been cases where sales units successfully gained mandates like this (see Dörrenbächer & Gammelgaard, 2006).

Constrained. Cluster 1 subsidiaries can be referred to as ‘Constrained’. These subsidiaries are under-developed. The most predominant feature of these subsidiaries is that all of them are managed hierarchically (CHQ, RHQ, mandates) and are low in autonomy. This is what differentiates them from the constrained autonomous subsidiaries. Other distinctive characteristics of these subsidiaries are low external embeddedness and initiative level.

Overall being of low capacity, this subsidiary is the most constrained one in New Zealand. The subsidiary can be compared to those subsidiary types that are low-low on the dimensions, such as ‘Vassal’ in Taggart (1997a). The good thing is that these subsidiaries are not just engaged in sales of their products, they also engage in local market initiatives at a moderate extent. Their autonomy (both operational and strategic) is also at a moderate level. This is what makes these subsidiaries unique to the ones identified as low-low capacity in literature. Being relatively lowest in number, they are still considerable (116) for an under-developed subsidiary and require a serious effort for their development.

Obviously these subsidiaries would risk a lot if they take initiative as this requires a high level of autonomy. The first thing therefore these subsidiaries need to do is increase their external embeddedness. External embeddedness is positively linked to autonomy (Andersson et al., 2007; Birkinshaw et al., 2005). The results also support that. Through collaboration with local firms these subsidiaries will gain autonomy and shift to a more responsive strategy. With a sufficient level of autonomy developed, these subsidiaries can then take local initiatives through which they will develop significantly. As these subsidiaries are managed hierarchically they will probably need to follow the same developmental path (i.e., through local innovations) like the hierarchically managed constrained autonomous subsidiaries.

Having identified the subsidiary types and their specific developmental paths, now the subsidiary types are configured with their developmental contexts. The developmental contexts will be identified and their linkages with the subsidiary types will be established. This analysis will address research question 2.

SUBSIDIARY CONFIGURATION

This section analyses the variance between the subsidiary types across the developmental context's dimensions. The results show that the developmental context varies across the subsidiary types. Variations among the subsidiary types within the dimensions are illustrated. This is followed by a discussion section.

Subsidiary Strategy and Manager

A chi-square test shows that subsidiaries, where the country manager is located overseas, are predominantly (two-third) constrained subsidiaries ($p < 0.01$). Whereas entrepreneurial subsidiaries show the broadest strategies in the international markets than

the other subsidiaries, hence indicating a broad scope of activity. The entrepreneurial subsidiaries are higher (see Appendix E4) in their capacities than the following:

1. Constrained autonomous subsidiaries in terms of the: *miniature replica strategy* in the global market; *product specialist* strategy in the regional, global, and internal markets; and, the *strategic independent* strategy in the regional, global, and internal markets.
2. Constrained subsidiaries in terms of the: *product specialist* strategy in the regional, and global markets; and, the *strategic independent* strategy in the regional market.

MNE Strategy, Behaviour, and Nationality

Analysis of variance (see Appendix E4) shows that constrained subsidiaries are significantly higher than the entrepreneurial subsidiaries in PCN and TCN expatriation. The constrained subsidiaries are lower in receiving MNE investment support than the constrained autonomous, and the entrepreneurial subsidiaries. Entrepreneurial subsidiaries are significantly higher than the constrained autonomous and the constrained subsidiaries in terms of seeking and receiving MNE resource support for initiative implementation.

MNE-subsidiary Transactions

Analysis of variance (see Appendix E4) shows that entrepreneurial subsidiaries are significantly higher than the constrained autonomous subsidiaries in terms of knowledge outflows to HQ and the subsidiaries, and product outflows to overseas

subsidiaries and the overseas suppliers. Entrepreneurial subsidiaries are also higher than the constrained subsidiaries in terms of the knowledge outflows to HQ.

Host Country Strategic Importance

Analysis of variance (see Appendix E4) shows that constrained autonomous subsidiaries are significantly higher in pursuing a market-seeking motive than the constrained, and the entrepreneurial subsidiaries, but lower than the entrepreneurial subsidiaries in pursuing resource-seeking and strategic asset-seeking motives. Constrained subsidiaries are significantly higher than the entrepreneurial subsidiaries in pursuing market-seeking motives, but lower in resource-seeking and strategic asset-seeking motives. Constrained autonomous subsidiaries face a higher level of local competition than the constrained and the entrepreneurial subsidiaries. Constrained autonomous subsidiaries have broader growth prospects than the constrained subsidiaries, but lower export opportunity than the entrepreneurial subsidiaries. Entrepreneurial subsidiaries have broader growth prospects and export opportunity than the constrained subsidiaries.

Subsidiary Characteristics

Analysis of variance (see Appendix E4) shows that entrepreneurial subsidiaries have broader capability and resources than the constrained autonomous subsidiaries, and broader resources than the constrained subsidiaries. Constrained autonomous subsidiaries are more affected by isolation effects on capability than the entrepreneurial subsidiaries. Constrained subsidiaries are more internally isolated than the entrepreneurial and the constrained autonomous subsidiaries. Constrained subsidiaries are more affected by isolation effects on performance than the constrained autonomous subsidiaries.

Constrained subsidiaries are more affected by isolation effects in terms of performance and capability than the entrepreneurial subsidiaries. Constrained subsidiaries aspire for autonomy more than the constrained autonomous and the entrepreneurial subsidiaries.

Discussion

Analysis of the developmental context identifies a number of dimensions across which subsidiary types differ. The key areas in which the developmental context varies are: (i) subsidiary country manager; (ii) subsidiary scope of activity; (iii) expatriation; (iv) MNE openness towards subsidiary development; (v) parent resource support for initiative implementation; (vi) knowledge and product outflows; (vii) motives of operation; (viii) growth and export opportunities; (ix) resources and capabilities; (x) internal isolation; and, (xi) perceptions of autonomy. The results justify the theory-based developmental context as variations among the subsidiaries across all the broad dimensions of the developmental context are identified. There are, however, some sub-dimensions of the developmental context on which subsidiary types do not vary, e.g. subsidiary credibility, entrepreneurial culture. These dimensions are therefore taken here as less crucial for a subsidiary classification. The subsidiary classification is configured with their developmental contexts (see Figure 5.2).

It is argued that subsidiary roles studies do not identify how their dimensions are superior relative to other studies' dimensions and/or indicate which dimensions are crucial for international management (see Morschett et al., 2015). Taking a holistic approach, a developmental context is developed.

Figure 5.2: Subsidiary Configuration with a Developmental Context

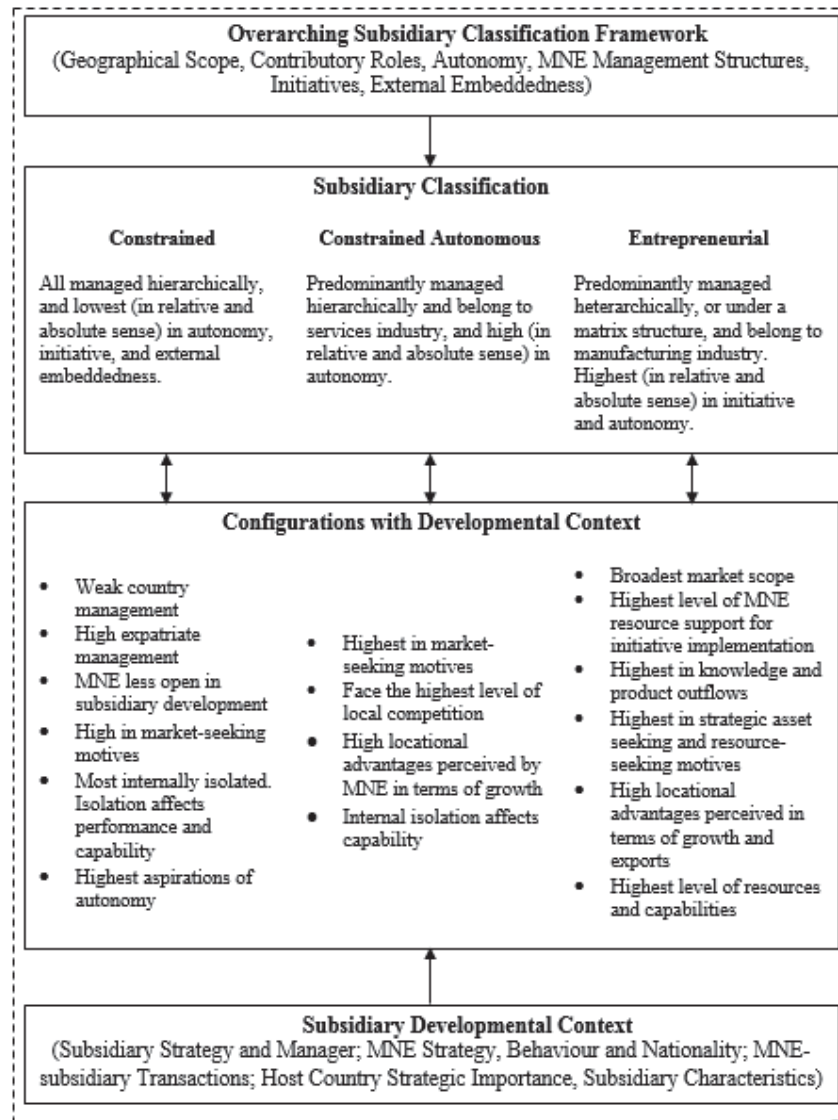


Figure design adapted from Birkinshaw and Morrison (1995)

Based on the results, it is suggested that the variables across which subsidiary types vary are crucial for subsidiary roles and development. Some of these have been used in the existing studies, while others are either used in a different context or used rarely. The results indicated that the MNE management structures and subsidiary initiative are the key determinants of subsidiary development. The results elaborated on the role of country manager in subsidiary development. While there is some

understanding as to the general role of country managers (see Bartlett & Ghoshal, 2003), and there are some extreme takes on country management (see Birkinshaw, 1995; Birkinshaw & Pedersen, 2010), the overall understanding of the country manager's role with respect to subsidiary roles and development is poor (Schmid et al., 2014). The results suggest that the country manager is not an endangered species, rather country management remains dominant today. The results also showed evidence of subsidiaries which were designated a country manager, but the manager was not physically based in the host country. Such evidence is rare. The results also indicated how the country manager's international experience links to subsidiary development.

The role of expatriation in an MNE is poorly understood (Harzing et al., 2015). The results indicated that expatriation negatively influences subsidiary development to the extent that subsidiary resources start to deplete. Results showed that where the subsidiaries were most under-developed to where most developed, the differences in management under expatriation were significant. Therefore where the subsidiaries aspire for development expatriate management should be avoided.

With respect to MNE openness in subsidiary development, and MNE investments, studies, e.g. Birkinshaw (1999), and Frost et al. (2002), show how parent openness in subsidiary development and incremental investments matter for subsidiary mandate development. Studies, e.g. Andersson et al. (2002), however, emphasize less the internal network and more on external network. The results show that the internal network is more crucial for subsidiary development than the external network.

The importance of host country for MNE vis-à-vis subsidiary growth and exports is well recognised (see Bartlett & Ghoshal, 1986). From a resource development perspective (Barney, 1991; Wernerfelt, 1984), however, the locational factors are largely underemphasized (Rugman, Verbeke, & Nguyen, 2011). The results show how MNE

perception of host locations' importance varies between under-developed and developed subsidiaries. The results also show how MNEs have different preferences with respect to locational factors and the industry. Results show that the MNEs prospects of: growth are more predominant in the services industry subsidiaries than the manufacturing subsidiaries, and for the exports it is the other way around.

Studies on knowledge flows have been increasing since the original study of Gupta and Govindarajan (1991). Product flows studies, however, are rare (for notable exceptions see Andersson & Forsgren, 1994; Harzing & Noorderhaven, 2006a). This thesis grounded outflows and contributory role in RDT and showed that subsidiaries with broader roles and a higher level of development were mostly competence-creating subsidiaries. The relevance of these dimensions is well established already. The assertion here is that the two dimensions are crucial determinants of subsidiary roles and development.

Discussion with respect to motives of operation vis-à-vis roles and development is rare. Some studies, e.g. Verbeke et al. (2009), Wolf and Egelhoff (2012) and Nguyen (2014), discuss these dimensions, but the discussion is mainly brief, hypothetical or indirectly related to subsidiary development. Based on the empirical evidence here it is argued that the motives are key determinants of subsidiary roles and development. Motives not just vary across industry, management structures, within formal structures, but also correlate strongly with the key determinants of development. Studies interested in subsidiary roles and development should put a higher focus on motives of operations.

There is broader understanding that subsidiary resources and capabilities are key to subsidiary roles and development (see Birkinshaw et al., 1998; Cavanagh & Freeman, 2012; Penrose, 1959). There is also modest understanding as to how internal isolation affects subsidiary development (see Harzing & Noorderhaven, 2006b; Monteiro et al.,

2008). Also the relevance of the scope framework for tracking subsidiary development over time is established (see Delany, 2000; Dörrenbächer & Gammelgaard, 2006). The results here strongly support these studies. It is, however, indicated here that the subsidiary scope of activity today is broader than the one originally conceptualised. The subsidiaries engage to varying extents in exports, internal sales, and are not limited to the few one to two subsidiary types with which the original scope framework associates exports. The assertion here with respect to the scope of activity is that this broad dimension is a key determinant of subsidiary roles and development, but it needs updating and a reconceptualisation.

A different perspective to autonomy is taken and it shows that subsidiaries having high autonomy do not perceive the same benefits about autonomy vis-à-vis their roles and development as the less autonomous subsidiaries do. While there is recognition that autonomy alone is not a sufficient determinant of subsidiary development (Filippov & Duysters, 2014), the contingency is that its need or usefulness varies from under-developed to developed subsidiaries. There is much written about the benefits of autonomy (see Gammelgaard et al., 2012; McDonald et al., 2008), but the contingencies are much less discussed.

CLASSIFICATION AND CONFIGURATION

What has been achieved thus far? Here this is elaborated on in the context of the research issues, objectives and questions.

An Alternate Subsidiary Typology

In Chapter 2, it was indicated that with an overarching framework a novel/alternate subsidiary classification will be achieved. Many of the ways in which the

classification and the framework are novel have been discussed earlier in this chapter. The discussion here is therefore concise. Earlier it has been argued that the subsidiary classifications do not link with the previous ones, and/or suggest how their dimensions are superior to the other dimensions (Hoffman, 1994; Morschett et al., 2015; Schmid, 2004). While there is validity in the criticism, there is also a reason as to the lack of such a link. Every subsidiary classification study had a different research question and different set of variables. Some looked at flows of knowledge, others at a global strategy. Clearly the two variables are important, but also different. In essence, every typology is different. What is common is the approach that is the frameworks focus much on the MNE strategy and the role assigned, but not on the role assumed, and the subsidiary's own strategy. Besides this there are a range of contextual factors rather easily ignored (Enright & Subramanian, 2007; Yip, 1995; Yip & Hult, 2012). What this thesis offers is a subsidiary typology, which is different from the previous ones. How it is different is briefly discussed as follows:

1. A classification reflects a range of possibilities (Morschett et al., 2015). This classification is based on an array of dimensions, indicating a broader range of possibilities:
 - a. Besides identifying possibilities, each subsidiary type is linked to a unique developmental path, which is based on variables such as the way each subsidiary is managed, their strategy, industry, motives, the MNE openness etc.
2. The subsidiary classification is more meaningful in that the capacity is measured both in a relative and in an absolute sense. With this approach, the classification is more reflective of reality in that areas where the

subsidiary is lacking are identified. For example, the entrepreneurial subsidiary type, although relatively highest, also needed to be higher in an absolute sense (in their contributory role) to be labelled as a fully developed subsidiary. A relative measure alone can be misleading.

3. The classification is based on subsidiary roles and development concepts grounded in rich macro theories. An overarching/holistic approach is applied. There is a broad issue at the core (i.e., subsidiary evolution). With this, the framework is more meaningful and less arbitrary than the earlier frameworks.

Alternate Drivers of Subsidiary Development

A key assumption of the thesis is that the subsidiary roles and development vary across the different MNE management structures. This statement has been comprehensively assessed here and it has found strong support. A number of other key dimensions are also identified, such as the country manager, the motives of operation, and the industry. Studies interested in subsidiary roles and development are biased towards the manufacturing industry, and have rarely looked at the subsidiary motives (Enright & Subramanian, 2007) and the subsidiary manager (Schmid et al., 2014). The results here show that these ignored dimensions are crucial for subsidiary roles and development.

With respect to the industry bias (see Enright & Subramanian, 2007; Manolopoulos, 2008), this thesis partly supports the prior studies as the results have shown that the manufacturing subsidiaries have high opportunities to develop. It is, however, also indicated that the services subsidiaries are competitive too, and justify a less indifferent approach in the subsidiary management literature. Every MNE has some

manufacturing subsidiaries and some services (i.e., retail and wholesale) subsidiaries. Manufacturing units are few, but sales are many. Based on the results the services subsidiaries face higher competition and higher pressures of performance than the manufacturing subsidiaries. Services subsidiaries have their own developmental path and MNEs view a high growth potential in their services subsidiaries. The subsidiary management literature has offered much on manufacturing, but little on services. By putting an equal focus on manufacturing and the services industry a range of contingencies as to how the subsidiaries vary across industry are identified. This has offered new insights, and shown that the services subsidiaries also merit research.

Which Dimensions are Crucial?

The purpose of a developmental context was linking alternate subsidiary types with their unique developmental contexts. Analysis revealed some patterns. For example, it is found that the constrained subsidiaries have the weakest country management with the highest level of expats; constrained autonomous the highest local competition; and the entrepreneurial subsidiaries the highest level of resources, capabilities, and the MNE resource support for initiative implementation. These factors indicate the subsidiary unique environment and settings in which they operate and develop. Some are constrained by a particular setting, others get benefits/are affected in another way. For example, constrained subsidiaries are found to be affected by internal isolation in terms of performance and capability, but the constrained autonomous are affected only in terms of capability.

Concepts used in the subsidiary classification and configuration have now been discussed in detail. Implications for theory have also been made in the previous chapter. Some implications follow this section. With that in this thesis the discussion on subsidiary

classification and configuration is concluded and there is nothing else that is deemed to be explored.

IMPLICATIONS FOR THEORY

Three implications for theory can be made here: one each for the RBV, the RDT, and the network model of the MNE.

1. **RBV:** Resource development in the MNE is linked to the MNE management structures, in that where the subsidiary is managed formally the resource development is more likely under a matrix than under other formal structures (e.g. RHQ, CHQ, or mandates). Prior research has not studied as to how resource development links to various organisational structures, as the structures have been studied mainly separately (Wolf & Egelhoff, 2010).
2. **RDT:** Resource dependence in the MNE is linked to the MNE management structures, so that where the subsidiary is managed (formally) under a matrix than under other formal structures (e.g. RHQ, CHQ, or mandates) the development of resources (which can be transferred to the MNE), and the overall knowledge transfers are higher. Prior research has only hypothesized as to which structure facilitates knowledge flows better in an MNE (see Bartlett & Ghoshal, 1989, 1990; Donaldson, 2009; Galbraith, 2000; Wolf & Egelhoff, 2012). There is, however, no consensus. Also research does not do comparisons of the various formal structures, e.g. CHQ, RHQ, DHQ, and mandates.

3. **Network Model:** When studied across roles and development simultaneously, subsidiaries can be classified in terms of their entrepreneurial activities in the various markets (i.e., local, global and internal) they interface with, and their embeddedness in the local network. Prior research mainly looks at these aspects from an MNE/subsidiary development perspective (see Andersson et al., 2014; Andersson et al., 2007; Birkinshaw et al., 2005) rather than ways in which subsidiaries can be classified. Also subsidiary roles studies do not look at a range of networks a subsidiary interfaces with, let alone the subsidiary initiatives. What the network model suggests is that subsidiaries in their various networks can assume various roles (see Andersson & Forsgren, 1996). What the results imply to the network model is that such variations of roles in various networks indicate various possibilities for subsidiaries and, are influenced by various factors such as the subsidiary initiatives, the way subsidiaries are managed, and the industry sector to which the subsidiaries belong.

SUMMARY

This chapter examined the two research questions of the thesis. It classified the subsidiaries based on their roles and development over a multidimensional multifaceted framework. The framework was tested. A key dimension of the framework that is the MNE management structures, was analysed comprehensively. The results supported the assumption that management structures affect subsidiary roles and development in that heterarchically managed subsidiaries (as a whole) have the highest opportunity to develop, and within hierarchical models, the matrix structure is the most favourable for

subsidiary development. The findings are linked to literature and a number of gaps are filled.

The overarching framework shows three subsidiary types. None of the subsidiary types are fully developed. Two are moderately developed (entrepreneurial and constrained autonomous) and one is under-developed (constrained). The entrepreneurial subsidiaries show the highest opportunity to develop. Each subsidiary type (based on the theory developed in Chapter 4) is linked to a developmental path. Subsidiary types are then configured with their unique developmental contexts. A range of crucial dimensions for subsidiary roles and development, including new dimensions, as well as those rather well used in the subsidiary strategy and management literature, are identified.

CHAPTER 6 - CONCLUSIONS

This thesis produced a developmental classification of subsidiaries, and configured the classification with their unique contexts. This whole exercise was driven by three research issues. These are described as follows:

1. Research identifies a range of issues in the (existing) subsidiary classifications, e.g. classifications are narrow, dichotomous, limited in scope (as based only on MNE strategy/process), and are reflective only of the role assigned by the parent MNE. Whereas in reality, the roles are also assumed by the subsidiary. Roles may change over time, and there are multiple factors relevant to the subsidiary roles (Enright & Subramanian, 2007; Morschett et al., 2015; Yip, 1995; Yip & Hult, 2012). Despite recognition of such issues, there aren't any advances yet in terms of producing a fine-grained classification of subsidiaries, which is based on a range of elements relevant to the subsidiaries. There is thus a need for an overarching classification framework, which is based on a range of possibilities.
2. Subsidiary research lacks in an important area (i.e., the MNE management structures) of international management. This issue has two aspects:
 - a. Recently a number of studies have recognised that the MNE management structures are an ignored research area, and the literature on the subject needs to be advanced (see Alfoldi et al., 2012; Amann et al., 2014; Wolf & Egelhoff, 2010, 2012). Some earlier studies have discussions on the matrix and the lateral structures. The discussions are mainly about how effective the

structures in terms of handling MNE coordination and heterogeneity are (Bartlett & Ghoshal, 1989, 1990; Donaldson, 2009; Hedlund, 1986, 1993, 1994a, 1994b; Wolf & Egelhoff, 2012). The discussions have been useful, but are made only in isolation. There isn't an evidence-based comparative study or a contingency model that has been developed (Wolf & Egelhoff, 2010). To advance the subsidiary research a full range of MNE management structures needs to be compared.

- b. Few studies have identified the roles of the various intermediaries between the focal subsidiary and the CHQ. The roles vary, for example, a matrix structure is used where MNEs adopt a product diversification strategy (Chandler, 1962; Stopford & Wells, 1972). RHQs are established, e.g. for MNE-subsidary coordination and strategy formulation (Amann et al., 2014; Enright, 2005a). What are the influences of these structures on the subsidiaries, and how does the subsidiary evolution vary across these structures? This question remains to be examined. This is because the existing subsidiary literature focuses mainly on the CHQ. Little focus is put on the intermediaries (e.g. RHQs) who in some cases act the same as the CHQ, but vary in power and roles from the CHQ. MNE management structures are a key contingency to the subsidiary roles (Enright & Subramanian, 2007). It is logical to assume that various structures variously influence subsidiary evolution. To advance the subsidiary research, this needs to be examined.

3. There is recognition that subsidiaries operate in various contexts (Enright & Subramanian, 2007; Meyer et al., 2011; Yip, 1995; Yip & Hult, 2012). However, what the influence of a context on a subsidiary is or how it configures with a subsidiary is poorly understood. There is little understanding as to the influences of various factors, e.g. industries, internationalisation motives, structures, nationality, or the subsidiary strategy over subsidiary roles (see Benito et al., 2003; Enright & Subramanian, 2007; Schmid et al., 2014). It is well recognised that subsidiary development can be influenced by a range of factors in the various environments (internal and external) a subsidiary interfaces with (Birkinshaw, 2014; Birkinshaw & Pedersen, 2010). Little work is, however, undertaken which involves configuration of the various levels of development with various contextual characteristics.

Based on the research issues (above) the thesis developed two broad research questions. Research question 1 looked at issues 1 and 2 and the research question 2 at issue 3. The research questions developed are as follows:

1. How can different foreign subsidiaries be classified on a multidimensional framework, particularly in terms of the way they are managed?
2. How does subsidiaries' evolution vary depending on the contexts they operate in?

Grounded in the network conceptualisation of the MNE, a resource-based view of the firm, and the resource dependence theory, an overarching subsidiary classification

framework is developed. The overarching framework draws on some key dimensions of the subsidiary literature, but links to all the subsidiary strategy and management streams. The framework addresses the research question 1. Through an intensive literature review a range of characteristics associated with subsidiary evolution are identified. The characteristics are grouped into five broad dimensions, representing a subsidiary developmental context. The term developmental context (taken from the psychology literature) is analogous to other contexts used in the subsidiary literature (e.g. structural and local contexts). It is, however, broader (in dimensions), multifaceted, and has implications for both subsidiary roles and development. Research question 2 is addressed by studying how the subsidiary classification (from the overarching framework) links to the developmental context.

The thesis's empirical context is the foreign-owned subsidiaries operating in New Zealand. New Zealand is an attractive context for a subsidiary evolution study. From an empirical perspective, New Zealand has a history of multinationals dating back from as early as the 19th century. The multinationals have played a key role in the country's infrastructure and economic development (Akoorie, 1996a; Scott-Kennel, 2001; Scott-Kennel & Akoorie, 2013). The country continues to attract foreign investment (Raziq & Perry, 2012; Statistics-NZ, 2014).

Theoretically, the New Zealand context has much relevance to the thesis's research objectives. This is discussed as follows:

1. It is recognised that the subsidiary literature is biased towards the manufacturing industry (Enright & Subramanian, 2007; Manolopoulos, 2008). The understanding of subsidiary roles in an equally important industry, such as the services, is poor, which this thesis aims to enhance

by drawing on a diverse industry sample. New Zealand has a large services sector (as well as manufacturing) and much of the foreign investments coming in are for the services sector. As discussed earlier, industry is a key contingency to subsidiary roles. The New Zealand evidence offers a great potential in developing understanding of how the subsidiary roles vary in context of such contingencies.

2. The internalisation theory of the MNE suggests that FDI inflows are largely determined by the size of the host market, so that large markets gain higher FDIs than the small markets (Buckley & Casson, 1976, 1998, 2009). New Zealand as a small and remote economy gains considerable levels of foreign investments. This suggests that the factors which determine FDI inflows are several. The evolution of subsidiary roles research greatly emphasizes the investment support from the parent MNE to the subsidiary (Birkinshaw, 1999). While there are some FDI studies (involving subsidiaries) undertaken using the New Zealand evidence (see Akoorie, 1996a; Scott-Kennel, 2001), the subsidiary roles and development research (in New Zealand) are almost non-existent. The subsidiary roles and development literature draws mainly from the evidence of peripheral economies, and the possibility of alternate subsidiary types as may be found in other economies (such as New Zealand) is often ignored (Enright & Subramanian, 2007). There is still much to be explored. The New Zealand evidence offers great potential in advancing the subsidiary literature and the international business and strategy theories.

3. There is evidence that geographical distance leads to disaggregation of the HQ activity (see Baaij et al., 2015; Baaij & Slangen, 2013). Much of the foreign investments coming to New Zealand are from the USA and the EU. Due to the country's geographical location, it is logical to assume that much of the subsidiary management in New Zealand will be via the intermediaries or the lateral structures rather than the CHQ. This is critical to this thesis, as a diverse rather than a predominant CHQ managed subsidiary sample is required here. New Zealand evidence here helps in addressing the thesis's (core) research issue (i.e., MNE management structures).
4. According to the actor network theory, power in a network is derived from a firm's position, which stems from their identities and experiences (Henderson et al., 2002; Law, 1999; Parker, 2014). New Zealand can be compared with its neighbour Australia in many ways (e.g. economy, systems, procedures, infrastructure), but theoretically, Australia has an advantage as it is larger and less remote than New Zealand. Due to such factors, MNEs from other countries are likely to establish their management offices in Australia than New Zealand. Australia is a major investor in New Zealand, and therefore much of the subsidiary management will be likely located in Australia. All these factors put MNEs' affiliates in Australia (or the corporations headquartered in Australia) in more powerful positions compared to the subsidiaries serving a rather small New Zealand market. A predominant management configuration outside New Zealand can have implications for New Zealand's subsidiary development and its centrality in the MNE.

Obviously, the opportunity for management mandates for New Zealand subsidiaries can be expected to be low. It is interesting to examine how in such arrangements, low power subsidiaries develop and gain mandates and contributory roles.

Questionnaires were sent to a near complete population of foreign-owned subsidiaries operating in New Zealand. The survey received a large response rate (i.e., 429 responses). A large sample is critical for studies that are: interested in typologies (Patel et al., 2003); and, based on multidimensional frameworks (Enright & Subramanian, 2007). The thesis adopted a quantitative inductive approach. When an inductive approach is adopted to conduct a quantitative research, an exploratory data analysis is appropriate (Dudovskiy, 2015). Overall, based on literature, prior studies, and the thesis's objectives, the methodology adopted is a good fit. Results are analysed using correlations, cluster, and variance analyses. Discussions are made on the results. Meaningful insights are revealed.

This chapter summarises the key contributions of the thesis. It first explains how the research questions are examined and how the results fill research gaps. Following this, it outlines contributions made to the subsidiary strategy and management literature. This is followed by a section outlining implications for the overarching theories (i.e., resource-based view, resource dependence theory, and the network model of the MNE). The chapter then moves towards explaining what the findings imply for the management practice and the policy-makers. Limitations are discussed, and paths for future research are identified. The chapter ends with a summary section.

RESEARCH CONTRIBUTIONS

This section divides the research contributions into three sections: (i) research questions; (ii) subsidiary strategy and management; and, (iii) implications for theory.

Research Questions

The first research objective was to explore how subsidiaries that are managed in a variety of ways are classified using a multidimensional framework. A framework was developed, which takes a contingency approach in that the subsidiary roles and development differ across their MNE management structures, contributory roles, initiatives, autonomy, geographical scope, and external embeddedness. The framework grounded the concepts in the RBV, RDT and the network theory. The framework drew on all the streams of the subsidiary literature and linked to the prior classification frameworks. It identified critical dimensions relevant to a subsidiary classification.

Research identifies a range of issues with the previous frameworks, such as they are disconnected from each other (Hoffman, 1994), lack a theoretical basis (Schmid, 2004), and do not discuss their dimensions' importance (Morschett et al., 2015). The frameworks are two-dimensional and based on either the MNE strategy or the MNE process (Enright & Subramanian, 2007). The overarching framework fills these gaps. It is better grounded in macro theories in that most of the dimensions are based on all or more than one theory (selected). Its links with previous frameworks are established so that some critical dimensions (e.g. autonomy, but with a multiple face) are included in the framework. It argues (and finds support for) that the dimensions, such as MNE management structures and initiatives, are most crucial for subsidiary development and the contributory role for subsidiary power. It is based on both the MNE and the subsidiary strategy, and the development process.

The framework delivers an alternate three-part subsidiary classification: entrepreneurial, constrained autonomous, and constrained. These labels are based on the key dimensions across which the subsidiaries differ, both in a relative and in an absolute sense. In an absolute sense (based on the classification criteria devised in Chapter 2), the former (two) are moderately developed subsidiaries and the latter is an under-developed subsidiary. In a relative sense, however, entrepreneurial subsidiaries are the most developed, and constrained the least developed subsidiaries. These subsidiaries show various characteristics. However, a subsidiary with a single capacity on all dimensions, e.g. all-low or all-high, is not found. In fact, every subsidiary type is found to have more than one capacity level across its dimensions. This shows that when a classification is based on multiple dimensions then simplistic patterns (e.g. all-high, low, moderate etc.) do not emerge. A subsidiary overall capacity is multifaceted in that a subsidiary, for example, can be high in operational autonomy, but moderate in strategic autonomy; and low in external embeddedness, but high in geographical scope. This thesis posits that it is less possible, let alone useful, to identify subsidiaries with the desired level of capacities. A classification is better if it is naturally occurring rather than customized to fit an a priori framework. Subsidiary types were therefore not predefined, as maintaining the clusters' natural formation was intended rather than basing the classification on a predefined clusters' solution. In this way, this thesis produces a classification that is based on both the theory (as the framework is grounded in theories) and the empirical evidence (as the data decides the subsidiary types). It is different to the previous frameworks, which were based either on theory (see Gupta & Govindarajan, 1991) or the empirics (see Bartlett & Ghoshal, 1986).

The classification is unique in several other ways. For example, earlier classifications do not show the entrepreneurial orientation of subsidiaries. Subsidiary

research takes initiatives as the most crucial determinant of subsidiary development (Birkinshaw, 1999, 2014; Birkinshaw & Hood, 1997, 1998; Rugman, Verbeke, & Nguyen, 2011; Schmid et al., 2014; Strutzenberger & Ambos, 2014; Verbeke et al., 2007). The results show that the entrepreneurial subsidiary is the highest in global and internal initiatives. Earlier studies also do not show which management structure is most positively linked to subsidiary development. The results show that the entrepreneurial subsidiary is predominantly managed heterarchically or under a matrix structure, and the constrained subsidiary under (non-matrix) hierarchical structures. Some contextual contingencies, which have been largely ignored (see Enright & Subramanian, 2007) are therefore also addressed by this classification.

With the exception of the matrix structure, the hierarchical structures, in particular the CHQ, link negatively to subsidiary development. This contradicts some studies, e.g. Wolf and Egelhoff (2010), who assert that subsidiary development is less facilitated in lateral than formal structures. There is some confidence in the results' validity as the results are based on original empirical evidence on subsidiaries, which are managed variously. Another new finding is that the services subsidiaries are predominantly managed hierarchically (i.e., CHQ, RHQ, and mandates) and are locally responsive. Overall, the subsidiaries embed both in the internal and the external network, but the external embeddedness is either too low or the subsidiaries engage only in non-collaborative arm's length relationships rather than embed in the local network. Also the results suggest that internal embeddedness is more critical to subsidiary development than the external embeddedness. Previous studies talk about internal, external and dual embeddedness in the context of the strategy (see Achcaoucaou et al., 2014; Andersson & Forsgren, 1996; Nell et al., 2011b), but rarely establish where subsidiaries embed more or which one is more critical for subsidiary development.

A developmental path is identified for the three subsidiaries. The path towards development is fairly unique for the three subsidiary types and is based on their characteristics and the strategies identified. Earlier studies, e.g. Pedersen (2006), argue that subsidiaries can identify their own developmental paths. The author does not consider the possibilities and the contingencies such as strategy, industry, and the structures. The results suggest that subsidiaries are less independent in taking their own developmental paths and not every developmental path suits a subsidiary. For example, entrepreneurial subsidiaries are better off if they take a higher level of local and global initiative because they are exporting subsidiaries. Constrained autonomous, a higher level of internal initiative as they are more focused on local sales. The constrained subsidiaries need to develop autonomy first, and for that they need to increase their external embeddedness. Earlier frameworks do not explicitly identify a developmental path for subsidiaries. By identifying unique developmental paths, this thesis shows how the three subsidiary types can evolve.

With regard to research objective 2, the thesis developed a broad developmental context. The developmental context drew on a range of contextual contingencies in the subsidiary literature and synthesized them (loosely in a model) across five broad dimensions. The three subsidiary types from the overarching framework were linked to the developmental context and how the context varied across the three subsidiary types was explored. This showed how some strategies and developmental characteristics vary across various levels of development. This is not indicated in the previous literature. For example, it is found that constrained subsidiaries have the weakest country management with the highest level of expatriate management. The country manager is rarely studied in the subsidiary literature (Schmid et al., 2014), and it is even argued by some that the prevalence of country managers is perhaps diminishing in the developed world (see

Birkinshaw & Pedersen, 2010). The results show that this is not the case in New Zealand. In fact, the country manager role is broader than the one hypothesized by other studies, e.g. Bartlett and Ghoshal (2003). Expatriate management is found to be negatively linked to subsidiary development. The role of expatriates is poorly understood (Harzing et al., 2015). Some suggest that expatriation is effective in intra-MNE knowledge transfers (see Gong, 2003), while others question the expats' abilities in taking short-term assignments, and their loyalties in the MNE (see Black & Gregersen, 1992, 1999). The results indicate that expatriate management is linked to subsidiary resource depletion, a decreased level of initiative, and hence it is not appropriate for subsidiaries aspiring to role development.

The results show that the internationalisation motive is a key determinant of subsidiary development. Nguyen (2014) hypothesizes the link of market-seeking with the manufacturing industry, but finds no support for this. The results show that a market-seeking motive is linked to the services industry, hierarchical structures and under-development. Whereas the strategic asset-seeking and resource-seeking motives are linked to the manufacturing and primary industries, heterarchical structures and a higher level of development. Constrained autonomous subsidiaries are highest in taking market-seeking motives, whereas entrepreneurial subsidiaries are in resource and strategic asset seeking motives. Constrained subsidiaries are predominant in market-seeking motives. Wolf and Egelhoff (2012) propose that a matrix structure is appropriate where there is simultaneous need for exploration and exploitation. The results offer the first of support to this proposition. Overall, the findings show how motives link to subsidiary roles and development. A fine detail on a range of aspects is provided. The subsidiary classification is linked to another ignored contextual contingency (i.e., motives).

Results show that subsidiaries vary within exploitative motives across their structures. For example, heterarchically managed subsidiaries are higher in resource-

seeking, whereas formally managed subsidiaries are higher in market-seeking motives. This contradicts Wolf and Egelhoff (2012), who propose that exploration is more appropriate for network organisations. Results show that there are contingencies within the exploitative motive.

The results show that internal isolation variously influences the subsidiary types. For example, it negatively influences the performance and capabilities of the constrained subsidiaries, but for the constrained autonomous subsidiaries, it influences only the capabilities. Prior studies, e.g. Monteiro et al. (2008), only indicate the antecedents of isolation, such as subsidiary capability, and do not show if a reverse relationship between isolation and capability exists. The results suggest that HQ ethnocentrism induces subsidiary isolation from the internal network. Earlier studies, e.g. Birkinshaw and Riddlerstrale (1999), study only the HQ ethnocentrism in relationship to initiatives.

The configuration exercise also revealed some dimensions crucial to subsidiary development, and some less crucial. For example, variations among the subsidiary types in terms of their credibility are not found. It is, however, found that some dimensions are highly linked to subsidiary development (e.g. exports, resources and capabilities, parent investment support), and some dimensions linked to under-development (e.g. expatriation, internal isolation, and weak country management). The context is largely ignored in subsidiary literature (Enright & Subramanian, 2007; Meyer et al., 2011; Yip, 1995; Yip & Hult, 2012). By establishing linkages of various subsidiaries with various contexts some research gaps are filled.

Subsidiary Strategy and Management

The thesis has made a number of contributions to the subsidiary strategy and management literature. Among these the most critical and relevant to the thesis's

objectives are the contributions to the MNE management structures and the subsidiary country manager. Contributions to these are elaborated on in the following sections. The thesis also makes a range of micro contributions to the subsidiary literature. These are put concisely in a table (see Table 6.1).

MNE Management Structures. The dimension MNE management structures draws on both the hierarchical and the heterarchical models, linking both the MNE strategy and structure stream (which concerns hierarchy) and the MNE process stream (which concerns heterarchy) of the subsidiary literature. Earlier there have been calls for the development of contingency models that could allow studying characteristics associated with hierarchy and heterarchy, as previously the hierarchical/heterarchical models have been studied separately (see Wolf & Egelhoff, 2010). Here by offering a contingency model it is examined how subsidiaries are managed, and how their characteristics vary across various management structures. The key contribution of the thesis with respect to the MNE management structures is that *the heterarchically-managed subsidiaries have broader roles and higher development opportunities than the hierarchically managed subsidiaries; among formal structures, the subsidiaries managed under a matrix have broader roles and higher development opportunities than the other formally managed subsidiaries*. Earlier studies mainly look at the coordination of activity in the MNE (see Bartlett & Ghoshal, 1989, 1990; Hedlund, 1986, 1993, 1994b), with a few also making propositions about subsidiary development (see Wolf & Egelhoff, 2010), but do not show (empirically) which structure favours subsidiary development. The MNE management structure is a key contextual contingency that has been ignored in the subsidiary literature (Amann et al., 2014; Enright & Subramanian, 2007). This finding justifies that MNE management structure is a crucial dimension for classifying

subsidiaries and configuring them with the contexts they operate in. The broad finding is reported by the findings outlined in paragraphs below.

The results show that subsidiaries managed laterally predominantly follow a transnational strategy in that they are active in internal knowledge transfers (mainly outflows), exports, as well as selling to the local market. These are key characteristics of a transnational strategy (see Bartlett & Ghoshal, 1989; Leong & Tan, 1993; Meyer & Yu-Shan, 2014). Within hierarchical structures, subsidiaries that are not managed under a matrix predominantly take a multi-domestic strategy. Prior research discusses which structure suits a transnational strategy, but there is no consensus. For example, Bartlett and Ghoshal (1989), and Bartlett and Ghoshal (1990), posit that a transnational strategy is best implemented in a lateral structure, rather than a matrix which due to multiple reporting offices and related issues makes a transnational strategy implementation difficult. In contrast, Donaldson (2009) and Wolf and Egelhoff (2012) argue that the matrix structure is more appropriate than the lateral for implementing a transnational strategy. This thesis does not establish which one is better. It indicates under which structure the transnational strategy implementation is predominant. This partly explains the MNE perspective as to which structure is better or more useful for implementing a particular strategy. More importantly, it shows which structure best suits the subsidiary development.

The determinants of subsidiary development, which vary across hierarchy and heterarchy, are 'headquarters' and the 'subsidiary choice' rather than the 'local environment'. Taking a local environment determinism perspective, it shows that subsidiaries do not vary in their roles and development, irrespective of whether they are managed formally or informally. Prior studies, e.g. Bartlett and Ghoshal (1989), Donaldson (2009), and Wolf and Egelhoff (2012), have talked about transnational

strategy with respect to structure (lateral or matrix). The results show that no structure (CHQ, RHQ, mandates, DHQ, and lateral) is better where the subsidiaries follow a locally responsive strategy. Overall this thesis finds that a broader subsidiary focus in the local market than the internal and global markets is associated to low subsidiary development levels.

Subsidiaries managed laterally get MNE investment support (and approvals for activity not aligned with the corporation's objectives) rather more easily than the hierarchically managed subsidiaries. Within hierarchical models, subsidiaries managed directly via the CHQ get the lowest resource support for initiative implementation. These are subsidiary development issues, which to the best of knowledge have not been studied across hierarchy and heterarchy. There is an implication with respect to the latter (i.e., CHQ). It is argued (or assumed implicitly) by some that subsidiaries managed under intermediaries benefit less than those that interface with the CHQ directly (see Delany, 2000; Mahnke et al., 2012; Nell et al., 2011a). The findings here show that from a subsidiary development perspective, interfacing the CHQ directly rather than being managed under an intermediary is not necessarily beneficial. In fact, the reverse may be true.

Laterally managed subsidiaries are higher in knowledge outflows than the hierarchically managed subsidiaries. Some studies argue that knowledge transfer and innovation are favoured under a matrix structure (see Galbraith, 2000; Joyce et al., 1997; Wolf & Egelhoff, 2012). Proponents of heterarchy, in contrast, say the same for the lateral structures (see Bartlett & Ghoshal, 1989; Hedlund, 1986, 1993, 1994a). But again, since much of this discussion is done in isolation from the other structures (Wolf & Egelhoff, 2010), there is not an established comparison yet. Again results do not show which one

is better, but it shows where the outflows are predominant, and which structure best suits the subsidiary development.

Laterally managed subsidiaries are higher in contributory roles than the hierarchically managed subsidiaries. A contributory role is different to a simple resource (knowledge) transfer in that it reflects the internal transfer of a resource that is most specialised and superior in the MNE (Birkinshaw et al., 1998). Within hierarchy, subsidiaries managed under a matrix structure are highest in the contributory role and the local product outflows. Earlier discussions (as above) on resources/capabilities are mainly in terms of which structure (lateral or matrix) better facilitates the resource (internal) transfers. The results here show that (as a whole) subsidiaries managed under lateral structures are mostly involved in specialised resource transfer. From amongst the hierarchical models (CHQ, RHQ, mandates and matrix), the matrix structure is involved in the most in specialised resource transfers. From a subsidiary development perspective two structures are therefore critical: lateral, and matrix (among the formal structures).

Laterally managed subsidiaries are more entrepreneurial in the local and the global markets than the hierarchically managed subsidiaries. Laterally managed subsidiaries are also higher in their resource levels than the hierarchically managed subsidiaries. A higher level of initiative, contributory role, and resources shows that subsidiaries managed laterally have higher opportunities to develop than the formally managed subsidiaries. Wolf and Egelhoff (2010) argue that hierarchically managed subsidiaries have lesser limitations in terms of development than those managed laterally. But their study is mainly conceptual without empirical support. The results show that their conjecture does not hold. With a higher capacity across a range of elements from resource support, knowledge outflows, to those discussed here, it makes sense to assert that the

laterally managed subsidiaries are less limited in terms of development than the hierarchically managed subsidiaries.

Hierarchically managed subsidiaries are more affected by isolation in terms of capabilities than the laterally managed subsidiaries. Within hierarchical models, subsidiaries managed under the CHQ are affected the most in terms of resources. Wolf and Egelhoff (2012) propose that where the distance is large hierarchical structure is appropriate. MNEs keep those subsidiaries near that are value creating (see Andersson et al., 2007; Birkinshaw & Hood, 1998). This is probably what Wolf and Egelhoff do not consider. Results identify factors associated with moderating isolation effects. These are exports, autonomy and initiatives. On all these factors it shows that the laterally managed subsidiaries have higher capacities than the formally managed subsidiaries.

Heterarchically managed subsidiaries are predominantly resource-seeking and hierarchically managed market-seeking. Within hierarchical models, however, subsidiaries under a matrix are more explorative than the other subsidiaries. The former contradicts Wolf and Egelhoff (2012), and Baum et al. (2000), who posit that network organisations are limited in implementing existing practices, which are needed for exploitation. The results show the contingencies within exploitation, that the lateral structure is higher in resource-seeking, and the formal structure in market-seeking. The results support the other proposition of Wolf and Egelhoff (2012), that a matrix structure is suitable where there is a simultaneous need for exploration and exploitation. Nevertheless, this thesis still claims novelty here as this is the first evidence supporting this proposition.

Subsidiaries are managed laterally where they are old, large, and autonomous, and are encouraged to: take initiatives and export activity; and, transfer the competences to the MNE as a whole. Subsidiaries are managed under a matrix structure where the

subsidiary possesses competences and the MNE seeks to transfer the competences internally, but also control the subsidiary formally. These are key distinguishing characteristics of the subsidiaries managed laterally versus subsidiaries managed under a matrix. With this, significant additions to the characteristics identified in the literature about the two structures are made. For other established characteristics see Wolf and Egelhoff (2012).

Table 6.1: Micro Contributions

Findings	Novelty
Effects of internal isolation on subsidiary performance, resources and capabilities can be moderated with exporting, a high level of autonomy, initiatives and with a subsidiary manager with international experience.	There is a recognition that isolation negatively influences subsidiaries (see Ambos & Ambos, 2009; Harzing & Noorderhaven, 2006a; Monteiro et al., 2008). There is, however, limited guidance as to the factors through which negative influences from internal isolation can be moderated.
Local and global initiatives positively influence subsidiary contributory role.	Earlier studies find link of initiative with contributory role (see Birkinshaw et al., 1998; Cavanagh & Freeman, 2012), but which initiatives are influencers is not known (Cavanagh & Freeman, 2012). Results show that the global initiative has the highest influence on the contributory role; the influence is relatively lower with the local; the internal initiative is not linked to the contributory role.
Global integration is linked to both exploration (strategic-asset motives) and exploitation (resource-seeking motives), whereas responsiveness to exploitation (market-seeking motive) only.	There is a recognition that MNEs are diverse in terms of their internationalisation and accordingly they have to calibrate their motives and strategies (see Benito, 2015). The results identify which strategy is linked to which (particular) motive.
Subsidiaries belonging to services industry are as contributing to the MNE as the manufacturing subsidiaries. Services subsidiaries face less MNE ethnocentrism than the manufacturing subsidiaries and operate more in highly dynamic environments.	The industry is a contingent contextual factor largely ignored. Subsidiary roles and development studies show a bias towards the manufacturing industry and tell little about services' subsidiaries' role and development (Enright & Subramanian, 2007; Manolopoulos, 2008). The results show how services subsidiaries are equally important for the MNEs and do not justify a bias.

Table 6.1 continued: Micro Contributions

Findings	Novelty
<p>Subsidiaries strive for autonomy from the start. As they develop, their autonomy increases to the extent where subsidiaries realise that further autonomy alone is not sufficient for their development.</p>	<p>Subsidiary autonomy literature (see Gammelgaard et al., 2012; McDonald et al., 2008) least considers the subsidiary view of autonomy vis-à-vis development. Studies have established that autonomy is positively associated with the development and that HQs reduce subsidiary discretion as subsidiaries become important (Hedlund, 1981; Johnston & Menguc, 2007; Peng & Beamish, 2014). Little, however, is considered regarding whether subsidiaries strive for further autonomy or integration as they achieve a desired level of autonomy.</p>
<p>Link of autonomy with strategy is only partial, in that operational autonomy is linked to strategy (i.e., positively linked to responsiveness). Whereas strategic autonomy is more linked to competence creation.</p>	<p>There is recognition that high autonomy is associated with external embeddedness and isolation and integration to low autonomy (Andersson & Forsgren, 1996). Autonomy is multifaceted in that it varies from decisions of a strategic nature to decisions of an operational nature (Gammelgaard et al., 2012). A high level of strategic autonomy isolates the subsidiary from the internal network (Keupp et al., 2011). The results show that only the operational autonomy is associated with strategy. Strategic autonomy is not linked to strategy or isolation; it is granted to/earned by, competence creating subsidiaries, which can both integrated as well as autonomous. Studies need to focus on the multifaceted nature of autonomy and the dual embeddedness rather than the strategy alone.</p>
<p>Link of autonomy with internationalisation motives is multifaceted in that strategic autonomy is positively associated with exploration and exploitation (resource-seeking), whereas operational autonomy positively associated with exploration, but negatively to exploitation (market-seeking).</p>	<p>There is modest understanding as to the various links of motives with subsidiary roles and capabilities (see Verbeke et al., 2009). There is, however, limited knowledge as to how autonomy varies with various motives.</p>
<p>Development of subsidiaries inclined towards integration or exporting is determined predominantly by subsidiary choice or headquarters determinants of development. Whereas the development of subsidiaries inclined towards local focus or responsiveness is determined predominantly by local environmental factors.</p>	<p>Existing studies, e.g. Filippov and Duysters (2014) have tested the developmental determinants, but the contingencies as to what factors are associated with which development determinants are not yet explored.</p>

Table 6.1 continued: Micro Contributions

Findings	Novelty
Global initiative link to exploitation is multifaceted in that it is positively associated with exploration, but also exploitation such that where the motive is resource-seeking the link is positive and where market-seeking, the link is negative.	Previous research, e.g. Birkinshaw and Hood (1998) grounds (HQ determined) subsidiary development in the internationalization (see Johanson & Vahlne, 1977, 2009) and the product life cycle theory (see Vernon, 1966). The research shows that subsidiaries draw on HQ resources and operate with various motives. Research, however, does not show as to how subsidiary development links to various motives.
Scope framework needs to be reconceptualised such that the export orientation of subsidiaries is given an increased focus.	The scope framework (see White & Poynter, 1984) does not sufficiently consider the export activity in the regional/global markets. For example, it takes that a miniature replica subsidiary serves the local market only. Recent research, e.g. Meyer and Estrin (2014) emphasize greatly the exports and argue that export dimension should be explicitly taken as a strategy in the role frameworks. Results show that subsidiaries are exporting, but the extent of exports vary.
Expatriation is negatively linked to subsidiary development in terms of its negative links with subsidiary autonomy, initiatives, and resources and capabilities. Also, MNEs assign expats to small and less contributing subsidiaries operating with market-seeking motives. For subsidiaries to develop a stable country manager is critical.	Research on expatriates is under-developed and lacks consensus. Some studies, e.g. Gong (2003) and Kawai and Strange (2014) link expatriation with subsidiary development rather positively, some, e.g. Black and Gregersen (1992), and Black and Gregersen (1999) link expatriation negatively, others, e.g. Peng and Beamish (2014) link expatriation to small subsidiaries and low resources. Results show that MNEs assign expats to less important subsidiaries and that expatriation does not favour subsidiary development. With an expatriate manager subsidiary loses both their strategic and operational autonomy, initiatives are suppressed, and their resources/capabilities are depleted.
Subsidiaries belonging to Anglo-Saxon countries are larger, more entrepreneurial and bid more for internal resources and facilities, than the subsidiaries belonging to non-Anglo-Saxon countries.	Subsidiary research largely ignores the context in which subsidiaries operate. A key contextual contingency is the MNE nationality (Enright & Subramanian, 2007; Yip, 1995; Yip & Hult, 2012). Some studies have taken MNE nationality context in terms of strategy and structure (see Hedlund & Åman, 1983; Jong & Dut, 2010), but some other dimensions such as initiatives are largely ignored in this context.

Subsidiary Country Manager. The importance of subsidiary manager for subsidiary development has been recognised. Managerial mind-sets and cognitive abilities are key to how organisations develop capabilities, exploit internalisation and

internationalisation advantages, achieve global integration, and source global knowledge (Bartlett & Ghoshal, 1989; Becker-Ritterspach & Dörrenbächer, 2011; Dörrenbächer & Geppert, 2009; Luo, 2002; Monteiro, 2015; Murtha et al., 1998; Storey, 1994). However, the evidence as to the ways in which a subsidiary manager influences subsidiary development is limited (Dörrenbächer & Geppert, 2009; Schmid et al., 2014). The key finding here is that *the subsidiary manager and their managerial characteristics are key contextual contingencies to subsidiary development*. The thesis extends the subsidiary literature in terms of how these contingencies interact with subsidiary development. This is outlined as follows.

It is argued that a subsidiary country manager is an endangered species in the developed world, as there the need for a strong leader with political connections and local responsiveness does not matter much (see Birkinshaw, 1995; Birkinshaw & Pedersen, 2010). The claims link country management with contingencies such as strategy: (i) strong country management with the ability to reinforce a locally responsive strategy; and, (ii) weak or no country management with integration, and getting dominated by other MNE units/head office. The studies also link subsidiary management with a regional or matrix structure rather than the country management. The thesis shows some contradictions as follows:

1. First, despite a high evidence of hierarchical structures, results show that 91% of the subsidiaries in New Zealand have a country manager. This is a significant number to refute the claim that country management is diminishing in the developed world.
2. It is argued that the subsidiary manager's role is diminishing (see Birkinshaw, 1995). Bartlett and Ghoshal (2003) propose three roles of the country

manager: (i) senses/interprets threats and opportunities in local market; (ii) develops subsidiary resources and capabilities; and, (iii) contributes/participates actively in the global strategy. The results show that the subsidiary manager's role is not diminishing. In fact, it has been broadened in that besides the other roles, the subsidiary manager also senses and interprets threats and opportunities beyond the local market. Also compared to where the subsidiary has a country manager to where it does not, the subsidiaries with a country manager show higher opportunities to develop.

3. Country management is not linked to strategy (or industry). The results show that among those subsidiaries which do not have a country manager, around half follow a locally responsive strategy, with minimal or no integration with the MNE. With this, the claim that where there is no country management the subsidiary integrates with the MNE (see Birkinshaw, 1995) is not supported.

The results show evidence of subsidiaries which have an overseas-based country manager. Previous research, e.g. Keupp (2008), and Dörrenbächer and Geppert (2009), have studied country managers, but mainly where the subsidiary has a locally-based manager, rather than where the manager is based overseas. Results show that such subsidiaries (with an overseas-based manager) are the most constrained and under-developed. To the best of knowledge, this thesis offers the first evidence of dedicated subsidiary managers that are based overseas.

The results show that where the subsidiary manager has overseas (managerial) experience, the subsidiary competence-creation is higher, and internal isolation lower than where the manager has little or no overseas experience. Prior studies, e.g. Dörrenbächer and Geppert (2009), show that managerial characteristics are linked to

initiative taking in that they are influenced by the subsidiary manager's socio-political and biographical background. Here some other dimensions are identified, such as the manager's international experience, which as per the results are linked to subsidiary development.

Implications for Theory

The thesis is interested in subsidiary development, which is broadly seen as the development of resources (see Birkinshaw, 2014; Birkinshaw & Hood, 1997, 1998; Penrose, 1959). With resource development, subsidiaries gain various power positions and mandates in the MNE (Birkinshaw & Hood, 1998; Dörrenbächer & Gammelgaard, 2006; Mudambi, Pedersen, et al., 2014; Najafi-Tavani et al., 2015). The thesis grounded these developmental aspects in three overarching theories: RBV, RDT, and the network model. An overarching framework is conceptualised, which is based on six broad dimensions: initiatives, MNE management structures, autonomy, geographical scope, contributory role, and external embeddedness. These dimensions link directly or indirectly with subsidiary development.

As indicated above the central element of this thesis is subsidiary development, which is seen as the development of resources. Extensions to the overarching theories are therefore mainly about subsidiary resource development/depletion. The resource-based theories have been criticised in terms of their limited guidance as to how resources develop/deplete (see Black & Boal, 1994; Fiol, 2001; Hart, 1995; Hoopes et al., 2003). The extensions made here therefore also address some of the critiques on the theories. Before proceeding on to the theoretical implications, it is important to briefly recap how the concepts are grounded in the general theories.

RBV is about the subsidiary resource through which subsidiaries gain competitive advantage and achieve high-level performance (Barney, 1991; Wernerfelt, 1984). *RDT* is about power and influence developed through resource dependences among the organisations in that the firm possessing resources gains an influential position over the firm depending on the resources. Based on that if the MNE is dependent upon its subsidiary's resource, the focal subsidiary then gains power and centrality in the MNE network (Mudambi & Navarra, 2004; Mudambi, Pedersen, et al., 2014; Najafi-Tavani et al., 2015; Pfeffer & Salancik, 1978, 2003). The *network model* considers the MNE as an inter-organisational network rather than a monolithic organisation (Ghoshal & Bartlett, 1990; Ghoshal & Nohria, 1989; Nohria & Ghoshal, 1997). The network is taken as a resource in that various relationships developed in the network are seen as useful resources for the subsidiary (Andersson et al., 2002; Donaldson, 1995).

Initiative is grounded in the network model of the MNE and the RBV so that it is the various markets (local, global and internal) in the subsidiary network that the subsidiary interfaces with. As the subsidiary resource develops, the subsidiary takes initiatives in these markets (Birkinshaw, 2014; Birkinshaw et al., 1998). These initiatives result in further resource development (Birkinshaw, 2014) and enhancement of the subsidiary's *geographical scope* (Birkinshaw & Hood, 1998).

Subsidiaries are *embedded* in their networks (internal and external) in various ways. In these networks, subsidiaries collaborate with other firms, learn, develop competences and then transfer the competences to the MNE as a whole (Andersson et al., 2014; Andersson & Forsgren, 1996; Andersson et al., 2007; Birkinshaw et al., 2005; Gammelgaard et al., 2011). These competences can be transferred across the MNE, thereby reflecting various resource levels, of which some might be quite specialised. These are referred to as the subsidiary *contributory role* (Birkinshaw et al., 1998). With

such specialised resource transfers, subsidiaries develop dependences in the MNE and assume various power positions (Mudambi, Pedersen, et al., 2014). With such resource dependences subsidiaries gain various levels of *autonomy* and legitimacy in the MNE (Drees & Heugens, 2013; Johnston & Menguc, 2007; Najafi-Tavani et al., 2015).

MNE management structures are an MNE resource (Barney, 1991; Tomer, 1987). At the firm level, this resource is used to effectively coordinate and integrate the MNE activity (Wolf & Egelhoff, 2012). At the subsidiary level this resource helps with the transfer of innovations within the MNE (Dellestrand & Kappen, 2011), leading to (other) subsidiaries' resource development, and the focal subsidiary's influence in the MNE.

Having recapped on the theoretical context, the extensions made to the theories now follow:

Resource-based View. The key contribution to the resource-based view that this thesis makes is that it identifies ways in which subsidiaries can develop resources. RBV has a limited focus on resource development (Fiol, 2001; Hoopes et al., 2003). This is important for the thesis as the overarching subsidiary classification framework assumes that subsidiary roles change overtime with the changes in their level of resources. Also it is implied in the developmental context that each context entails various development opportunities for subsidiaries. The following paragraphs identify the characteristics associated to subsidiary resource development or depletion.

The results show that the subsidiary resource develops if the subsidiary engages in exports and serves international markets. Earlier studies link the development of resources and capabilities with the subsidiary product and value-added scope (see Dörrenbächer & Gammelgaard, 2006). Recent subsidiary research, such as Meyer and Estrin (2014), identifies exports as an MNE global strategy. The results show that market

scope is linked to the development of resources in that subsidiaries taking export strategies develop resources and those with narrow market scope have low resource development opportunities.

There is recognition that distance matters in subsidiary research because large distance negatively influences subsidiary roles and development (Ambos & Håkanson, 2014a; Ambos & Ambos, 2009; Harzing & Noorderhaven, 2006a; Monteiro et al., 2008). The results show that subsidiary resource and capability depletion due to a large distance is less likely where the subsidiary is high in exports, autonomy, initiatives, international experience (of the subsidiary manager), and where the subsidiary is managed laterally than formally. Research so far has not studied how the negative influences of internal isolation can be moderated.

Results show that where the subsidiary manager is an expatriate the subsidiary resource is likely to get depleted. Prior research, e.g. Peng and Beamish (2014), links expatriation to subsidiary size and argues that small subsidiaries having few (human) resources are put under expatriates. What the results show here is that expatriation affects resource 'qualitatively', irrespective of the subsidiary size.

The results show that resource development in the MNE is linked to the MNE management structures. The resource development is more likely to occur: (i) where the subsidiary is managed laterally than formally; or, (ii) within the formal structures, where the subsidiary is managed under a matrix rather than the other formal structures, e.g. RHQ, CHQ or mandated units. Prior research has not studied how resource development links to various organisational structures. An exception is Wolf and Egelhoff (2010) who draw on the subsidiary development literature to argue that subsidiary development issues can be better handled in a formal rather than a lateral structure. However, much of what the authors assume is less supported by this thesis's empirical findings.

Resource Dependence Theory. The key contribution that this thesis makes to the resource dependence theory is that it identifies ways in which subsidiaries can potentially form internal resource dependences in the MNE. The application of RDT to the subsidiary literature has been limited. Few studies using the RDT lens have linked subsidiary resource size with subsidiary autonomy (see Ambos et al., 2010; Hedlund, 1981; Peng & Beamish, 2014). Only recently some studies e.g. Mudambi and Pedersen (2007) and Mudambi, Pedersen, et al. (2014) using the RDT lens look at the subsidiary resource value and the internal resource transfers. This thesis contributes in this area and identifies ways in which subsidiaries can potentially become competence-creating. This is important for the thesis as the overarching classification framework assumes that a key subsidiary distinction is the level of its resources that are valuable for the MNE as a whole. Also the key contexts for subsidiary competence-creation are identified. This is outlined in the paragraphs below.

Resource dependence in the MNE is linked to the MNE internationalisation motives. Results show that both the subsidiaries operating with exploration and/or exploitation motives can develop resources with which they can develop internal resource dependences. However, where the exploitation motive is market-seeking, a resource dependency is less likely to occur. Earlier studies, e.g. Gaffney et al. (2013), link subsidiary motives with resource dependence in the external market. The contribution here is regarding the internal resource dependence vis-à-vis the internationalisation motives.

Resource dependence in the MNE is linked to the local and the global market initiatives, in that the two types of initiatives lead to subsidiary resource development to the extent that they become most specialised in the MNE. No link of internal initiative to such resource development is found. Prior research has found links of contributory roles

with initiatives as a whole (Birkinshaw et al., 1998; Cavanagh & Freeman, 2012). However, such links with various types of initiatives are not yet explored (Cavanagh & Freeman, 2012). Here the results identify which initiatives lead to internal resource dependence and which do not.

Resource dependence in the MNE is linked to subsidiary manager's characteristics. The subsidiary is likely to develop resources through which the subsidiaries can develop internal resource dependences, where: (i) a designated country manager exists to where a manager does not exist; and/or (ii) the manager has international experience with other organisations to where the manager has little or no international experience. To the best of knowledge this is the first finding that links subsidiary managers' professional characteristics with resource dependences. Prior studies, e.g. Dörrenbächer and Geppert (2009), link managerial characteristics to subsidiary development in terms of how the characteristics link to subsidiary initiatives. Other studies identify subsidiary manager roles (see Bartlett & Ghoshal, 2003) with one as contributing to the global strategy. Other than this, subsidiary research has largely ignored the subsidiary manager (Schmid et al., 2014).

Resource dependence in the MNE is linked to the MNE management structures. The development of resources through which internal resource dependences can be created is more likely to occur: (i) where the subsidiary is managed laterally rather than formally; or (ii) within the formal structures, where the subsidiary is managed under a matrix rather than the other formal structures, e.g. RHQ, CHQ or mandated units. Under this, the overall knowledge-transfers are also more likely to be higher. Prior research has only hypothesized as to which structure facilitates knowledge flows better in an MNE (see Bartlett & Ghoshal, 1989, 1990; Donaldson, 2009; Galbraith, 2000; Wolf & Egelhoff, 2012). There is little consensus or an evidence-based comparison (Wolf &

Egelhoff, 2010). What the results identify here are the structures under which the subsidiary resource dependences are more likely to occur. Here comparisons of the various formal structures (e.g. CHQ, RHQ, and mandated units) are made, which are lacking in the prior research.

Network Conceptualisation of the MNE. Existing subsidiary literature studies the subsidiary network stream and the evolution of subsidiary roles stream separately (Birkinshaw & Pedersen, 2010; Bouquet & Birkinshaw, 2008). The key contribution this thesis makes with respect to the network model is that it identifies the key factors and characteristics associated to the subsidiary networks that are crucial for subsidiary development. Both the overarching subsidiary classification framework and the developmental context draw on the subsidiary networks vis-à-vis subsidiary development. This is informed by the findings outlined as follows.

The results show that a subsidiary collaboration with its external network does not directly bring subsidiary competence-creation. The subsidiaries need to take a high level of local and internal initiative to reap the benefits of the external network. Prior research links external embeddedness with the subsidiary contributory role (see Achcaoucaou et al., 2014; Santangelo, 2009), without putting much focus on the mechanisms through which subsidiary competences could be developed and then transferred to the MNE. What the overall results imply to the network model is that where the subsidiaries are embedded in the local network, subsidiary competences develop through local and internal initiatives.

The primary determinant of subsidiary resource development is the MNE internal network. Earlier studies either look at the networks individually (see Frost et al., 2002; Gupta & Govindarajan, 1991) or emphasize dual embeddedness (see Achcaoucaou et al.,

2014; Ciabuschi et al., 2014; Narula, 2014). Although there is recognition that subsidiary external embeddedness matters for MNEs if it brings benefits to the MNE (see Andersson et al., 2007), the order in which network is more critical (internal or external) for subsidiary development is not yet identified.

When studied across roles and development simultaneously, subsidiaries are best classified in terms of their entrepreneurial activities in the various markets (i.e., local, global and internal) they interface with, and their embeddedness in the local network. Prior research mainly looks at these aspects from an MNE/subsidiary development perspective (see Andersson et al., 2014; Andersson et al., 2007; Birkinshaw et al., 2005) rather than ways in which subsidiaries can be classified. Also subsidiary roles studies do not look at a range of networks a subsidiary interfaces with, let alone the subsidiary initiatives. What the network model suggests is that subsidiaries in their various networks can assume various roles (see Andersson & Forsgren, 1996). What the results imply to the network model is that such variations of roles are determined by various contingencies such as the subsidiary initiatives, the way subsidiaries are managed and the industry sector to which the subsidiaries belong.

IMPLICATIONS FOR MANAGEMENT PRACTICE

The thesis has a range of practical implications. The implications refer to: (i) managers in foreign-owned subsidiaries in New Zealand; (ii) managers in HQ of the MNEs operating in New Zealand; (iii) managers of foreign-owned subsidiaries in small-developed economies; and, (iv) managers in the MNEs in general.

There is no shortage of literature suggesting that managers take initiatives for their development (see Ambos & Birkinshaw, 2010; Birkinshaw, 1997, 2014; Rugman, Verbeke, & Nguyen, 2011), and that initiative leads to enhancement of subsidiary

contributory role (see Birkinshaw et al., 1998; Birkinshaw & Pedersen, 2010; Cavanagh & Freeman, 2012). The results fully support the literature. Practically, however, this may not be as straight-forward. It is important that managers (with respect to the market in which they take the initiative) consider a range of factors, e.g. their subsidiary motives of operations, the industry to which the subsidiary belongs, the management structure, and the MNE global strategy. Results suggested that MNEs have expectations from their manufacturing subsidiaries that they will export, and from their services subsidiaries that they expand in the local market. A services industry subsidiary managed formally, operating with a market-seeking motive, would risk a lot (in terms of the potential HQ resistance and initiative success) if it takes a global market initiative, since as per the results such subsidiaries are mainly created to serve the local market. Managers from the services industry subsidiaries should therefore be entrepreneurial, but in the local market and where possible bid internally for reconfiguration and/or expansion of the MNE activity in the host country. Managers from the subsidiaries belonging to the manufacturing industry, however, may take the global market initiatives and explore markets where they can export their products.

There is a great deal of evidence suggesting that subsidiary external embeddedness helps subsidiary develop competences (see Andersson et al., 2014; Andersson & Forsgren, 1996; Andersson et al., 2007; Santangelo, 2009). While the results find that the link of external embeddedness and competence development is moderated by the local initiatives (rather than a direct one) as opposed to some other studies suggest (e.g. Achcaoucaou et al., 2014; Santangelo, 2009). The overall embeddedness of the subsidiaries in their local context is found to be low. External embeddedness has developmental implications for both the foreign firms and the local industry. Subsidiary managers should increase collaboration with the local industry to

reap the maximum benefits from the host economy. With this, the subsidiaries lacking autonomy (i.e., the ‘constrained’ subsidiaries) will have their autonomy levels enhanced too, which is critical for subsidiary initiatives and the overall development.

There is a tendency to assume that subsidiaries not directly interfacing the CHQ (i.e., managed under an intermediary) benefit lesser than those directly interfacing the CHQ (see Delany, 2000; Mahnke et al., 2012). The results suggest that such contentions cannot be generalised. In fact, subsidiaries interfacing with the CHQ directly are found to benefit the least. If the HQ wants to maintain a formal structure then the ideal from a subsidiary development perspective is the matrix structure. However, if the subsidiary is large, old, reasonably autonomous and competent then the subsidiary may well be put under a lateral structure. Subsidiary development has implications for the MNE as a whole. Results have identified structures under which subsidiaries show high development and structures where subsidiaries show low development. It is reasonable to assume that the structures where subsidiaries show high development are better structures for the MNE too. The subsidiary may sort out ways of how a change in their management structure might be possible.

Subsidiaries should have a country manager in any case and short-term secondment or management via expatriation, or a person based overseas may be avoided. What is best for a subsidiary is a locally-based stable manager (ideally with international experience) rather than a temporary assignee. This is an implication for the HQ. This is important for the development of the subsidiary and the MNE as a whole.

New Zealand is a geographically isolated country (OECD, 2009, 2011). Isolation is generally linked with unfavourable effects on the subsidiary (Ambos & Håkanson, 2014a; Harzing & Noorderhaven, 2006a; Monteiro et al., 2008). The results show that a good number of subsidiaries indicate that they are internally isolated and/or affected (with

isolation) in terms of resources, capabilities and performance. Results, however, also indicate ways in which such isolations can be moderated. These include management under a lateral structure, high-level exports, initiatives, autonomy, and an internationally experienced country manager. The goal of subsidiaries should be to decrease internal isolation. Where a subsidiary is affected with isolation, the subsidiary should (based on their possibilities) focus on some or all of the factors identified here.

The results show that the predominant motive of MNEs' current operations in New Zealand is market-seeking. New Zealand is rich in natural resources, and considerably developed (in terms of infrastructure and human capital) for the foreign MNEs to explore. The MNEs can benefit more if they diversify their internationalisation motives rather than stick to a predominant exploitative market-seeking motive. The results indicate that subsidiary resource development is linked positively to strategic asset and resource-seeking motives, but negatively with market-seeking motives. If HQs want their subsidiaries and the MNE as a whole to develop, they should perhaps relook at their internationalisation motives and take a more explorative or a non-market-seeking exploitative motive.

Lastly, (in general) while resource dependence is about power, in an MNE it is also about meeting the broad responsibilities and the MNE expectations. Definitely, MNEs are dependent upon their contributing subsidiary outputs, but such subsidiary mandates are also targets allocated to the contributing subsidiaries, which the subsidiaries are expected to achieve. Mandated subsidiaries risk losing mandates upon exploitation of power (see Dörrenbächer & Gammelgaard, 2011) or with under-performance. Since subsidiaries are under the legal ownership of the MNE, and given that the subsidiaries in New Zealand are predominantly small sized operations, it would be more useful if the

subsidiaries view their resource dependence relationships as valuable resource exchange relationships rather than relationships of power.

IMPLICATIONS FOR POLICY

The thesis has some implications for the policy-makers. The implications follow from the insights developed about the factors that drive subsidiary development. Overall, the implications are about how the policy-makers can facilitate development of foreign-owned subsidiaries in New Zealand.

There are some commonalities among all the foreign-owned subsidiaries in New Zealand; some of which can be seen as negatives while others positives. The negatives are: *(i)* a moderate level geographical scope; *(ii)* a low contributory role; and, *(iii)* a low to moderate level external embeddedness. For subsidiary development these levels need to be enhanced. The positives are: *(i)* a considerable presence of network organisations; *(ii)* a decent autonomy level; and, *(iii)* and an acceptable level of subsidiary initiatives. These factors reflect characteristics of subsidiaries on a developmental path. This thesis identifies a subsidiary type (entrepreneurial) which can transform to a fully developed subsidiary if its contributory role enhances. The subsidiary type predominantly belongs to the manufacturing industry, managed laterally or under a DHQ, highly autonomous and high in initiatives. A key policy recommendation is how to increase such subsidiaries, and how to encourage their continued development. As follows, some guidance is offered.

New Zealand has a large services sector and the majority of foreign investments coming to New Zealand are for the services sector. The results, however, show that subsidiary development is favoured more in the manufacturing industry, e.g. the entrepreneurial subsidiary predominantly belongs to the manufacturing industry. The investment that New Zealand should attract more is therefore in the manufacturing

industry rather than the services sector subsidiaries, which are mainly involved in sales of products/services.

The results show that subsidiaries do not differ in their external embeddedness level across industry, which shows that embeddedness it is not an industry related issue. The associations of exploration (strategic asset-seeking) and exploitation (market-seeking) with external embeddedness are positive, but too weak, which indicates that internationalisation motives have little to do with external embeddedness. The results also indicate a positive link of industry dynamism and external embeddedness, where the link is found to be relatively stronger. This suggests that local environment dynamicity may be enhanced, but would that be enough? At the subsidiary level, this thesis has discussed the relevance of local initiative to external embeddedness. However, the question as to what would motivate the local and foreign firms to collaborate with each other remains unexamined. Theoretically it is the firm's resource which is more valuable or unique to the other firms. This can motivate other firms to collaborate (Barney, 1991; Pfeffer & Salancik, 1978). As indicated earlier, subsidiaries do not differ in their contributory roles across industry. This a positive sign as it indicates that potentially all subsidiaries in New Zealand can develop resources, which are superior in their MNEs, and through which they can develop resource-based dependences. What should the policy-makers do? An appropriate answer is a higher-level investment in R&D. If New Zealand is R&D intensive the local industry will benefit directly, and the foreign firms will have to work harder to compete with the local industry. Inter-firm collaboration as a result will naturally enhance. Research shows that New Zealand needs to improve on R&D spending. Compared to other developed economies, such as Ireland, Finland, Denmark, Israel, and Singapore, New Zealand ranks lowest in its public spending on R&D (Statistics-NZ, 2012). An overall low incidence of R&D, low investments in R&D,

declining innovation activity, and a low level of exports by both the local and foreign firms are the explicit indicators (see Statistics-NZ, 2005-2011). Universities are a key source of R&D. Quantitatively, there are only eight universities in New Zealand, which is a low number compared with any economy. Qualitatively, however, eight universities may be enough for a small economy provided that they produce and sustain high quality research. Policy-makers can play a key role in enhancing the R&D base of New Zealand.

It is a good sign that a considerable number of subsidiaries in New Zealand are managed laterally, although there is a predominant RHQ management from Australia too. Australia is a major investor in New Zealand. It is therefore rather natural for a large number of subsidiaries to be managed from Australia. The New Zealand government's concern that there should be New Zealand involvement in every new foreign investment (see English, 2010), e.g. establishment of a 'local head office', is valid. It is, however, also not easy to get MNEs to relocate their HQs in New Zealand from Australia, which has a larger and a closer (to the global markets) market than New Zealand. This may require some concrete incentives from the New Zealand government to the foreign investors, and/or better taxation treatment than at present. More promising (or less costly), however, would be if a considerable number of MNEs put their subsidiaries in New Zealand under a matrix structure. Results showed evidence of only 15 subsidiaries in New Zealand which are managed under a matrix structure. Results suggest that a matrix structure is as good as the lateral structure in terms of subsidiary development, and it is at the same time as formal as other formal structures (e.g. RHQ, and mandates). With such an arrangement, many of the issues associated with formal structures can be moderated, and subsidiary development can be enhanced. What the policy-makers can do is encourage the MNEs to manage their subsidiaries in New Zealand via a DHQ. How far from an MNE perspective would that be possible is another issue that would need to be

addressed. MNEs might have their own reasons for putting their subsidiaries under a matrix or a RHQ.

In conclusion, this thesis has identified possible developmental paths of the various types of subsidiaries. The developmental paths are based on the way firms are managed, the industry sector to which they belong, the motives of creations/operations, and the level of discretion over activity. For subsidiaries to develop, they should enhance their resources, be involved heavily in initiatives, seek investment support from a number of sources (including domestic) or through their own means, and be less internally isolated and more externally embedded. New Zealand is a small developed economy. Clearly, the local market size would not increase, and the subsidiaries here would not be as returning as subsidiaries in larger or emerging economies. The subsidiaries, however, may still gain centrality and power internally and externally through competence development. Policy-makers can play a key role in helping subsidiaries realise such a potential. Policy-makers need to encourage developed subsidiaries, as this may encourage other narrow scope foreign and local firms to determine and follow their appropriate developmental paths.

LIMITATIONS AND FUTURE RESEARCH

The most critical limitation of this thesis is its cross-sectional design. Why a cross-sectional method was chosen is discussed in detail in the introduction and the measurement chapters. The key reasons are the motivation of a nation-wide experience, and the limited resources (time and money). A longitudinal study is without a doubt more relevant to subsidiary development than a cross-sectional study. In a doctoral study (as in this one), however, the researcher gets a maximum of six months to a year for the data collection. Subsidiary development does not occur in months. A decent study on

subsidiary development may easily take some good 10 years to reveal meaningful insights. It is also important to note that the research on subsidiary evolution is now entering its third decade. The concepts are established, and theoretically longitudinal studies might not offer much more or different results than a cross-sectional study may do. What is there for future studies? A straight-forward suggestion of a longitudinal study would not be very helpful for the reasons stated above. However, where possible a repeated cross-sectional study from the same respondents over-time (two to three years) or a longitudinal study (if the resources permit) would be recommended.

The thesis has offered an overarching framework, which derives a three part subsidiary classification. While the framework combines the earlier works and introduces some new dimensions, a limitation with the classification is that the data are collected from a single economy. Data collected from a single economy or from MNEs from a single economy will have some contextual limitations. It is argued that no country including the large ones like USA or China can reflect the entirety of subsidiary types, because a subsidiary may be created in a host country for a location-specific reason or it could be based on the predominant MNE needs in a home country (Enright & Subramanian, 2007). The subsidiary types may also vary from country to country due to changes in their overall strategies (Taggart, 1997c). There is confidence that the theoretical results from the inferential analysis in this thesis are generalizable and applicable at least to subsidiaries in small and developed European economies, with whom New Zealand shares many characteristics such as politics, economy, and infrastructure. The recommendation for future research here is that for improved generalizability, the data could be collected from multiple but similar economies.

Due to the questionnaire's length issue, this thesis could not explore much about initiatives. To get the maximum information about subsidiary initiatives more than one

construct is needed. The outcome of each initiative (taken in the five years) would need to be identified, such as whether the initiative/project was continued, discontinued, successful, or a failure? What was the HQ response on each initiative? What was the process? Was it assigned by the HQ, or initiated by the subsidiary? Did the initiative seek HQ approval or was it taken without the knowledge of the MNE? Did the initiative lead to role development/mandates, were the mandates temporary or long term? These are examples of a range of questions that future studies on initiatives may investigate. Future studies on initiatives should be detailed, broader in scope and come up with innovative ways of exploring initiatives in greater depth. For example, earlier studies have not used a multilevel approach (e.g. manager, team) to study initiatives (see Strutzenberger & Ambos, 2014). This is one way future studies may advance the initiatives' research.

The contributory role is a much less researched topic (Ho, 2014), although its relevance to resource development (see Cavanagh & Freeman, 2012) and dependence (see Mudambi, Pedersen, et al., 2014) is greatly recognised. However, with the way the contributory role is described in literature and is used in this thesis, a good number of resource-rich subsidiaries could be ignored. For example, some subsidiaries belong to large MNEs, while others belong to small MNEs. A highly resource-rich subsidiary of a large MNE may not be as contributory as a less resource-rich subsidiary of a small MNE. In this regard it would be more helpful if future studies identify the regions where the focal subsidiary contributes internally. It would be rather rare for one subsidiary of a global MNE to have a resource level more superior to elsewhere in the entire MNE. By applying a regional perspective, the subsidiary contributory role may be better identified, and more contributing subsidiary types may emerge.

Although this thesis captures the entire population of foreign subsidiaries in New Zealand, it could be better if access to the official database was less limited. Several

attempts were made to buy a complete database from the government agencies, such as 'Statistics New Zealand', and 'The Company Office New Zealand', but due to privacy reasons, and a probable suspicion of the unknown, access to the database was always denied. The study therefore primarily relied on a database from commercial providers, and the researcher's own time-consuming efforts on the internet and the telephone. It is suggested to the government agencies that they be more open in providing data access to researchers and to appreciate that the research can have useful implications for the theory, practice as well as for policy. Future studies capturing an economy experience should look at ways of getting the official data.

This thesis revealed some interesting findings about the internationalisation motives. A key limitation of this thesis is that it did not explicitly identify the efficiency-seeking motive. Efficiency-seeking rationalises the resource-seeking and efficiency-seeking investments in terms of the cost advantages (Dunning, 1993). There was an option of 'other motives' in the instrument, but the results did not identify efficiency-seeking as a major category of motives in New Zealand. Also the earlier large sample study that is Scott-Kennel (2001), identifies only less than a tenth of subsidiaries in New Zealand with a predominant efficiency-seeking motive. This thesis therefore does not tell how the efficiency-seeking motive links to subsidiary development. This is therefore an area for future research. It would also be interesting if future research looks at some recent studies too, which offer new typologies of internationalisation motives. For example, Cuervo-Cazurra, Narula, and Un (2015) identify a range of new motives that seem promising.

This thesis finds expatriation negatively linked to subsidiary development. Research does not tell much about expatriation and subsidiary development. This thesis had only one small construct on expatriation. It would be interesting if future studies explore the link further. A qualitative study on expats, exploring their motivations, roles,

behaviours, and aspirations, and personal and professional goals, would be promising. This is a critical finding as MNEs manage a number of subsidiaries via expats, and recent studies suggest that expats are increasing (see Harzing et al., 2015).

This thesis did not find support for the claim that country manager is an endangered species in the developed world (see Birkinshaw & Pedersen, 2010). The thesis identified the role of country manager broader than the one previously hypothesised (see Bartlett & Ghoshal, 2003). There is need for a further and in-depth study on the subsidiary country manager. The area is under-researched.

A very important area for future research is the MNE management structures. This thesis identified the contingencies as to how subsidiary roles and development vary across various management structures, and also which structure is better or more relevant to subsidiary development. This thesis did not study the HQ. So less is revealed as to what happens at the various types of HQs/controlling offices. Future studies may take both the HQ and the focal subsidiary into analysis and explore further through a comparison. For example, how the CHQ and the intermediary (i.e., a RHQ, a DHQ or a mandated subsidiary) individually and as a whole respond to an initiative proposal sent by a subsidiary. Also how the HQ's behaviours vary across subsidiaries from different industry sectors. Such an investigation would greatly contribute to the much less researched area of MNE management structures.

SUMMARY

This chapter concludes the thesis and makes implications for theory, subsidiary management practice, and public policy. The chapter first summarises the key research contributions of the thesis. In the research contributions section, first it is elaborated on how the thesis research questions are answered and how they contribute to the subsidiary

literature. Second, the section elaborates on the contributions made to the subsidiary strategy and management literature. The section outlines the contributions to ‘MNE management structures’ and the ‘subsidiary country manager’, which the thesis identifies as key areas of contribution. The section then summarises other key contributions of the thesis. Third, the section outlines the implications for the three macro theories used in the thesis (i.e., RBV, RDT, and the network theory).

The chapter then presents the implications for management practice. The key implication is how managers can develop their subsidiaries. A section on implications for the policy-makers comes next. Here the key implication is how the relatively most developed subsidiary in New Zealand (i.e., entrepreneurial) can be increased and their development encouraged. A section outlining key limitations of the thesis and areas of future research then follows. This section based on the limitations of the thesis as well as literature makes recommendations for future research on subsidiaries.

In summary, this thesis was interested in a broad developmental classification of subsidiaries and in exploring how the subsidiaries configure with their unique developmental contexts. The thesis grounded the concepts in three overarching theories: RBV, RDT, and the network model. Data from 429 foreign subsidiaries in New Zealand were collected. The thesis offered an alternate subsidiary classification and developed insights into how the classification varies with their developmental contexts. Gaps in the subsidiary strategy and management literature are filled, and a range of micro as well as macro theoretical contributions are made.

REFERENCES

- Achcaoucaou, F., Miravittles, P., & León-Darder, F. (2014). Knowledge sharing and subsidiary R&D mandate development: A matter of dual embeddedness. *International Business Review*.
- Adeyemi, O., Slepnirov, D., Wæhrens, B., Boer, H., & Wu, X. (2014). Exploring the Changing Roles of Western Subsidiaries in China: Balancing Global Priorities with Local Demands. In J. Johansen, S. Farooq & Y. Cheng (Eds.), *International Operations Networks* (pp. 67-80): Springer London.
- Akooie, M. E. M. (1996a). *The Impact of Foreign Direct Investment and Government Policy on the Internationalisation Process of the New Zealand Firm*. University of Waikato, Hamilton, New Zealand.
- Akooie, M. E. M. (1996b). New Zealand: The Development of a Resource-Rich Economy. In J. Dunning & R. Narula (Eds.), *Foreign Direct Investment and Governments: Catalysts for Economic Restructuring*. London and New York: Routledge.
- Alessandra, P., & Andersson, U. (2014). Knowledge outflows from foreign subsidiaries and the tension between knowledge creation and knowledge protection: Evidence from the semiconductor industry. *International Business Review*, 23(1), 63-75.
- Alfoldi, E. A., Clegg, L. J., & McGaughey, S. L. (2012). Coordination at the edge of the empire: The delegation of headquarters functions through regional management mandates. *Journal of International Management*, 18(3), 276-292.
- Alfredo, V., Nell, P. C., & Hotho, J. J. (2014). MNC Headquarters as Global Network Orchestrators: Insights from Headquarters Relocation Patterns in Europe *Orchestration of the Global Network Organization* (Vol. 27, pp. 299-323): Emerald Group Publishing Limited.
- Almarria, K., & Gardiner, P. (2014). Application of resource-based view to project management research: supporters and opponents. *Procedia - Social and Behavioral Sciences*, 437-445.
- Almeida, P. (1996). Knowledge sourcing by foreign multinationals: Patent citation analysis in the U.S. semiconductor industry. *Strategic Management Journal*, 17(SUPPL. WINTER), 155-165.

- Almeida, P., & Phene, A. (2004). Subsidiaries and knowledge creation: The influence of the MNC and host country on innovation. *Strategic Management Journal*, 25, 847-864.
- Almor, T., & Hirsch, S. (1992). Outsiders' response to Europe 1992: Theoretical considerations and empirical evidence. *Journal of International Business Studies*, 26, 223-239.
- Amann, B., Jaussaud, J., & Schaaper, J. (2014). Clusters and Regional Management Structures by Western MNCs in Asia: Overcoming the Distance Challenge. *Management International Review*, 54, 879-906.
- Ambos, B., Asakawa, K., & Ambos, T. C. (2011). A dynamic perspective on subsidiary autonomy. *Global Strategy Journal*, 1(3/4), 301-316.
- Ambos, B., & Håkanson, L. (2014a). The Concept of Distance in International Management Research. *Journal of International Management*, 20(1), 1-7. doi: <http://dx.doi.org/10.1016/j.intman.2013.10.003>
- Ambos, B., & Håkanson, L. (2014b). The Concept of Distance in International Management Research. *Journal of International Management*, 20, 1-7.
- Ambos, B., & Reitsperger, W. D. (2004). Offshore Centers of Excellence: Social Control and Success. *MIR: Management International Review*, 44(2), 51-65. doi: 10.2307/40836019
- Ambos, T. C., & Ambos, B. (2009). The impact of distance on knowledge transfer effectiveness in multinational corporations. *Journal of International Management*, 15, 1-14.
- Ambos, T. C., Ambos, B., & Schlegelmilch, B. B. (2006). Learning from foreign subsidiaries: an empirical investigation of headquarters' benefit from reverse knowledge transfers. *International Business Review*, 15, 294-312.
- Ambos, T. C., Andersson, U., & Birkinshaw, J. M. (2010). What are the consequences of initiative-taking in multinational subsidiaries? *Journal of International Business Studies*, 41(7), 1099-1118.
- Ambos, T. C., & Birkinshaw, J. M. (2010). Headquarters' attention and its effect on subsidiary performance. *Management International Review*, 50(4), 449-469.

- Andersen, T. J., & Joshi, M. P. (2008). *Strategic orientations of internationalizing firms: a comparative analysis of firms operating in technology intensive and common goods industries*. Frederiksberg, (SMG Working Paper, 11/2008).
- Andersson, U., Björkman, I., & Forsgren, M. (2005). Managing subsidiary knowledge creation: The effect of control mechanisms on subsidiary local embeddedness. *International Business Review*, *14*(5), 521-538.
- Andersson, U., Dellestrand, H., & Pedersen, T. (2014). The Contribution of Local Environments to Competence Creation in Multinational Enterprises. *Long Range Planning*, 87-99.
- Andersson, U., & Forsgren, M. (1994). *Degree of Integration in Some Swedish MNCs*. Department of Business Studies, Uppsala University, Uppsala. Uppsala, Sweden.
- Andersson, U., & Forsgren, M. (1996). Subsidiary embeddedness and control in the multinational corporation. *International Business Review*, *5*(5), 487-508.
- Andersson, U., & Forsgren, M. (2000). In search of center of excellence: Network embeddedness and subsidiary roles in multinational corporations. *Management International Review*, *40*(4), 329-350.
- Andersson, U., Forsgren, M., & Holm, U. (2001). Subsidiary Embeddedness and Competence Development in MNCs A Multi-Level Analysis. *Organization Studies*, *22*(6), 1013-1034. doi: 10.1177/0170840601226005
- Andersson, U., Forsgren, M., & Holm, U. (2002). The Strategic Impact of External Networks: Subsidiary Performance and Competence Development in the Multinational Corporation. *Strategic Management Journal*, *23*(11), 979-996.
- Andersson, U., Forsgren, M., & Holm, U. (2007). Balancing subsidiary influence in the federative MNC: A business network view. *Journal of International Business Studies*, *38*(5), 802-818.
- Armstrong, J. S., & Overton, T. S. (1977). Estimating nonresponse bias in mail surveys. *Journal of Marketing Research*, *16*(August), 396-402.
- Baaij, M. G., Mom, T. J. M., Van, D., B., Frans, A. J., & Volberda, H. W. (2015). Why Do Multinational Corporations Relocate Core Parts of Their Corporate Headquarters Abroad? *Long Range Planning*, *48*(1), 46-58. doi: <http://dx.doi.org/10.1016/j.lrp.2012.07.001>

- Baaij, M. G., & Slangen, A. H. L. (2013). The role of headquarters–subsidiary geographic distance in strategic decisions by spatially disaggregated headquarters. *Journal of International Business Studies*, *44*, 941-952.
- Bacharach, S. B. (1989). Organizational theories: Some criteria for evaluation. *Academy of Management Review*, *14*, 496-515.
- Balasubramanyam, V. N., & Greenaway, D. (1992). Economic integration and foreign direct investment: Japanese investment in the EC. *Journal of Common Market Studies*, *30*(2), 175-194. doi: 10.1111/j.1468-5965.1992.tb00426.x
- Baraldi, E., & Strömsten, T. (2008). Configurations and control of resource interfaces in industrial networks. In A. Woodside (Ed.), *Creating and managing superior customer value* (Vol. 14, pp. 251-316): Emerald Group Publishing Limited.
- Barney, J. B. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, *17*(1), 99-120.
- Barney, J. B. (1997). *Gaining and sustaining competitive advantage* (Vol. 1). Reading, MA: Addison-Wesley.
- Barney, J. B. (2001). Resource-based theories of competitive advantage: A ten-year retrospective on the resource-based view. *Journal of Management*, *27*(6).
- Barney, J. B., Wright, M., & Ketchen Jr, D. J. (2001). The resource-based view of the firm: Ten years after 1991. *Journal of Management*, *27*(6), 625-641.
- Bartlett, C. A., & Ghoshal, S. (1986). Tap your subsidiaries for global reach. *Harvard Business Review*, *64*(6), 87-94.
- Bartlett, C. A., & Ghoshal, S. (1989). *Managing across borders: The transnational solution*: Harvard Business School Press.
- Bartlett, C. A., & Ghoshal, S. (1990). Matrix management: Not a structure, a frame of mind. *Harvard Business Review*, *68*, 138–145.
- Bartlett, C. A., & Ghoshal, S. (1998). *Managing Across Borders: The Transnational Solution* (2nd ed.). Boston, MA: Harvard Business School Press.
- Bartlett, C. A., & Ghoshal, S. (2003). What Is a Global Manager? *Harvard Business Review*, August 2003.

- Bartlett, C. A., Ghoshal, S., & Birkinshaw, J. M. (2005). *Transnational management: Text and cases* (4 ed.). Boston, MA: McGraw Hill.
- Baum, J. A. C., Li, S. X., & Usher, J. M. (2000). Making the next move: How experiential and vicarious learning shape the locations of chains' acquisitions. *Administrative Science Quarterly*, *45*, 766-801.
- Becker-Ritterspach, F., & Dörrenbächer, C. (2011). An Organizational Politics Perspective on Intra-firm Competition in Multinational Corporations. *Management International Review*, *51*(4), 533-559. doi: 10.1007/s11575-011-0083-2
- Bell, E., & Bryman, A. (2003). *Business research methods*. Oxford University Press.
- Benito, G. R. G. (2005). Divestment and international business strategy. *Journal of Economic Geography*, *5*(2), 235-251.
- Benito, G. R. G. (2015). Why and how motives (still) matter. *Multinational Business Review*, *23*(1).
- Benito, G. R. G., Groggaard, B., & Narula, R. (2003). Environmental influences on MNE subsidiary roles: Economic integration and the nordic countries. *Journal of International Business Studies*, *34*(5), 443-457.
- Benito, G. R. G., Lunnan, R., & Tomassen, S. (2011). Distant Encounters of the Third Kind: Multinational Companies Locating Divisional Headquarters Abroad. *Journal of Management Studies*, *48*(2), 373-394.
- Berry, H., Guillén, M. F., & Zhou, N. (2010). An institutional approach to cross-national distance. *Journal of International Business Studies*, *41*(9), 1460-1480.
- Biau, D. J., Kernéis, S., & Porcher, R. (2008). Statistics in Brief: The Importance of Sample Size in the Planning and Interpretation of Medical Research. *Clinical Orthopaedics and Related Research*, *466*(9), 2282-2288. doi: 10.1007/s11999-008-0346-9
- Birkinshaw, J. M. (1995). Is the country manager an endangered species? *The international Executive*, *37*(3).
- Birkinshaw, J. M. (1996). How multinational subsidiary mandates are gained and lost. *Journal of International Business Studies*, *27*(3), 467-495.

- Birkinshaw, J. M. (1997). Entrepreneurship in multinational corporations: The characteristics of subsidiary initiatives. *Strategic Management Journal*, 18(3), 207-229.
- Birkinshaw, J. M. (1998). Corporate entrepreneurship in network organizations: How subsidiary initiative drives internal market efficiency. *European Management Journal*, 16(3), 355-364.
- Birkinshaw, J. M. (1999). The determinants and consequences of subsidiary initiative in multinational corporations. *Entrepreneurship Theory and Practice*, 24(1), 9-36.
- Birkinshaw, J. M. (2014). Subsidiary initiative in the modern multinational corporation. *Research in Global Strategic Management*, 16(201-220).
- Birkinshaw, J. M., Braunerhjelm, P., Holm, U., & Terjesen, S. (2006). Why do some multinational corporations relocate their headquarters overseas? *Strategic Management Journal*, 27(7), 681-700.
- Birkinshaw, J. M., & Fry, N. (1998). Subsidiary initiatives to develop new markets. *MIT Sloan Management Review*, 39(3), 51-61.
- Birkinshaw, J. M., & Hood, N. (1997). An Empirical Study of Development Processes in Foreign-Owned Subsidiaries in Canada and Scotland. *MIR: Management International Review*, 37(4), 339-364.
- Birkinshaw, J. M., & Hood, N. (1998). Multinational subsidiary evolution: Capability and charter change in foreign-owned subsidiary companies. *Academy of Management Review*, 23(4), 773-795.
- Birkinshaw, J. M., Hood, N., & Jonsson, S. (1998). Building firm-specific advantages in multinational corporations: The role of subsidiary initiative. *Strategic Management Journal*, 19(3), 221-241.
- Birkinshaw, J. M., Hood, N., & Young, S. (2005). Subsidiary entrepreneurship, internal and external competitive forces, and subsidiary performance. *International Business Review*, 14(2), 227-248.
- Birkinshaw, J. M., & Morrison, A. J. (1995). Configurations of strategy and structure in subsidiaries of multinational corporations. *Journal of International Business Studies*, 26(4), 729-753.

- Birkinshaw, J. M., & Pedersen, T. (2010). Strategy and management in MNE subsidiaries. In A. M. Rugman (Ed.), *The Oxford handbook of international business* (2nd ed.). Oxford, UK: Oxford University Press.
- Birkinshaw, J. M., & Riddlerstrale, J. (1999). Fighting the corporate immune system: A process study of subsidiary initiatives in multinational corporations. *International Business Review*, 8(2), 149.
- Black, J. A., & Boal, K. B. (1994). Strategic resources: Traits, configurations and paths to sustainable competitive advantage. *Strategic Management Journal*, 15, 131-149.
- Black, J. S., & Gregersen, H. B. (1992). Serving two masters: Managing the dual allegiance of expatriate employees. *Sloan Management Review*, 33(4), 61-71.
- Black, J. S., & Gregersen, H. B. (1999). The right way to manage expats. *Harvard Business Review*, 77(2), 51-61.
- Blau, P. M. (1964). *Exchange and Power in Social Life*. New York: Wiley.
- Blumberg, B., Cooper, D. R., & Schindler, P. S. (2005). *Business Research Methods*. Maidenhead: McGraw-Hill.
- Boddeyn, J. (1983). Foreign and domestic divestment and investment decisions: Like or unlike? . *Journal of International Business Studies*, 14(3), 23-35.
- Boddy, D. (2011). *Management: An introduction*. Essex: Prentice Hall.
- Boojihawon, D. K., Dimitratos, P., & Young, S. (2007). Characteristics and influences of multinational subsidiary entrepreneurial culture: The case of the advertising sector. *International Business Review*, 16(5), 549-572.
- Borini, F. M., Junior, M. D. M. O., & Proenca, E. R. (2005). Competências de marketing e vendas em subsidiárias estrangeiras e as estratégias das multinacionais. *Economia Global e Gestão*, 10(3), 109-128.
- Bouquet, C., & Birkinshaw, J. M. (2008). Managing power in the multinational corporation: How low-power actors gain influence. *Journal of Management*, 34(3), 477-508.

- Boyacigiller, N. (1990). The role of expatriates in the management of interdependence, complexity and risk in multinational corporations. *Journal of International Business Studies*, 21(3), 357-381.
- Bradley, E. H., Curry, L. A., & Devers, K. J. (2007). Qualitative Data Analysis for Health Services Research: Developing Taxonomy, Themes, and Theory. *Health Services Research*, 42(4), 1758-1772. doi: 10.1111/j.1475-6773.2006.00684.x
- Brewerton, P. M., & Millward, L. J. (2001). *Organizational research methods: A Guide for Students and Researchers*. London, UK: SAGE Publications Ltd.
- Brock, D. M. (2003). Autonomy of individuals and organizations: Towards a strategy research agenda. *International Journal of Business and Economics*, 2(1), 57-73.
- Brock, D. M., Barry, D., & Thomas, D. C. (2000). "Your forward is our reverse, your right, our wrong": rethinking multinational planning processes in light of national culture. *International Business Review*, 9, 687-701.
- Brooke, M. Z. (1984). *Centralization and autonomy: A study in organization behaviour*. London and New York: Holt, Rinehart and Winston.
- Bryman, A. (2012). *Social Research Methods* (4 ed.). UK: Oxford University Press.
- Buckley, P. J., & Casson, M. C. (1976). *The Future of the Multinational Enterprise*. London: Macmillan.
- Buckley, P. J., & Casson, M. C. (1998). Analyzing Foreign Market Entry Strategies: Extending the Internalization Approach. *Journal of International Business Studies*, 29(3), 539-561. doi: 10.2307/155524
- Buckley, P. J., & Casson, M. C. (2009). The internalisation theory of the multinational enterprise: A review of the progress of a research agenda after 30 years. *J Int Bus Stud*, 40(9), 1563-1580.
- Buckley, P. J., Clegg, J., Forsans, N., & Reilly, K. (2001). Increasing the Size of the "Country" Regional Economic Integration and Foreign Direct Investment in a Globalised World Economy. *Management International Review*, 41(3), 251-274.
- Burgelman, R. A. (1983). Corporate entrepreneurship and strategic management: Insights from a process study. *Management Science*, 29, 1349-1364.

- Burns, R. B., & Burns, R. A. (2008). *Business Research Methods and Statistics Using SPSS*. London: SAGE Publications Ltd.
- Cantwell, J., & Mudambi, R. (2005). MNE competence-creating subsidiary mandates. *Strategic Management Journal*, 26(12), 1109-1128.
- Casciaro, T., & Piskorski, M. J. (2005). Power Imbalance, Mutual Dependence, and Constraint Absorption: A Closer Look at Resource Dependence Theory. *Administrative Science Quarterly*, 50(2), 167-199.
- Cavanagh, A., & Freeman, S. (2012). The development of subsidiary roles in the motor vehicle manufacturing industry. *International Business Review*, 21(4), 602-617.
- Chandler, A. D. (1962). *Strategy and structure: chapters in the history of the industrial enterprise*: MIT Press.
- Chandler, A. D. (1991). The functions of the HQ unit in the multibusiness firm. *Strategic Management Journal*, 12, 31-50.
- Chang, E., & Taylor, M. S. (1999). Control in multinational corporations (MNCs): The case of Korean manufacturing subsidiaries. *Journal of Management*, 25(4), 541-565.
- Chang, S. J. (1995). International Expansion Strategy of Japanese Firms: Capability Building through Sequential Entry. *The Academy of Management Journal*, 38(2), 383-407.
- Chen, H., Hsu, C.-W., & Caskey, D. (2013). Internationalization of Taiwanese manufacturing firms: The evolution of subsidiary mandates and capabilities. *Asian Bus Manage*, 12(1), 37-60.
- Chetty, S. K., & Stangl, L. M. (2010). Internationalization and innovation in a network relationship context. *European Journal of Marketing*, 44(11/12), 1725-1743.
- Chiang, C.-Y., Chang, S.-C., Hsu, Y.-W., & Wang, Y.-B. (2008). Parent-subsidiary links under procedural justice in the emerging market. *International Journal of Commerce and Management*, 18(1).
- Chiao, Y.-C., & Ying, K.-P. (2013). Network effect and subsidiary autonomy in multinational corporations: An investigation of Taiwanese subsidiaries. *International Business Review*, 22(4), 652-662. doi: <http://dx.doi.org/10.1016/j.ibusrev.2012.10.001>

- CIA. (2014). The World Factbook 2014. from Central Intelligence Agency <https://www.cia.gov/library/publications/the-world-factbook/index.html>
- Ciabuschi, F., Holm, U., & Martín, O. M. (2014). Dual embeddedness, influence and performance of innovating subsidiaries in the multinational corporation. *International Business Review*, 23(5), 897-909.
- Ciabuschi, F., Martín, O. M., & Ståhl, B. (2010). Headquarters' influence on knowledge transfer performance. *Management International Review*, 50, 417-491.
- Clegg, S., Hardy, C., & Walter, R. N. (1996). *Handbook of organization studies*. London: Sage.
- Coase, R. H. (1937). The Nature of the Firm. *Economica*, 16(4), 386-405.
- Colakoglu, S., & Caligiuri, P. (2008). Cultural distance, expatriate staffing and subsidiary performance: The case of US subsidiaries of multinational corporations. *The International Journal of Human Resource Management*, 19(2), 223-239. doi: 10.1080/09585190701799804
- Colakoglu, S., Yamao, S., & Lepak, D. P. (2014). Knowledge creation capability in MNC subsidiaries: Examining the roles of global and local knowledge inflows and subsidiary knowledge stocks. *International Business Review*, 23(1), 91-101. doi: <http://dx.doi.org/10.1016/j.ibusrev.2013.08.009>
- Collis, D. J. (1994). Research note: How valuable are organizational capabilities. *Strategic Management Journal*, 15(143-152).
- Collis, D. J., & Montgomery, C. A. (1995). Competing on resources. *Harvard Business Review*, 73(4), 118-128.
- Collis, D. J., Young, D., & Goold, M. (2007). The size, structure, and performance of corporate headquarters. *Strategic Management Journal*, 28, 383-405.
- Corado, S. V., Biscaya, R., & Nevado, P. (2002). Subsidiary decision-making autonomy: competences, integration and local responsiveness *Network Knowledge in International Business*. Cheltenham, UK: 'Edward Elgar Publishing, Inc.'
- Couto, J. P., Gonçalves, V. F. D. C., & Fortuna, M. J. A. (2003). Strategic Choice of the Subsidiaries: Contextual and Operational Factors. *Journal of Comparative International Management*, 6(1), 57-70.

- Crespo, C. F., Griffith, D. A., & Lages, L. F. (2014). The performance effects of vertical and horizontal subsidiary knowledge outflows in multinational corporations. *International Business Review*, 23(5), 993-1007. doi: <http://dx.doi.org/10.1016/j.ibusrev.2014.03.002>
- Creswell, J. W. (2008). *Research design: Qualitative, quantitative, and mixed methods approaches*: Sage.
- Crick, D. (2009). The internationalisation of born global and international new venture SMEs. *International Marketing Review*, 26(4/5), 453-476. doi: doi:10.1108/02651330910971986
- Crookell, H. H. (1986). Specialization and international competitiveness. In H. Etemad & L. S. Dulude (Eds.), *Managing the Multinational Subsidiary* (pp. 102-111). London: Croom Helm.
- Croxtton, F. E., Cowden, D. J., & Klein, S. (1968). *Applied General Statistics*: Pitman.
- Cuervo-Cazurra, A., Narula, R., & Un, C. A. (2015). Internationalization motives: sell more, buy better, upgrade and escape. *Multinational Business Review*, 23(1).
- D'Cruz. (1986). Strategic management of subsidiaries. In H. Etemad & L. S. Dulude (Eds.), *Managing the multinational subsidiary: Response to environmental change and the host nation R & D policies*. London: Croom Helm.
- Davis, G. F., & Cobb, J. A. (2010). *Research in the Sociology of Organizations Chapter 2 Resource dependence theory: Past and future*: Emerald Group Publishing Limited.
- Davis, L. N., & Meyer, K. E. (2004). Subsidiary research and development, and the local environment. *International Business Review*, 13(3), 359-382.
- Deci, E. L. (1971). Effects of externally mediated rewards on intrinsic motivation. *Journal of Personality and Social Psychology*, 18, 105-115.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic Motivation and Self-Determination in Human Behavior*. New York: Plenum.
- Delany, E. (1998). Strategic development of multinational subsidiaries in Ireland. In J. M. Birkinshaw & N. Hood (Eds.), *Multinational corporate evolution and subsidiary development* (pp. 239-267). London: Macmillan.

- Delany, E. (2000). Strategic development of the multinational subsidiary through subsidiary initiative-taking. *Long Range Planning*, 33(2), 220-244.
- Dellestrand, H. (2011). Subsidiary embeddedness as a determinant of divisional headquarters involvement in innovation transfer processes. *Journal of International Management*, 17, 229-242.
- Dellestrand, H., & Kappen, P. (2011). Headquarters allocation of resources to innovation transfer projects within the multinational enterprise. *Journal of International Management*, 17, 263-277.
- Denzin, N. K., & Lincoln, Y. S. (2000). Introduction: The discipline and practice of qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (2nd ed., pp. 1-28). Thousand Oaks, CA: Sage.
- Dimitratos, P., Liouka, L., Ross, D., & Young, S. (2009). The multinational enterprise and subsidiary evolution: Scotland since 1945. *Business History*, 51(3), 401-425.
- Diniz, E., Piccolo, L. D. R., Pinheiro, M. C., Couto, D. P., Salles, J. F., & Koller, S. H. (2013). Influences of developmental contexts and gender differences on school performance of children and adolescents. *Educational Psychology*, 34(7), 787-798. doi: 10.1080/01443410.2013.804491
- Donaldson, L. (1995). *American Anti-Management Theories of Organization: A Critique of Paradigm Proliferation*. New York: Cambridge University Press.
- Donaldson, L. (2001). *The Contingency Theory of Organizations*. London: Sage.
- Donaldson, L. (2009). In search of the matrix advantage: A re-examination of the fit of matrix structures to transnational strategy. In J. L. Cheng, E. Maitland & S. Nicholas (Eds.), *Managing subsidiary dynamics: Headquarters role, capability development, and China strategy* (Vol. 22, pp. 3-26).
- Dörrenbächer, C., & Gammelgaard, J. (2004). *Subsidiary upgrading? Strategic inertia in the development of German-owned subsidiaries in Hungary*. CKG Working Paper.
- Dörrenbächer, C., & Gammelgaard, J. (2006). Subsidiary role development: The effect of micro-political headquarters-subsidiary negotiations on the product, market and value-added scope of foreign-owned subsidiaries. *Journal of International Management*, 12(3), 266-283.

- Dörrenbächer, C., & Gammelgaard, J. (2011). Subsidiary power in multinational corporations: the subtle role of micro-political bargaining power. *7*(1), 1742-2043.
- Dörrenbächer, C., & Geppert, M. (2009). A micro-political perspective on subsidiary initiative-taking: Evidence from German-owned subsidiaries in France. *European Management Journal*, *27*(2), 100-112.
- Doz, Y. L. (1976). *National Policies and Multinational Management*. Harvard Business School.
- Doz, Y. L., & Prahalad, C. K. (2005). Managing MNCs: a search for new paradigm. In S. Ghoshal & D. E. Westney (Eds.), *Organization theory and the multinational corporation* (pp. 20-44). New York: Palgrave Macmillan.
- Drees, J. M., & Heugens, P. P. M. A. R. (2013). Synthesizing and Extending Resource Dependence Theory: A Meta-Analysis. *Journal of Management*, *39*(6), 1666-1698.
- Dudovskiy, J. (2015). *An Ultimate Guide to Writing a Dissertation in Business Studies: A Step-by-Step Assistance* Retrieved from <http://research-methodology.net/>
- Dunning, J. H. (1980). Toward an eclectic theory of international production: Some empirical tests. *Journal of International Business Studies*, *11*(1), 9-31.
- Dunning, J. H. (1988). The Eclectic Paradigm of International Production: a Restatement and Some Possible Extensions. *Journal of International Business Studies*, *19*(1), 1-31.
- Dunning, J. H. (1993). *Multinational enterprises and the global economy*. Wokingham, UK: Addison-Wesley Publishing Company.
- Dunning, J. H. (2009). Location and the multinational enterprise: A neglected factor? *Journal of International Business Studies*, *40*(1), 5-19.
- Dunning, J. H., & Lundan, S. M. (2008a). Institutions and the OLI paradigm of the multinational enterprise. *Asia Pacific Journal of Management*, *25*(4), 573-593.
- Dunning, J. H., & Lundan, S. M. (2008b). *Multinational Enterprises and the Global Economy*. Cheltenham, UK: Edward Elgar Publishing.

- Dutton, J. E., Ashford, S. J., O'Neill, R. M., Hayes, E., & Wierba, E. E. (1997). Reading the wind: How middle managers assess the context for selling issues to top managers. *Strategic Management Journal*, 18(5), 407-425.
- Easterby-Smith, M., Thorpe, R., & Lowe, A. (2002). *Management research: An introduction*: Sage Publications Ltd.
- Edwards, R., Ahmad, A., & Moss, S. (2002). Subsidiary autonomy: The case of multinational subsidiaries in Malaysia. *Journal of International Business Studies*, 33(1), 183-191.
- Egelhoff, W. G. (1982). Strategy and Structure in Multinational Corporations: An Information-Processing View. *Administrative Science Quarterly*, 27(3), 435-458.
- Egelhoff, W. G. (1984). Patterns of Control in U. S., UK, and European Multinational Corporations. *Journal of International Business Studies*, 15(2), 73-83.
- Egeraata, C. V., & Breathnach, P. (2012). The drivers of transnational subsidiary evolution: The upgrading of process R&D in the Irish pharmaceutical industry. *Regional Studies*, 46(9), 1153-1167.
- Eiriz, V., & Wislon, D. (2006). Research in relationship marketing: antecedents, traditions and integration. *European Journal of Marketing*, 40(3/4).
- Eisenhardt, K. (1989a). Agency theory: An assessment and review. *Academy of Management Review*, 14(1), 57-74.
- Eisenhardt, K. M. (1989b). Building theories from case study research. *Academy of Management Review*, 532-550.
- Eldabi, T., Irani, Z., Paul, R., & Love, P. (2002). Quantitative and qualitative decision making in simulation modelling. *Management Decision*, 40(1), 64-73.
- Emerson, R. M. (1962). Power-Dependence Relations. *American Sociological Review*, 27(1), 31-41.
- Emerson, R. M. (1976). Social Exchange Theory. *Annual Review of Sociology*, 2, 335-362.

- Emory, C. W., & Cooper, D. R. (1991). *Business research methods*. Homewood, IL: Richard D. Irwin, Inc.
- English, B. (2010). New investment rules strike the right balance. from <http://www.beehive.govt.nz/release/new-investment-rules-strike-right-balance>
- Enright, M. J. (2005a). Regional management centers in the Asia-Pacific. *Management International Review*, 45(1), 59-82.
- Enright, M. J. (2005b). The roles of regional management centers. *Management International Review*, 45, 83-102.
- Enright, M. J., & Subramanian, V. (2007). An Organizing Framework for MNC Subsidiary Typologies. *Management International Review*, 47(6), 895-924.
- Erikson, K. (2009). *Entering the Brazilian Market: A Guide for LEAN Consultants*: Diplomica Verlag.
- Ernst, H., Hoyer, W. D., & Rübsaamen, C. (2010). Sales, marketing, and research-and-development cooperation across new product development stages: Implications for success. *Journal of Marketing*, 74(5), 80-92.
- Escrig-Tena, A. B., & Bou-Llusar, J. C. (2005). A Model for Evaluating Organizational Competencies: An Application in the Context of a Quality Management Initiative*. *Decision Sciences*, 36(2), 221-257. doi: 10.1111/j.1540-5414.2005.00072.x
- Ettlie, J. E., & Rosenthal, S. R. (2011). Service versus Manufacturing Innovation*. *Journal of Product Innovation Management*, 28(2), 285-299. doi: 10.1111/j.1540-5885.2011.00797.x
- Fan, D., & Zhu, C. J. (2014). How do Chinese multinationals perceive factors affecting the integration-responsiveness framework? *International Journal of Emerging Markets*, 9(2), 181-204.
- Fayerweather, J. (1969). *International Business Management: A Conceptual Framework* (Vol. 42). New York: McGraw Hill.
- Fernando, A. C. (2006). *Corporate governance: Principles, policies and practices*. India: Pearson Education.

- Ferraris, A. (2014). Rethinking the literature on “multiple embeddedness” and subsidiary-specific advantages. *Multinational Business Review*, 22(1), 15-33. doi: doi:10.1108/MBR-11-2013-0064
- Fife-Schaw, C. (1995). Questionnaire design. In G. M. Breakwell, S. Hammond & C. Fife-Schaw (Eds.), *Research Methods in Psychology*. London, UK: Sage Publications.
- Filippov, S. (2014). Knowledge-Sharing Subsidiaries in Central and Eastern Europe. *EUROPE-ASIA STUDIES*, 66(9), 1552-1571.
- Filippov, S., & Duysters, G. (2011). Competence-building in foreign subsidiaries: The case of new EU member state. *Journal For East European Management Studies*, 16(4).
- Filippov, S., & Duysters, G. (2012). Evolving subsidiary roles and regional economic integration in Europe. *Transformations in Business & Economics*, 11(1), 35-53.
- Filippov, S., & Duysters, G. (2014). Exploring the drivers and elements of subsidiary evolution in several new EU member states. *International Journal of Emerging Markets*, 9(1), 120-146. doi: doi:10.1108/IJoEM-03-2011-0022
- Fink, A., & Kosecoff, J. (1996). *How to conduct surveys. A step by step guide*. London: Sage Publications.
- Fink, R. C., Edelman, L. F., Hatten, K. J., & James, W. L. (2006). Transaction cost economics, resource dependence theory, and customer–supplier relationships. *Industrial and Corporate Change*, 15(3), 497-529.
- Fiol, C. M. (2001). Revisiting an identity-based view of sustainable competitive advantage. *Journal of Management*, 27(6).
- Fisch, J. H., & Oesterle, M.-J. (2003). Exploring the globalization of German MNCs with the complex spread and diversity measure. *Schmalenbach Business Review*, 55(1), 2-21.
- Fiss, P. C. (2007). A set-theoretic approach to organizational configurations. *Academy of Management Review*, 32(4), 1180-1198.
- Forsgren, M. (2008). *Theories of the multinational firm: a multidimensional creature in the global economy*. Cheltenham, UK: Edward Elgar.

- Forsgren, M., Holm, U., & Johanson, J. (1995). Division headquarters go abroad - A step in the internationalization of the multinational corporation. *Journal of Management Studies*, 32(4), 475-491. doi: 10.1111/j.1467-6486.1995.tb00785.x
- Forsgren, M., & Pedersen, T. (1998). Centres of excellence in multinational companies: The case of Denmark. In J. M. Birkinshaw & N. Hood (Eds.), *Multinational Corporate Evolution and Subsidiary Development* (pp. 141-161). Houndmills, UK: Palgrave Macmillan.
- Foss, N., & Foss, K. (2002). *Authority and discretion: tensions, delegation and implications for new organizational forms*. Paper presented at the Paper Presented at the 2001 LINK conference, Copenhagen, Denmark.
- Foss, N. J. (1998). The resource-based perspective: An assessment and diagnosis of problems. *Scandinavian Journal of Management*, 14(3), 133-149.
- Foss, N. J., & Pedersen, T. (2002). Transferring knowledge in MNCs: The role of sources of subsidiary knowledge and organizational context. *Journal of International Management*, 8(1), 49-67.
- Franko, L. G. (1974). The Move Toward a Multidivisional Structure in European Organizations. *Administrative Science Quarterly*, 19(4), 493-506.
- Freeman, S., Hutchings, K., & Chetty, S. K. (2012). Born-Globals and Culturally Proximate Markets. *Management International Review*, 52, 425-460.
- Frost, T. S., Birkinshaw, J. M., & Ensign, P. C. (2002). Centers of excellence in multinational corporations. *Strategic Management Journal*, 23(11), 997-1018.
- Fuller, C. (2005). Corporate repeat investment and regional institutional capacity: the case of after-care services in Wales. *European Urban and Regional Studies*, 12(1), 5-21.
- Furnham, A. (1986). Response bias, social desirability and dissimulation. *Personality and individual differences*, 7(385-400).
- Gaffney, N., Kedia, B., & Clampit, J. (2013). A resource dependence perspective of EMNE FDI strategy. *International Business Review*, 22, 1092-1100.
- Galbraith, J. R. (1973). *Designing complex organizations*. Reading, MA: Addison-Wesley.

- Galbraith, J. R. (2000). *Designing the global corporation*. San Francisco, CA: Jossey-Bass.
- Gammelgaard, J., McDonald, F., Stephan, A., Tüselmann, H., & Dörrenbächer, C. (2012). The impact of increases in subsidiary autonomy and network relationships on performance. *International Business Review*, 21(6), 1158-1172.
- Gammelgaard, J., McDonald, F., Tüselmann, H., Dörrenbächer, C., & Stephan, A. (2009). Subsidiary Role and Skilled Labour Effects in Small Developed Countries. *Management International Review*, 49(1), 27-42.
- Gammelgaard, J., McDonald, F., Tüselmann, H., Dörrenbächer, C., & Stephan, A. (2011). Effective autonomy, organisational relationships and skilled jobs in subsidiaries. *Management Research Review*, 34(4), 366-385.
- Garnier, G. (1982). Context and Decision Making Autonomy in the Foreign Affiliates of U.S. Multinational Corporations. *Academy of Management Journal*, 25(4), 893-908.
- Gates, S. R., & Egelhoff, W. G. (1986). Centralization in Headquarters-Subsidiary Relationships. *Journal of International Business Studies*, 17(2), 71-92.
- Ghemawat, P. (2001). Distance still matters: The hard reality of global expansion. *Harvard Business Review*, 79(8), 137-147.
- Ghoshal, S. (1986). *The innovative multinational: A differentiated network of organizational roles and management processes*. Boston, MA: Harvard Business School.
- Ghoshal, S., & Bartlett, C. A. (1990). The Multinational Corporation as an Interorganizational Network. *The Academy of Management Review*, 15(4), 603-625.
- Ghoshal, S., & Nohria, N. (1989). Internal differentiation within multinational corporations. *Strategic Management Journal*, 10(4), 323-337.
- Glückler, J. (2014). How controversial innovation succeeds in the periphery? A network perspective of BASF Argentina. *Journal of Economic Geography*, 14(5), 903-927.

- Gnyawali, D. R., Singal, M., & Mu, S. (2009). Knowledge ties among subsidiaries in MNCs: A multi-level conceptual model. *Journal of International Management*, 15(4), 387-400.
- Goggin, W. (1974). How the multidimensional structure works at Dow Corning. *Harvard Business Review*, 55(1), 54-65.
- Golikova, V., Karhunen, P., & Kosonen, R. (2011). Subsidiary evolution in a transition economy: Kemira GrowHow in the Russian fertilizer market. *Journal For East European Management Studies*, 16(1), 9-30.
- Gong, Y. (2003). Subsidiary staffing in multinational enterprises: Agency, resources, and performance. *Academy of Management Journal*, 46(6), 728-739.
- Goold, M., & Campbell, A. (2002). Parenting in complex structures. *Long Range Planning*, 35, 219-243.
- Gove, W. R., & Geerken, M. R. (1977). Response bias in surveys of mental health: and empirical investigation. *American journal of Sociology*, 82, 1289-1317.
- Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research*. Thousand Oaks, CA: Sage.
- Gummesson, E. (2003). All research is interpretive! *Journal of Business and Industrial Marketing*, 18(6/7), 482-492.
- Gupta, A. K., & Govindarajan, V. (1991). Knowledge flows and the structure of control within multinational corporations. *Academy of Management Review*, 16(4), 768-792.
- Gupta, A. K., & Govindarajan, V. (1994). Organizing for knowledge flows within MNCs. *International Business Review*, 3(4), 443-457.
- Gupta, A. K., & Govindarajan, V. (2000). Knowledge flows within MNCs. *Strategic Management Journal*, 21, 473-496.
- Håkansson, H. (1987). *Industrial technological development. A network approach*. London: Croom, Helm.

- Hall, P. A., & Soskice, D. (2001). *Varieties of capitalism: The institutional foundations of comparative advantage*. Oxford: Oxford University Press.
- Hansen, J. T. (2004). Thoughts on knowing: Epistemic implications of counseling practice. *Journal of Counseling & Development, 82*, 131-138.
- Harman, H. (1967). *Modern factor analysis*. Chicago, IL: University of Chicago Press.
- Hart, S. L. (1995). A Natural-Resource-Based View of the Firm. *Academy of Management Review, 20*(4), 986-1014.
- Hartigan, J. A. (1975). *Clustering Algorithms*. New York: John Wiley & Sons.
- Harzing, A. W. K. (1997). Response rates in international mail surveys: Results of a 22 country study. *International Business Review, 6*(6), 641-665.
- Harzing, A. W. K. (1999). *Managing the multinationals: an international study of control mechanisms*. Northampton, UK: Edward Elgar.
- Harzing, A. W. K., & Noorderhaven, N. (2006a). Geographical distance and the role and management of subsidiaries: The case of subsidiaries down-under. *Asia Pacific Journal of Management, 23*(2), 167-185.
- Harzing, A. W. K., & Noorderhaven, N. (2006b). Knowledge flows in MNCs: An empirical test and extension of Gupta and Govindarajan's typology of subsidiary roles. *International Business Review, 15*(3), 195-214.
- Harzing, A. W. K., Pudelko, M., & Sebastian, R. B. (2015). The Bridging Role of Expatriates and Inpatriates in Knowledge Transfer in Multinational Corporations. *Human Resource Management, n/a-n/a*. doi: 10.1002/hrm.21681
- Haugland, S. A. (2010). The integration-responsiveness framework and subsidiary management: A commentary. *Journal of Business Research, 63*, 94-96.
- Hauschildt, J., & Kirchmann, E. (2001). Teamwork for innovation - the 'troika' of promoters. *R&D Management, 31*(1), 41-49.
- Hedlund, G. (1981). Autonomy of Subsidiaries and Formalization of Headquarters–Subsidiary Relationships in Swedish MNCs. In L. Otterbeck (Ed.), *The Management of Headquarters: Subsidiary Relationships in Multinational Corporations* (pp. 25-78). Gower: Aldershot.

- Hedlund, G. (1986). The hypermodern MNC—A heterarchy? *Human Resource Management*, 25(1), 9-35. doi: 10.1002/hrm.3930250103
- Hedlund, G. (1993). Assumptions of hierarchy and heterarchy: An application to the multinational corporation. In S. Ghoshal & D. E. Westney (Eds.), *Organization theory and the multinational corporation*. London: Macmillan.
- Hedlund, G. (1994a). A model of knowledge management and the N-form corporation. *Strategic Management Journal*, 15, 73-90.
- Hedlund, G. (1994b). A model of knowledge management and the N-form corporation. *Strategic Management Journal*, 15, 73-90.
- Hedlund, G., & Åman, P. (1983). *Managing relationships with foreign subsidiaries: Mekanpublikation*.
- Helfat, C. E., Finkelstein, S., Mitchell, W., Peteraf, M., Singh, H., Teece, D., & Winter, S. G. (2009). *Dynamic capabilities: Understanding strategic change in organizations*: Wiley-Blackwell.
- Henderson, J., Dicken, P., Hess, M., Coe, N., & Yeung, H. W. (2002). Global production networks and the analysis of economic development. *Review of International Political Economy*, 9(3), 436-464.
- Hillman, A. J., Withers, M. C., & Collins, B. J. (2009). Resource Dependence Theory: A Review. *Journal of Management*, 35(6), 1404-1427.
- Hite, J. M., & Hesterly, W. S. (2001). The evolution of firm networks: From emergence to early growth of the firm. *Strategic Management Journal*, 22, 275-286.
- Ho, Y.-C. (2014). Multilateral knowledge transfer and multiple embeddedness. *Multinational Business Review*, 22(2), 155-175. doi: doi:10.1108/MBR-04-2014-0010
- Hoenen, A. K., Nell, P. C., & Ambos, B. (2013). MNE entrepreneurial capabilities at intermediate levels: the roles of external embeddedness and heterogeneous environments. *Long Range Planning*, 47(1-2).
- Hofer, C. W. (1975). Toward a Contingency Theory of Business Strategy. *Academy of Management Journal*, 18(4), 784-810.

- Hoffman, R. (1994). Generic Strategies for Subsidiaries of Multinational Corporations. *Journal of Managerial Issues*, 6(1), 69-87.
- Hogenbirk, A. E., & Kranenburg, H. L. (2006). Roles of foreign owned subsidiaries in a small economy. *International Business Review*, 15(1), 53-67.
- Holm, U., Holmstrom, C., & Sharma, D. (2005). Competence development through business relationships or competitive environment? Subsidiary impact on MNC competitive advantage. *Management International Review*, 45(2), 197-218.
- Holm, U., Johanson, J., & Thilenius, P. (1995). Headquarters' knowledge of subsidiary network contexts in the multinational corporation. *International Studies of Management & Organization*, 25(1,2), 97-119.
- Holm, U., Malmberg, A., & Sölvell, Ö. (2003). Subsidiary impact on host-country economies—the case of foreign-owned subsidiaries attracting investment into Sweden. *Journal of Economic Geography*, 3(4), 389-408.
- Holm, U., & Sharma, D. D. (2006). Subsidiary marketing knowledge and strategic development of the multinational corporation. *Journal of International Management*, 12(1), 47-66.
- Homans, G. (1961). *Social Behavior: Its Elementary Forms*. New York: Harcourt Brace Jovanovich.
- Hood, N., & Taggart, J. H. (1999). Subsidiary development in German and Japanese manufacturing subsidiaries in the British Isles. *Regional Studies*, 33(6), 513-528.
- Hoopes, D. G., Madsen, T. L., & Walker, G. (2003). Guest editors' introduction to the special issue: why is there a resource based view? Toward a theory of competitive heterogeneity. *Strategic Management Journal*, 24(10), 889-902.
- Hulbert, J., & Brandt, W. (1980). *Managing the Multinational Subsidiary*. New York.: Holt, Rinehart and Winston,.
- Hull, L. (2002). Foreign owned banks: Implications for New Zealand's financial stability. Wellington, NZ: Reserve Bank of New Zealand.
- Hult, G. T. M., Ketchen-Jr, D. J., Cavusgil, S. T., & Calantone, R. J. (2006). Knowledge as a Strategic Resource in Supply Chains. *Journal of Operations Management*, 24, 5.

- Hurmerinta-Peltomäki, L., & Nummela, N. (2004). First the Sugar, Then the Eggs . . . Or the Other Way Round? Mixing Methods in International Business Research *Handbook of Qualitative Research Methods for International Business*. Cheltenham, UK: 'Edward Elgar Publishing, Inc.'
- Hutzschenreuter, T., Voll, J. C., & Verbeke, A. (2011). The impact of added cultural distance and cultural diversity on international expansion patterns: a Penrosean perspective. *Journal of Management Studies*, 48, 305-329.
- Inkson, J. H. K., Pugh, D. S., & Hickson, D. J. (1970). Organization context and structure: an abbreviated replication. *Administrative Science Quarterly*, 15(3), 318-329.
- Jacobs, D. (1974). Dependency and Vulnerability: An Exchange Approach to the Control of Organizations. *Administrative Science Quarterly*, 19(1), 45-59.
- Jakobsen, S., & Rusten, G. (2003). The autonomy of foreign subsidiaries: An analysis of headquarter-subsidiary relations. *Norsk Geografisk Tidsskrift*, 57(1), 20-30.
- Jarillo, J. C., & Martínez, J. I. (1990). Different roles for subsidiaries: The case of multinational corporations in Spain. *Strategic Management Journal*, 11(7), 501-512.
- Jensen, P., & Pedersen, T. (2011). The economic geography of offshoring: the fit between activities and local context. *Journal of Management Studies*, 48, 352-372.
- Johanson, J., & Mattsson, L.-G. (1985). Marketing investments and market investments in industrial networks. *International Journal of Research in Marketing*, 2(3), 185-195.
- Johanson, J., & Vahlne, J.-E. (1977). The Internationalization Process of the Firm - A Model of Knowledge Development and Increasing Foreign Market Commitments. *Journal of International Business Studies*, 8, 23-32.
- Johanson, J., & Vahlne, J.-E. (2009). The Uppsala internationalization process model revisited: From liability of foreignness to liability of outsidership. *Journal of International Business Studies*, 40(9), 1411-1431.
- Johnson, J. H. J. (1995). An Empirical Analysis of the Integration-Responsiveness framework: US construction Equipment Industry Firms in Global Competition. *Journal of International Business Studies*, 26(3).

- Johnson, W. H. A., & Medcof, J. W. (2002). Entrepreneurial behaviour in the MNC: an extended agency theory analysis of the parent-subsidiary relationship and subsidiary initiative. *The International Journal of Entrepreneurship and Innovation Management*, 2(2/3), 186–203.
- Johnston, S., & Menguc, B. (2007). Subsidiary size and the level of subsidiary autonomy in multinational corporations: A quadratic model investigation of Australian subsidiaries. *Journal of International Business Studies*, 38(5), 787-801.
- Jong, G. D., & Dut, V. V. (2010). The impact of the institutional environment on the autonomy of MNCs' subsidiaries. *Problems and Perspectives in Management*, 8(2), 53-63.
- Jong, G. D., Dut, V. V., Jindra, B., & Marek, P. (2015). Does country context distance determine subsidiary decision-making autonomy? Theory and evidence from European transition economies. *International Business Review*.
- Joyce, W. (1986). Matrix organization: A social experiment. *The Academy of Management Journal*, 29(3), 536-561.
- Joyce, W. F., McGee, V. E., & Slocum, J. W. J. (1997). Designing lateral organizations: An analysis of the benefits, costs, and enablers of nonhierarchical organizational forms. *Decision Sciences*, 28, 1-25.
- Judge, W. Q., & Li, S. (2012). Organization Design for Foreign Subsidiaries of Multinational Enterprises: A Contingency Perspective. *International Journal of Business and Management*, 7(3).
- Justel, A., Peña, D., & Zamar, R. (1997). A multivariate Kolmogorov-Smirnov test of goodness of fit. *Statistics & Probability Letters*, 35(3), 251-259.
- Kanter, R. M. (1982). The middle manager as innovator. *Harvard Business Review*, 60(4), 95-105.
- Kaplan, R. E. (1984). Trade routes: The manager's network of relationships. *Organizational Dynamics*, 12(4), 37-52.
- Kaplan, S., Murray, F., & Henderson, R. (2003). Discontinuities and senior management: assessing the role of recognition in pharmaceutical firm response to biotechnology. *Industrial and Corporate Change*, 12(2).

- Kasper, H., Lehrer, M., Mühlbacher, J., & Müller, B. (2009). Integration-Responsiveness and Knowledge-Management Perspectives on the MNC: A Typology and Field Study of Cross-Site Knowledge-Sharing Practices. *Journal of Leadership & Organizational Studies*, 15(3).
- Katz, R., & Allen, T. J. (1982). Investigating the Not Invented Here (NIH) syndrome: A look at the performance, tenure, and communication patterns of 50 R & D project groups. *R&D Management*, 12(1), 7-20.
- Kawai, N., & Strange, R. (2014). Subsidiary autonomy and performance in Japanese multinationals in Europe. *International business research*, 504-515.
- Kedia, B. L., & Mukherjee, D. (2009). Understanding offshoring: a research framework based on disintegration, location and externalization advantages. *Journal of World Business*, 44, 250-261.
- Keupp, M. M. (2008). *Subsidiary initiatives in international research and development*. Saarbruecken: Suedwestdeutscher Verlag fuer Hochschulschriften.
- Keupp, M. M., Palmié, M., & Gassmann, O. (2011). Achieving Subsidiary Integration in International Innovation by Managerial “Tools”. *Management International Review*, 51(2), 213-239. doi: 10.1007/s11575-011-0072-5
- Kim, W. C., & Mauborgne, R. A. (1991). Implementing global strategies: The role of procedural justice. *Strategic Management Journal*, 12(S1), 125-143. doi: 10.1002/smj.4250120910
- Kim, W. C., & Mauborgne, R. A. (1996). Procedural justice and managers' in-role and extra-role behavior: The case of the multinational. *Management Science*, 42(4), 499-515.
- Kincheloe, J. L., & McLaren, P. L. (2000). Rethinking critical theory and qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (2nd ed., pp. 279-313). Thousand Oaks, CA: Sage.
- Kirzner, I. M. (1973). *Competition and Entrepreneurship*. Chicago, IL.: University of Chicago Press.
- Knight, G. A., Madsen, T. K., & Servais, P. (2004). An inquiry into born global firms in Europe and the USA. *International Marketing Review*, 21(6), 645-665.
- Kolodny, H. (1981). Managing in a matrix. *Business Horizons*, 24(2), 17-35.

- Kor, Y. Y., & Mahoney, J. T. (2004). Edith Penrose's (1959) Contributions to the Resource based View of Strategic Management. *Journal of Management Studies*, 41(1), 183-191.
- KPMG. (1995). *Foreign ownership - cause for concern*. Wellington: KPMG.
- Kraaijenbrink, J., Spender, J. C., & Groen, A. J. (2010). The Resource-Based View: A Review and Assessment of Its Critiques. *Journal of Management*, 36(1), 349-372.
- Kruskal, W. H., & Wallis, W. A. (1952). Use of Ranks in One-Criterion Variance Analysis. *Journal of the American Statistical Association*, 47(260), 583-621.
- Lai, H. C., Gibbons, P. T., & Schoch, H. P. (2006). The management of information and managers in subsidiaries of multinational corporations. *British Journal of Management*, 17, 153-165.
- Lancaster, G. (2005). *Research methods in management: A concise introduction to research in management and business consultancy*. Burlington, MA: Elsevier Butterworth-Heinemann.
- Law, J. (1999). *After ANT: complexity, naming and typology*. Oxford: Blackwell.
- Lazarfeld, P. F., & Menzel, H. (1961). On the Relation Between Individual and Collective Properties. In A. Etzioni (Ed.), *Complex Organizations: A Sociological Reader* (pp. 422-440). New York: Holt Rinehart & Winston.
- Lei, D., Hitt, M. A., & Bettis, R. (1996). Dynamic core competences through meta-learning and strategic context. *Journal of Management*, 22(4), 549-569.
- Lemański, M. K. (2014). Reverse Transfer of HRM Practices from Emerging Market Subsidiaries: Organizational and Country-Level Influences *Multinational Enterprises, Markets and Institutional Diversity* (pp. 399-415).
- Leong, S. M., & Tan, C. H. (1993). Managing across Borders: An Empirical Test of the Bartlett and Ghoshal [1989] Organizational Typology. *Journal of International Business Studies*, 24(3), 449-464.
- Li, G. H., Yu, C. M., & Seetoo, D. H. (2010). Toward a theory of regional organisation: the emerging role of subregional headquarters and the impact on subsidiaries. *Management International Review*, 50(1), 5-33.

- Li, J., & Lee, R. P. (2014). Can knowledge transfer within MNCs hurt subsidiary performance? The role of subsidiary entrepreneurial culture and capabilities. *Journal of World Business*.
- Li, X., Liu, X., & Thomas, H. (2013). Market Orientation, Embeddedness and the Autonomy and Performance of Multinational Subsidiaries in an Emerging Economy. *Management International Review*, 1-29. doi: 10.1007/s11575-013-0177-0
- Lin, S.-L., & Hsieh, A.-T. (2010a). The integration-responsiveness framework and subsidiary management: A response. *Journal of Business Research*, 63, 911-913.
- Lin, S.-L., & Hsieh, A.-T. (2010b). International strategy implementation: Roles of subsidiaries, operational capabilities, and procedural justice. *Journal of Business Research*, 63, 52-59.
- Lincoln, Y. S., & Guba, E. G. (2000). Paradigmatic controversies, contradictions, and emerging confluences. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (2nd ed., pp. 163-188). Thousand Oaks, CA: Sage.
- Little, R. J. A. (1988). A Test of Missing Completely at Random for Multivariate Data with Missing Values. *Journal of the American Statistical Association*, 83(404), 1198-1202.
- Lopez, L. E., Kundu, S. K., & Ciravegna, L. (2009). Born global vs. born regional: Evidence from an exploratory study on the Costa Rican software industry. *Journal of International Business Studies*, 40(7), 1228-1238.
- Lumley, T., Diehr, P., Emerson, S., & Chen, L. (2002). The importance of the normality assumption in large public health data sets. *Annual Review of Public Health*, 23, 151-169.
- Luo, Y. (2002). Organizational dynamics and global integration: A perspective from subsidiary managers. *Journal of International Management*, 8(2), 189-215. doi: [http://dx.doi.org/10.1016/S1075-4253\(02\)00053-4](http://dx.doi.org/10.1016/S1075-4253(02)00053-4)
- Madureira, R. (2005). THE ROLE OF PERSONAL CONTACTS OF FOREIGN SUBSIDIARY MANAGERS IN THE COORDINATION OF INDUSTRIAL MULTINATIONALS *Managing Product Innovation* (pp. 337-521).
- Mahnke, V., Ambos, B., Nell, P. C., & Hobdari, B. (2012). How do regional headquarters influence corporate decisions in networked MNCs? *Journal of International Management*, 18, 293-301.

- Mahoney, J. T. (2005). *Economic Foundations of Strategy*. University of Illinois at Urbana-Champaign, USA SAGE Publications, Inc
- Maier, R. (2004). *Knowledge Management Systems* (1 ed.). New York: Springer.
- Malnight, T. W. (1995). Globalization of an ethnocentric firm: An evolutionary perspective. *Strategic Management Journal*, *16*(2), 119-141. doi: 10.1002/smj.4250160204
- Malnight, T. W. (1996). The transition from decentralized to network-based MNC structures: An evolutionary perspective. *Journal of International Business Studies*, *27*(1), 43-65.
- Manolopoulos, D. (2006). The concept of autonomy in the subsidiary management research: A conceptual investigation. *Journal of Transnational Management*, *11*(4), 45-62.
- Manolopoulos, D. (2008). A systematic review of the literature and theoretical analysis of subsidiary roles. *Journal of Transnational Management*, *13*(1), 23-57.
- Manolopoulos, D. (2010). Roles of foreign-owned subsidiaries in a European peripheral economy. *Management Research Review*, *33*(8), 840-859.
- Manolopoulos, D., Papanastassiou, M., & Pearce, R. (2005). Technology sourcing in multinational enterprises and the roles of subsidiaries: An empirical investigation. *International Business Review*, *14*(3), 249-267. doi: 10.1016/j.ibusrev.2005.01.002
- Martine, R. H., & Jonathon, N. C. (2014). Barriers to knowledge seeking within MNC teams: Which differences matter most? *Journal of International Business Studies*.
- Marulanda, C. C., Rodríguez, J. J. M., Barber, J. B., & Darder, F. L. (2015). *A Microeconomic Analysis of the Springboard Subsidiary: The Case of Spanish Firms*. Economics Discussion Papers, No 2015-23. Kiel Institute for the World Economy.
- McDonald, F., Tüselmann, H. J., Voronkova, S., & Allen, M. (2006). *The development of foreign-owned subsidiaries and the supply of European markets*. Working Paper (2006, March). Manchester Metropolitan University. Manchester, UK.

- McDonald, F., Tüselmann, H. J., Voronkova, S., & Dimitratos, P. (2005). The strategic development of foreign owned subsidiaries and employment in host locations in the UK. *Environment and Planning C: Government and Policy*, 23(6), 867-882.
- McDonald, F., Tüselmann, H. J., Voronkova, S., & Golesorkhi, S. (2011). The strategic development of subsidiaries in regional trade blocs. *Multinational Business Review*, 19(3), 256 - 271.
- McDonald, F., Warhurst, S., & Allen, M. (2008). Autonomy, Embeddedness, and the Performance of Foreign Owned Subsidiaries. *Multinational Business Review*, 16(3), 73 - 92.
- McDougall, P., & Oviatt, B. M. (2000). International entrepreneurship: the intersection of two research paths. *The Academy of Management Journal*, 43(5), 902-906.
- McKelvey, B. (1982). *Organizational Systematics: Taxonomy, Evolution, Classification*. Berkeley: University of California Press.
- Meyer, K. E. (2015). What is “strategic asset seeking FDI”? *Multinational Business Review*, 23(1).
- Meyer, K. E., & Estrin, S. (2014). Local context and global strategy: extending the integration responsiveness framework to subsidiary strategy. *Global Strategy Journal*, 4, 1-19.
- Meyer, K. E., Mudambi, R., & Narula, R. (2011). Multinational enterprises and local contexts: The opportunities and challenges of multiple embeddedness. *Journal of Management Studies*, 48(2), 235-252.
- Meyer, K. E., & Yu-Shan, S. (2014). Integration and responsiveness in subsidiaries in emerging economies. *Journal of World Business*.
- Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded source book* (2 ed.). Thousand Oaks CA: Sage.
- Miller, D. (1983). The correlates of entrepreneurship in three types of firms. *Management Science*, 29(7), 770-791.
- Miller, D. (1986). Configurations of strategy and structure: A synthesis. *Strategic Management Journal*, 7, 233-249.

- Miller, D. (2003). An asymmetry based view of advantage: towards an attainable sustainability. *Strategic Management Journal*, 24(10), 961-976.
- Miller, D., & Friesen, P. H. (1984). *Organizations: A quantum view*. Englewood Cliffs, NJ: Prentice-Hall.
- Mirchandani, D. A., & Lederer, A. L. (2005). *Procedural Justice and the Planning of Information Systems in Multinational Firms*. Paper presented at the 38th Hawaii International Conference on System Sciences, USA.
- Mirchandani, D. A., & Lederer, A. L. (2014). Autonomy and procedural justice in strategic systems planning. *Information Systems Journal*, 24(29-59).
- Monteiro, L. F. (2015). Selective attention and the initiation of the global knowledge-sourcing process in multinational corporations. *Journal of International Business Studies*.
- Monteiro, L. F., Arvidsson, N., & Birkinshaw, J. M. (2008). Knowledge Flows Within Multinational Corporations: Explaining Subsidiary Isolation and Its Performance Implications. *Organization Science*, 19(1).
- Morgan, G. (2006). *Images of Organization*: SAGE Publications.
- Morschett, D., Schramm-Klein, H., & Zentes, J. (2015). *Strategic International Management* (3rd ed.). Germany: Springer.
- Moser, C. A., & Kalton, G. (1971). *Survey methods in social investigation*. England: Dartmouth Publishing Company.
- Mudambi, R., & Navarra, P. (2004). Is Knowledge Power? Knowledge Flows, Subsidiary Power and Rent-Seeking within MNCs. *Journal of International Business Studies*, 35(5), 385-406.
- Mudambi, R., & Pedersen, T. (2007). Agency theory and resource dependency theory: Complementary explanations for subsidiary power in multinational corporations. In T. Pedersen & H. Volberda (Eds.), *Bridging IB theories, constructs, and methods across cultures and social sciences*. Basingstoke: Palgrave Macmillan.
- Mudambi, R., Pedersen, T., & Andersson, U. (2014). How subsidiaries gain power in multinational corporations. *Journal of World Business*, 101-113.

- Mudambi, R., Piscitello, L., & Rabbiosi, L. (2014). Reverse Knowledge Transfer in MNEs: Subsidiary Innovativeness and Entry Modes. *Long Range Planning*, 47(1–2), 49-63. doi: <http://dx.doi.org/10.1016/j.lrp.2013.08.013>
- Murtha, T. P., Lenway, S. A., & Bagozzi, R. P. (1998). Global mind-sets and cognitive shifts in a complex multinational corporation. *Strategic Management Journal*, 19, 97-114.
- Nachum, L., & Zaheer, S. (2005). The persistence of distance? The impact of technology on MNE motivations for foreign investments. *Strategic Management Journal*, 26, 747-767.
- Najafi-Tavani, Z., Giroud, A., & Andersson, U. (2014). The interplay of networking activities and internal knowledge actions for subsidiary influence within MNCs. *Journal of World Business*, 122-131.
- Najafi-Tavani, Z., Zaefarian, G., Naudé, P., & Giroud, A. (2015). Reverse knowledge transfer and subsidiary power. *Industrial Marketing Management*.
- Narula, R. (2014). Exploring the Paradox of Competence-creating Subsidiaries: Balancing Bandwidth and Dispersion in MNEs. *Long Range Planning*, 47(1–2), 4-15. doi: <http://dx.doi.org/10.1016/j.lrp.2013.10.006>
- Narula, R., & Cuervo-Cazurra, A. (2015). A set of motives to unite them all? Revisiting the principles and typology of internationalization motives. *Multinational Business Review*, 23(1).
- Nell, P. C., Ambos, B., & Schlegelmilch, B. B. (2011a). The benefits of hierarchy: exploring the effects of regional headquarters in multinational corporations. In C. G. Rasmussen (Ed.), *Advances in international management* (Vol. 24, pp. 85-106). Bingley: Emerald Publishing Ltd.
- Nell, P. C., Ambos, B., & Schlegelmilch, B. B. (2011b). The MNC as an externally embedded organization: An investigation of embeddedness overlap in local subsidiary networks. *Journal of World Business*, 46(4), 487-505.
- Newbert, S. L. (2007). Empirical research on the resource-based view of the firm: an assessment and suggestions for future research. *Strategic Management Journal*, 28, 121-147.
- Nguyen, Q. T. K. (2014). The Regional Strategies of British Multinational Subsidiaries in South East Asia. *British Journal of Management*, 25, S60-S76. doi: 10.1111/1467-8551.12006

- Nguyen, Q. T. K., & Rugman, A. M. (2014). Internal equity financing and the performance of multinational subsidiaries in emerging economies. *Journal of International Business Studies*.
- Nienhueser, W. (2008). Resource Dependence Theory - How Well Does It Explain Behavior of Organizations? *Management Revue - The international Review of Management Studies*, 19(1+2), 10-32.
- Nohria, N., & Ghoshal, S. (1994). Differentiated fit and shared values: alternatives for managing headquarters-subsidiary relations. *Strategic Management Journal*, 15, 491-502.
- Nohria, N., & Ghoshal, S. (1997). *The differentiated network: Organizing multinational corporations for value creation*. San Francisco: Jossey-Bass.
- NZ-Legislation. (2005). Overseas Investment Act 2005. from <http://www.legislation.govt.nz/act/public/2005/0082/latest/DLM358028.html>
- O'Cathain, A., & Thomas, K. J. (2004). "Any other comments?" Open questions on questionnaires – a bane or a bonus to research? *BMC Medical Research Methodology*, 4(25).
- O'Donnell, S. W. (2000). Managing foreign subsidiaries: Agents of headquarters, or an interdependent network? *Strategic Management Journal*, 21(5), 525-548.
- OECD. (2009). *OECD Economic Surveys: New Zealand 2009*. OECD.
- OECD. (2011). *OECD Economic Surveys: New Zealand 2011*. OECD.
- Ouchi, W. (1981). *How American business can meet the Japanese challenge*. Massachusetts: Addison-Wesley Publishing Company.
- Ouchi, W., & Maguire, M. (1975). Organizational control: Two functions. *Administrative Science Quarterly*, 20(559-569).
- Pace, C. R. (1939). Factors Influencing questionnaire returns from former university students. *Journal of Applied Psychology*, 23(3), 388-397.
- Palmié, M., Keupp, M. M., & Gassmann, O. (2014). Pull the Right Levers: Creating Internationally “Useful” Subsidiary Competence by Organizational Architecture.

Long Range Planning, 47(1-2), 32-48. doi:
<http://dx.doi.org/10.1016/j.lrp.2013.10.007>

- Parker, R. (2014). How technological change affects power relations in global markets: remote developers in the console and mobile games industry. *Environment and Planning A*, 46(1), 168.
- Parkhe, A. (1993). "Messy" research, methodological predispositions, and theory development in international joint ventures. *Academy of Management Review*, 18(2), 277-268.
- Patel, M., Doku, V., & Tennakoon, L. (2003). Challenges in recruitment of research participants. *Advances in Psychiatric Treatment*, 9.
- Paterson, S. L., & Brock, D. M. (2002). The development of subsidiary-management research: Review and theoretical analysis. *International Business Review*, 11(2), 139-163.
- Pearce, R. D., & Papanastassiou, M. (1996). *The Technological Competitiveness of Japanese Multinationals: European Dimensions*. Ann Arbor, MI: University of Michigan Press.
- Pearce, R. D., & Tavares, A. T. (2000). Emerging trading blocs and their impact on the strategic evolution of multinationals. *Managerial Finance*, 26(1), 26-40.
- Pedersen, T. (2006). Determining Factors of Subsidiary Development. In A. T. Tavares & A. Teixeira (Eds.), *Multinationals, Clusters and Innovation*. New York: Palgrave Macmillan.
- Peng, G. Z., & Beamish, P. W. (2014). MNC subsidiary size and expatriate control: Resource-dependence and learning perspectives. *Journal of World Business*, 49, 51-62.
- Penrose, E. T. (1959). *The Theory of the Growth of the Firm* (3 ed.). Oxford: Blackwell.
- Penwarden, R. (2013). How to Avoid Nonresponse Error. from <http://fluidsurveys.com/university/how-to-avoid-nonresponse-error/>
- Perri, A., & Andersson, U. (2014). Knowledge outflows from foreign subsidiaries and the tension between knowledge creation and knowledge protection: Evidence from the semiconductor industry. *International Business Review*, 23, 63-75.

- Perry, C. (1998). Process of a case study methodology for postgraduate research in marketing. *European Journal of Marketing*, 32(9/10), 785-802.
- Perry, C. (2001). Case research in marketing. *The Marketing Review*, 1(303-323).
- Pettigrew, A. (1997). What is a processual analysis? *Scandinavian Journal of Management*, 13(4), 337-348.
- Pfeffer, J., & Salancik, G. R. (1978). *The External Control of Organizations: A Resource Dependence Perspective*. Stanford: Harper & Row.
- Pfeffer, J., & Salancik, G. R. (2003). *The External Control of Organizations: A Resource Dependence Perspective*. Stanford: Stanford Business Classics.
- Picard, J. (1977). Factors of variance in multinational marketing control. In L. G. Mattson & F. Widersheim-Pau (Eds.), *Recent Research on the Internationalization of Business*. Uppsala: Almqvist & Wikse.
- Picard, J. (1980). Organizational structures and integrative devices in European multinational corporations. *Columbia Journal of World Business*, 51(1), 30-35.
- Piekkari, R., Nell, P., & Ghauri, P. (2010). Regional management as a system: a longitudinal case study. *Management International Review*, 50, 513-532.
- Piekkari, R., & Welch, C. (2010). The human dimension in multinational management: A way forward. *Scandinavian Journal of Management*, 26(4), 467-476.
- Ponterotto, J. G. (2005). Qualitative Research in Counseling Psychology: A Primer on Research Paradigms and Philosophy of Science. *Journal of Counseling Psychology*, 52(2), 126-136.
- Popper, K. R. (1959). *The logic of scientific discovery*. London: Routledge & Kegan Paul.
- Porter, M. E. (1979). How Competitive Forces Shape Strategy. *Harvard Business Review*, 57(2), 137-145.
- Porter, M. E. (1986). Changing patterns of international competition. *California Management Review*, 28, 9-40.
- Porter, M. E. (1990). *The Competitive Advantage of Nations*. New York: Free Press.

- Prahalad, C. K. (1976). *The Strategic Process in a Multinational Corporation*. PhD dissertation. School of Business Administration. Harvard University. Boston.
- Prahalad, C. K., & Doz, Y. L. (1981). An Approach to Strategic Control in MNCs. *Sloan Management Review*, 22(4), 5-13.
- Prahalad, C. K., & Doz, Y. L. (1987). *The multinational mission: balancing local demands and global vision*. New York: Free Press.
- Priem, R. L., & Butler, J. E. (2001). Is the resource-based "view" a useful perspective for strategic management research? *Academy of Management Review*, 26(1), 22-40.
- Punch, K. (2003). *Introduction to Social Research Quantitative and Qualitative Approaches*. London: Sage.
- Rabbiosi, L. (2011). Subsidiary roles and reverse knowledge transfer: An investigation of the effects of coordination mechanisms. *Journal of International Management*, 17, 97-113.
- Ragins, B. R., & Sundstrom, E. (1989). Gender and power in organizations: A longitudinal perspective. *Psychological Bulletin*, 105(1), 51-88.
- Randoy, T., & Li, J. (1998). Global Resource Flows and MNE Network Integration. In J. M. Birkinshaw & N. Hood (Eds.), *Multinational Corporate Evolution and Subsidiary Development* (pp. 77-85). London: Macmillan.
- Raziq, M. M., Borini, F. M., & Perry, M. (2012). Subsidiary initiatives and subsidiary autonomy: Evidence from New Zealand and Brazil. *International Entrepreneurship and Management Journal*, 1-17. doi: 10.1007/s11365-012-0240-5
- Raziq, M. M., Borini, F. M., Perry, M., & Battisti, M. (2013). Subsidiary Characteristics and Impact on Subsidiary Strategic and Operational Autonomy. *Journal of Transnational Management*, 18(3), 219-241. doi: 10.1080/15475778.2013.817271
- Raziq, M. M., & Perry, M. (2012). Foreign direct investment in New Zealand: Does it justify negative assessment? *Regional Science Policy & Practice*, 4(2), 155-164.
- Raziq, M. M., & Perry, M. (2013). A Conceptual Model of Foreign Subsidiary Strategy and Management: The Case of New Zealand. *Journal of Applied Management and Entrepreneurship*, 18(3), 3-24.

- Raziq, M. M., Perry, M., & Battisti, M. (2014). International Roles of Foreign-owned Subsidiaries in New Zealand: an exploratory study. *International Journal of Innovation Management*, 18(5).
- Rea, L., & Parker, R. (1997). *Designing and Conducting Survey Research* (2 ed.). San Francisco, CA: Jossey Bass.
- Reeves, T. C., Duncan, W. J., & Ginter, P. M. (2003). Strategic Configurations in Health Services Organizations. *Journal of Business Research*, 56(1), 31-43.
- Reilly, M., & Sharkey, S. P. (2014). Subsidiary driven innovation within shifting MNC structures: Identifying new challenges and research directions. *Technovation*, 34(3), 190-202.
- Robbins, S. P., & Judge, T. A. (2012). *Essentials of Organizational Behavior*: Pearson.
- Rosenberg, B. (2002). News media ownership: How New Zealand is foreign dominated. *Pacific Journalism Review*, 8, 59-95.
- Rossi, P. H., Wright, J. D., & Anderson, A. B. (1983). *Handbook of survey research*. London: Academic Press.
- Roth, K., & Morrison, A. J. (1990). An Empirical Analysis of the Integration-Responsiveness Framework in Global Industries. *Journal of International Business Studies*, 21(4), 541-564.
- Roth, K., & Morrison, A. J. (1992). Implementing global strategy: Characteristics of global subsidiary mandates. *Journal of International Business Studies*, 23(4), 715-736.
- Roth, K., Schweiger, D. M., & Morrison, A. J. (1991). Global Strategy Implementation at the Business Unit Level: Operational Capabilities and Administrative Mechanisms. *Journal of International Business Studies*, 22(3), 369-402.
- Rugman, A. M., & Almodóvar, P. (2011). The born global illusion and the regional nature of international business. In R. Ramamurti & N. Hashai (Eds.), *Research in global strategic management: The future of foreign direct investment and the multinational enterprise* (Vol. 15, pp. 265-283). Bingley: Emerald.
- Rugman, A. M., & Verbeke, A. (2001). Subsidiary-specific advantages in multinational enterprises. *Strategic Management Journal*, 22(3), 237-250.

- Rugman, A. M., Verbeke, A., & Nguyen, Q. T. K. (2011). Fifty Years of International Business Theory and Beyond. *Management International Review*, 51(6), 755-786.
- Rugman, A. M., Verbeke, A., & Yuan, W. (2011). Re-conceptualizing Bartlett and Ghoshal's Classification of National Subsidiary Roles in the Multinational Enterprise. *Journal of Management Studies*, 48(2), 253-277.
- Sambharya, R. B., Kumaraswamy, A., & Banarjee, S. (2005). Information technologies and the future of the multinational enterprise. *Journal of International Management*, 11, 143-161.
- Santangelo, G. D. (2009). MNCs and linkages creation: Evidence from a peripheral area. *Journal of World Business*, 44(2), 192-205.
- Sayles, L. (1976). Matrix management: The structure with a future. *Organizational Dynamics*, Autumn, 2-17.
- Schmid, S. (2003). How Multinational Corporations Can Upgrade Foreign Subsidiaries: A Case Study from Central and Eastern Europe'. In H.-J. Stutig, W. Dorow, F. Claassen & S. Blazejewski (Eds.), *Change Management in Transition Economies. Integrating Corporate Strategy, Structure and Culture*. Basingstoke: Palgrave Macmillan.
- Schmid, S. (2004). The Roles of Foreign Subsidiaries in Network MNCs: A Critical Review of the Literature and Some Directions for Future Research. In J. Larimo (Ed.), *European Research on Foreign Direct Investment and International Human Resource Management* (pp. 237-255). Vaasa, Vaasan Yliopiston Julkaisuja: Proceedings of the University of Vaasa.
- Schmid, S., Dzedek, L. R., & Lehrer, M. (2014). From Rocking the Boat to Wagging the Dog: A Literature Review of Subsidiary Initiative Research and Integrative Framework. *Journal of International Management*, 20(2), 201-218. doi: <http://dx.doi.org/10.1016/j.intman.2013.06.001>
- Schmid, S., & Hefter, K. (2014). Evaluating the performance of foreign subsidiaries: an extension of Gupta/Govindarajan's role typology. In M. LAAKSONEN, A. ARSLAN & M. KONTKANEN (Eds.), *Contributions to International Business*.
- Schmid, S., & Schurig, A. (2003). The development of critical capabilities in foreign subsidiaries: Disentangling the role of the subsidiary's business network. *International Business Review*, 12(6), 755-782.

- Schwandt, T. A. (1994). Constructivist, interpretivist approaches to human inquiry. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (pp. 118-137). Thousand Oaks, CA: Sage.
- Scott-Kennel, J. (2001). *The Impact of foreign direct investment on New Zealand industry*. University of Waikato.
- Scott-Kennel, J. (2004). Foreign Direct Investment and the Competitiveness of New Zealand Industry: Key Findings from a Nationwide Survey. *University of Auckland Business Review*, 6(2), 41-49.
- Scott-Kennel, J. (2007). Foreign direct investment and local linkages: An empirical investigation. *Management International Review*, 47(1), 51-77.
- Scott-Kennel, J., & Akoorie, M. E. M. (2013). *International Business Strategy: A New Zealand Perspective* (2nd ed.). Hamilton: MI Publishing.
- Seddon, P. B. (2014). Implications for strategic IS research of the resource-based theory of the firm: A reflection. *Journal of Strategic Information Systems*, 257-269.
- Shapiro, S. S., & Wilk, M. B. (1965). An Analysis of Variance Test for Normality (Complete Samples). *Biometrika*, 52(3), 591-611.
- Shook, C. L., Adams, G. L., Ketchen Jr, D. J., & Craighead, C. W. (2009). Towards a “theoretical toolbox” for strategic sourcing. *Supply Chain Management: An International Journal*, 14(1), 3-10.
- Silverman, D. (2013). *Doing Qualitative Research: A Practical Handbook* (4 ed.): SAGE Publications Ltd
- Sirmon, D. G., Hitt, M. A., & Ireland, R. D. (2007). Managing Firm Resources in Dynamic Environments to Create value: Looking Inside the Black Box. *Academy of Management Review*, 32(1), 273-292.
- Skinner, W. (1968). *American Industry in Developing Economies*. New York: Wiley.
- Soskice, D. (1999). Divergent production regimes: Coordinated and uncoordinated market economies in the 1980s and 1990s. In H. Kitschelt, P. Lange, G. Marks & J. D. Stephens (Eds.), *Continuity and change in contemporary capitalism* (pp. 101-134). Cambridge: Cambridge University Press.

- Stafford, L. (2008). Social Exchange Theories. In L. A. Baxter & D. O. Braithwaite (Eds.), *Engaging theories in interpersonal communication: Multiple perspectives* (pp. 377-389): Thousand Oaks.
- Statistics-NZ. (2005-2011). Business operations surveys. Wellington, NZ: Statistics New Zealand.
- Statistics-NZ. (2011). Balance of Payments and International Investment Position: Year ended 31 March 2011. Wellington, New Zealand: Statistics New Zealand.
- Statistics-NZ. (2012). New Zealand – a small advanced economy?
- Statistics-NZ. (2014). Balance of Payments and International Investment Position: Year ended December 2014. Wellington, New Zealand: Statistics New Zealand.
- Staw, B. M. (1975). Attribution of the “causes” of performance: A general alternative interpretation of cross-sectional research on organizations. *Organizational Behavior and Human Performance*, 13(3), 414-432.
- Stopford, J. M., & Wells, L. T. (1972). *Managing the Multinational Enterprise: Organisation of the Firm and Ownership of the Subsidiaries*. New York: Basic Books.
- Storey, D. (1994). *Understanding the Small Business Sector*. London: Routledge.
- Strutzenberger, A., & Ambos, T. C. (2014). Unravelling the Subsidiary Initiative Process: A Multilevel Approach. *International Journal of Management Reviews*, 16, 314-339.
- Taggart, J. H. (1996). Multinational manufacturing subsidiaries in Scotland: Strategic role and economic impact. *International Business Review*, 5(5), 447-468.
- Taggart, J. H. (1997a). Autonomy and procedural justice: A framework for evaluating subsidiary strategy. *Journal of International Business Studies*, 28(1), 51-76.
- Taggart, J. H. (1997b). *Constituents of subsidiary strategy*. Paper presented at the European international business academy, Stuttgart, Germany.
- Taggart, J. H. (1997c). An Evaluation of the Integration-Responsiveness Framework: MNC Manufacturing Subsidiaries in the UK. *Management International Review*, 37(4), 295-318. doi: 10.2307/40228410

- Taggart, J. H. (1998). Strategy Shifts in MNC Subsidiaries. *Strategic Management Journal*, 19, 663-681.
- Taggart, J. H. (1999a). MNC subsidiary performance, risk, and corporate expectations. *International Business Review*, 8, 233-255.
- Taggart, J. H. (1999b). US MNC subsidiaries in the UK: characteristics and strategic role. In F. Burton, M. Chapman & A. Cross (Eds.), *International Business Organization* (pp. 29-46). Houndsmills: MacMillan Press Ltd.
- Taggart, J. H., & Hood, N. (1999). Determinants of autonomy in multinational corporation subsidiaries. *European Management Journal*, 17(2), 226-236.
- Tan, D., & Mahoney, J. T. (2006). Why a multinational firm chooses expatriates: integrating resource-based, agency and transaction costs perspectives. *Journal of Management Studies*, 43(3), 457-484.
- Tavares, A. T. (2001a). *Strategic management of multinational networks: A subsidiary evolution perspective*. University of Reading Discussion Papers in International Investment and Management.
- Tavares, A. T. (2001b). *Strategic Management of Multinational Networks: A Subsidiary Evolution Perspective*. Discussion Papers in International Investment and Management. University of Reading, Reading.
- Tavares, A. T. (2002). Multinational subsidiary evolution and public policy: Two tales from the European periphery. *Journal of Industry, Competition and Trade*, 2(3), 195-213.
- Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509-533.
- Templ, M., Filzmoser, P., & Reimann, C. (2008). Cluster analysis applied to regional geochemical data: Problems and possibilities. *Applied Geochemistry*, 23(8), 2198-2213.
- Thomas, L. H., McColl, E., Priest, J., & Bond, S. (1996). Open-ended questions: do they add anything to a quantitative patient satisfaction scale? *Social Sciences in Health*, 2, 23-35.

- Tian, X., & Slocum, J. W. (2014). What determines MNC subsidiary performance? Evidence from China. *Journal of World Business*, 49(3), 421-430. doi: <http://dx.doi.org/10.1016/j.jwb.2013.08.002>
- Tolbert, P. S., & Zucker, L. G. (1996). The Institutionalization of Institutional Theory. In S. R. Clegg & C. Hardy (Eds.), *Studying Organization. Theory & Method*. London: Sage Publications.
- Tomer, J. F. (1987). *Organizational Capital: The path to higher productivity and well-being*. New York: Praeger.
- Tse, A. C. B., Tse, K. C., Yin, C. H., Ting, C. B., Yi, K. W., Yee, K. P., & Hong, W. C. (1995). Comparing two methods of sending out questionnaires: email versus mail. *Journal of the Market Research Society*, 37(4).
- Tseng, C.-H., Fong, C.-M., & Su, K.-H. (2004). The determinants of MNC subsidiary initiatives implications for small business. *International Journal of Globalisation and Small Business*, 1(1), 92-114.
- Ulrich, D., & Barney, J. B. (1984). Perspectives in organizations: resource dependence, efficiency, and population. *Academy of Management Review*, 471-481.
- Ven, A. H. V. D., & Drazin, R. (1985). The Concept of Fit in Contingency Theory. In B. M. Staw & L. L. Cummings (Eds.), *Research in Organizational Behavior* (Vol. 7). Greenwich, CT: JAI Press.
- Venaik, S., Midgley, D. F., & Devinney, T. M. (2005). Dual paths to performance: The impact of global pressures on MNC subsidiary conduct and performance. *Journal of International Business Studies*, 36(6), 655-675.
- Verbeke, A., Bachor, V., & Nguyen, B. (2013). Procedural Justice, Not Absorptive Capacity, Matters in Multinational Enterprise ICT Transfers. *Management International Review*, 53, 535-554.
- Verbeke, A., Chrisman, J. J., & Yuan, W. (2004). *Subsidiary entrepreneurship in multinational enterprises: A behavioral theory perspective*: Mimeo.
- Verbeke, A., Chrisman, J. J., & Yuan, W. (2007). A note on strategic renewal and corporate venturing in the subsidiaries of multinational enterprises. *Entrepreneurship Theory and Practice*, 31(4), 585-600.

- Verbeke, A., Li, L., & Goerzen, A. (2009). Toward More Effective Research on the Multinationality-Performance Relationship. *Management International Review*, 49(2), 149-161. doi: 10.1007/s11575-008-0133-6
- Vernon, R. (1966). International Investment and International Trade in the Product Cycle. *The Quarterly Journal of Economics*, 80(2), 190-207. doi: 10.2307/1880689
- Wang, J., Liu, X., & Li, X. (2009). A dual-role typology of multinational subsidiaries. *International Business Review*, 18(6), 578-591.
- Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic Management Journal*, 5(2), 171-180.
- Westney, E. D., & Zaheer, S. (2009). *The multinational enterprise as an organization* (2 ed.). Oxford: Oxford Univ. Press.
- White, R. E., & Poynter, T. A. (1984). Strategies for foreign-owned subsidiaries in Canada. *Business Quarterly*, 48(4), 59-69.
- Williams, D., McDonald, F., Tüselmann, H. J., & Turner, C. (2008). Domestic sourcing by foreign-owned subsidiaries. *Environment and Planning C: Government and Policy*, 26(1), 260-276.
- Williamson, O. E. (1975). *Markets and hierarchies. Analysis and Antitrust implications*. New York: Free Press.
- Williamson, O. E. (1996). *The Mechanisms of Governance*. Oxford: University Press: Oxford.
- Winter, S. G. (2003). Understanding dynamic capabilities. *Strategic Management Journal*, 24(10), 991-995.
- Winterscheid, B. C. (1994). Building capability from within: The insider's view of core competence. In G. Hamel & A. Heene (Eds.), *Competence-based competition* (Vol. 265-292). Chichester, UK: The Strategic Management Series, Wiley.
- Witte, E. (1973). *Organisation für Innovationsentscheidungen: Das Promotoren-Modell* (Vol. 2): O. Schwartz.

- Wolf, J., & Egelhoff, W. G. (2010). Limitations of the network organization in MNCs *Reshaping the Boundaries of the Firm in an Era of Global Interdependence* (Vol. 5, pp. 143-172): Emerald Group Publishing Limited.
- Wolf, J., & Egelhoff, W. G. (2012). Network or Matrix? How Information-Processing Theory Can Help MNCs Answer This Question. In A. Bøllingtoft, L. Donaldson, G. P. Huber, D. D. Håkonsson & C. C. Snow (Eds.), *Collaborative Communities of Firms* (Vol. 9, pp. 35-57): Springer New York.
- Yin, R. K. (2008). *Case study research: Design and methods*: Sage publications, INC.
- Yip, G. S. (1995). *Total Global Strategy*. Englewood Cliffs, NJ: Prentice Hall.
- Yip, G. S., & Hult, G. T. M. (2012). *Total Global Strategy* (3 ed.): Pearson.
- Young, S., Hood, N., & Hamill, J. (1988). *Foreign multinationals and the British economy*. London: Routledge.
- Young, S., Hood, N., & Peters, E. (1994). Multinational enterprises and regional economic development. *Regional Studies*, 28(7), 657-677.
- Young, S., & Tavares, A. T. (2004). Centralization and autonomy: Back to the future. *International Business Review*, 13(2), 215-237.
- Zahra, S. A., Dharwadkar, R., & George, G. (2000). *Entrepreneurship in multinational subsidiaries: the effects of corporate and local environmental contexts*. GT CIBER Working Paper.
- Zentes, J., Morschett, D., & Schramm-Klein, H. (2008). Das Integration/Responsiveness-Modell im Internationalen Management In T. Wrona & I. Bamberger (Eds.), *Strategische Managementforschung. [Aktuelle Entwicklungen und internationale Perspektiven]* (pp. 193-224). Gabler: Wiesbaden: Festschrift für Ingolf Bamberger.
- Zhang, F., Jiang, G., & Cantwell, J. A. (2014). Subsidiary exploration and the innovative performance of large multinational corporations. *International Business Review*.

APPENDICES

Appendix A

A1: Initiatives

Table A1: Initiatives

Initiatives' Items	Local	Global	Internal
	(Alpha: 0.668)	(Alpha: 0.693)	(Alpha: 0.619)
	<i>Factor Loadings</i>		
Offering new products/services in New Zealand	0.668		
Developed new products/services in New Zealand to be sold internationally		0.876	
Enhancements to existing products/services	0.718		
Market development	0.743		
Expanding Research and Development activity		0.876	
Expanding company operations in New Zealand			0.819
Transfer of production process to New Zealand			0.626
Acquisition of local companies			0.650
New technology adaptation	0.701		

A2: Autonomy

Table A2: Autonomy

Subsidiary Autonomy	Factor Loadings	Reliability Analysis
	<i>Strategic Autonomy</i>	
Hiring senior personnel	.713	
Outsourcing production/services	.762	
New market development	.637	
New product development	.641	
Annual budget setting	.704	
Changes in the organization of activity in New Zealand	.678	
Financing (debt/equity)	.660	
Choice of technology	.669	
<i>Operational Autonomy</i>		0.680
Changes in standard operating procedures	.865	
Changes in product/service design	.776	
Day to day management	.721	

A3: Constructs

Table A3: Constructs

Constructs	Reliability Analysis	Factor Loadings
Contributory role	0.757	
Resource Support Requested	0.814	
Resource Support Received	0.759	
Investment Support	0.694	
Corporate Immune System - HQ	0.632	
Perceptions of Autonomy	0.794	
Subsidiary Credibility	0.806	
Informal Control	0.878	
Formal Control	0.842	
Entrepreneurial Culture	0.815	
Knowledge Flows		
<i>Outflows to HQ</i>	0.782	
<i>Outflows to Other Subsidiaries</i>	0.848	
<i>Inflows from HQ</i>	0.772	
<i>Inflows from other subsidiaries</i>	0.875	
Capability	0.694	
Resources	0.803	
Performance	0.829	
Global Integration		
<i>The subsidiary business activities are susceptible to global integration</i>		0.635
<i>New product introductions occur in all major markets served simultaneously</i>		0.824
<i>Multinational Enterprise aims to standardize customer needs worldwide</i>		0.631
Expatriation		
<i>Management through parent company nationals in top management</i>		0.76
<i>Management through third country nationals in top management</i>		0.76

Appendix B

B1: Parent Company Home Country

Table B1: Parent Company Home Country

Subsidiary Parent Country	Number of Subsidiaries (429)
Australia	112
United States of America	111
Japan	38
United Kingdom	37
Germany	31
Switzerland	15
Netherlands	9
France	9
Denmark	6
South Korea	6
Sweden	6
India	5
Malaysia	5
Canada	4
Austria	4
Singapore	4
Hong Kong	3
China	2
Italy	2
Belgium	2
Finland	2
New Zealand	2
Norway	2
Cook Islands	1
French Polynesia	1
Gibraltar	1
Indonesia	1
Ireland	1
Philippines	1
Portugal	1
Russia	1
Liechtenstein	1
Thailand	1
United Arab Emirates	1
Vanuatu	1

B2: Subsidiary legal Status

Table B2: Subsidiary Legal Status

Legal Status	N	%
Branch	45	10
Subsidiary	377	88
Other	7	2

B3: Entry Mode

Table B3: Entry Mode

Entry Mode	N	%
Established as a new venture	182	42.4
Acquisition of an existing operation	202	47.1
A merger with an existing operation	17	4
A franchise or a licensing agreement	4	0.9
A joint venture with a New Zealand partner	15	3.5
A joint venture with a non-New Zealand partner	9	2.1
Other	15	4

B4: Subsidiary Age

Table B4: Subsidiary Age

Age	N	%
Less than 5 years	24	5.6
5-10 years	48	11.2
11-20 years	108	25.2
More than 20 years	249	58

B5: Subsidiary Size

Table B5: Subsidiary Size

Size (number of employees)	N	%
Less than 50	228	53.1
51-200	117	27.3
201-500	58	13.5
501-1000	11	2.6
More than 1000	15	3.5

Appendix C

C1: Management Offices' Locations

Table C1: Management Offices' Locations

Management Offices' Locations (N=244)	
Regional Headquarters/Office	Mandated Subsidiary
Australia (133) 59%	Australia (15)
New Zealand (50) 22%	China (1)
Singapore (26) 12%	New Zealand (1)
Other Asia - Hong Kong (3), Japan (2), South Korea (2), Malaysia (1), China (1), Thailand (1), Taiwan (1)	South Africa (1)
Other Europe - Germany (1), United Kingdom (1), Sweden (1)	
United States (1) 7%	
Brazil (1)	
French Polynesia (1)	

Appendix D

D1: Country Manager

Table D1: Country Manager

Subsidiary Country Manager (N = 429)		
Country Manager (391) (91%)		No Country Manager (38) (9%)
Works from NZ (377)	Works from Abroad (14)	
377	Australia (10), Japan (1), South Africa (1), Other (2)	38

D2: Country Manager's Employment Term

Table D2: Country Manager's Employment Term

Employment Term	N	%
Not Known	5	1
On temporary assignment to New Zealand (1-5 years)	28	7
On-going employee	346	89
Short term contract (less than 3 years)	5	1
Other*	7	2

* General Manager is the owner; Yearly contract extends; Part owner in the business equity share Contract; NZ based manager (NZ'er 3 years); Leaving July 2012 after 13 years in role.

D3: Country Manager's Prior Managerial Experience

Table D3: Country Manager's Prior Managerial Experience

Prior Managerial Experience (N=173)	Not known		None		Less than 5 years		5-10 years		More than 10 years	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
New Zealand experience with same corporation	3	1.7	46	26.6	48	27.7	29	16.8	47	27.2
Overseas experience with same corporation	7	4.0	102	59.0	39	22.5	8	4.6	17	9.8
New Zealand experience with other corporations	6	3.5	47	27.2	27	15.6	27	15.6	66	38.2
Overseas experience with other corporations	13	7.5	92	53.2	34	19.7	13	7.5	21	12.1

D4: HQ Control

Table D4a: Informal Control

Participation of Subsidiary Executives with HQ and Other Subsidiaries (n=75)	In international committees or task forces to deal with issues such as new product ideas; resolution of internal conflicts etc.		In international management programs that deal mostly with the transfer of company specific knowledge		In informal communication through personal contacts and relationships		
	Rank	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
<i>N/A</i>		3	4.0	2	2.7	2	2.7
<i>Lowest</i>		13	17.3	10	13.3	1	1.3
<i>Low</i>		17	22.7	16	21.3	6	8.0
<i>Slightly Low</i>		6	8.0	7	9.3	7	9.3
<i>Neither Low/High</i>		9	12.0	8	10.7	6	8.0
<i>Moderately High</i>		8	10.7	13	17.3	16	21.3
<i>High</i>		14	18.7	13	17.3	26	34.7
<i>Extremely High</i>		5	6.7	6	8.0	11	14.7
μ		3.47		3.73		4.95	
<i>SD</i>		2.101		2.036		1.739	

Table D4b: Formal Control

Subsidiary Management (n=75)	The HQ coordinates subsidiaries' activities using a comprehensive planning system, including strategic plans, functional area plans, production plans, consolidated budgets, etc.		There is a high degree of formalisation in the relationship between HQ and subsidiary in terms of clear definitions of policies, rules, job descriptions, and standard operating procedures to be followed.		Subsidiary operations are coordinated by means of a continuous evaluation of the results based on detailed written reports or ERP (Enterprise Resource Planning) data on financial positions, sales, inventory, expenses, personnel, etc.		
	Rank	f	%	f	%	f	%
<i>N/A</i>	1	1.3	-	-	-	-	-
<i>Strongly Disagree</i>	8	10.7	6	8.0	4	5.3	
<i>Disagree</i>	13	17.3	11	14.7	8	10.7	
<i>Somewhat Disagree</i>	4	5.3	8	10.7	6	8.0	
<i>Neutral</i>	9	12.0	4	5.3	7	9.3	
<i>Somewhat Agree</i>	9	12.0	9	12.0	9	12.0	
<i>Agree</i>	19	25.3	26	34.7	26	34.7	
<i>Strongly Agree</i>	12	16.0	11	14.7	15	20.0	
μ		4.33		4.61		4.96	
<i>SD</i>		2.107		1.979		1.849	

Table D4c: Expatriation

Subsidiary Management (n=75)	Management through parent company nationals in top management (e.g. Managing Director, Head of Finance, Head of Marketing etc.)		Management through third country nationals in top Management (e.g. Managing Director, Head of Finance, Head of Marketing etc.)	
	Rank	f	%	f
<i>N/A</i>	-	-	6	8.0
<i>Strongly Disagree</i>	15	20.0	29	38.7
<i>Disagree</i>	13	17.3	9	12.0
<i>Somewhat Disagree</i>	13	17.3	5	6.7
<i>Neutral</i>	4	5.3	4	5.3
<i>Somewhat Agree</i>	11	14.7	7	9.3
<i>Agree</i>	13	17.3	12	16.0
<i>Strongly Agree</i>	6	8.0	3	4.0
μ		3.61		2.75
<i>SD</i>		2.033		2.212

D5: Subsidiary Initiatives' Resource Support

Table D5: Subsidiary Initiatives' Resource Support

Subsidiary Initiatives	Head Office Resource Support													
	Resource Support Requested						Resource Support Received							
	N/A		No		Yes		Extent of support							
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Offering new products/services in New Zealand	45	10.5	127	29.6	257	59.9	174	40.6	5	1.2	124	28.9	126	29.4
Developed new products/services in New Zealand to be sold internationally	123	28.7	221	51.5	85	19.8	345	80.4	4	.9	44	10.3	36	8.4
Enhancements to existing products/services	128	29.8	202	47.1	99	23.1	176	41.0	4	.9	135	31.5	114	26.6
Market development	46	10.7	129	30.1	254	59.2	215	50.1	7	1.6	138	32.2	69	16.1
Expanding Research and Development activity	47	11.0	166	38.7	216	50.3	330	76.9	11	2.6	58	13.5	30	7.0
Expanding company operations in New Zealand	60	14.0	175	40.8	194	45.2	239	55.7	12	2.8	104	24.2	74	17.2
Transfer of production process to New Zealand	142	33.1	227	52.9	60	14.0	370	86.2	5	1.2	28	6.5	26	6.1
Acquisition of local companies	106	24.7	212	49.4	111	25.9	322	75.1	16	3.7	39	9.1	52	12.1
New technology adaptation	71	16.6	150	35.0	208	48.5	224	52.2	11	2.6	112	26.1	82	19.1
Overall Mean (%)		19.9		41.7		38.4		62.0		1.9		20.3		15.8

D6: Knowledge Flows

Table D6a: Knowledge Flows (Product Design)

Knowledge Flows – Product Design (n=75)	From NZ to HQ		From NZ to other subsidiaries		From HQ to NZ		From other subsidiaries to NZ	
	<i>f</i>	%	<i>F</i>	%	<i>f</i>	%	<i>f</i>	%
<i>Low</i>	15	20.0	20	26.7	10	13.3	22	29.3
<i>Slightly Low</i>	21	28.0	17	22.7	12	16.0	13	17.3
<i>Neither Low/High</i>	28	37.3	27	36.0	18	24.0	29	38.7
<i>Moderately High</i>	6	8.0	8	10.7	23	30.7	9	12.0
<i>High</i>	5	6.7	3	4.0	12	16.0	2	2.7
μ	2.53		2.43		3.20		2.41	
<i>SD</i>	1.107		1.117		1.273		1.116	

Table D6b: Knowledge Flows (Marketing)

Knowledge Flows – Marketing (n=75)	From NZ to HQ		From NZ to other subsidiaries		From HQ to NZ		From other subsidiaries to NZ	
	<i>f</i>	%	<i>F</i>	%	<i>f</i>	%	<i>f</i>	%
<i>Low</i>	21	28.0	23	30.7	11	14.7	28	37.3
<i>Slightly Low</i>	22	29.3	18	24.0	17	22.7	13	17.3
<i>Neither Low/High</i>	20	26.7	27	36.0	25	33.3	22	29.3
<i>Moderately High</i>	8	10.7	5	6.7	16	21.3	10	13.3
<i>High</i>	4	5.3	2	2.7	6	8.0	2	2.7
μ	2.36		2.27		2.85		2.27	
<i>SD</i>	1.158		1.057		1.159		1.178	

Table D6c: Knowledge Flows (Distribution)

Knowledge Flows – Distribution (n=75)	From NZ to HQ		From NZ to other subsidiaries		From HQ to NZ		From other subsidiaries to NZ	
	<i>f</i>	%	<i>F</i>	%	<i>f</i>	%	<i>f</i>	%
<i>Low</i>	20	26.7	26	34.7	14	18.7	26	34.7
<i>Slightly Low</i>	16	21.3	14	18.7	17	22.7	16	21.3
<i>Neither Low/High</i>	29	38.7	29	38.7	22	29.3	25	33.3
<i>Moderately High</i>	7	9.3	3	4.0	15	20.0	6	8.0
<i>High</i>	3	4.0	3	4.0	7	9.3	2	2.7
μ	2.43		2.24		2.79		2.23	
<i>SD</i>	1.105		1.101		1.233		1.098	

Table D6d: Knowledge Flows (Management Systems and Practices)

Knowledge Flows – Management Systems and Practices (n=75)	From NZ to HQ		From NZ to other subsidiaries		From HQ to NZ		From other subsidiaries to NZ	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
<i>Low</i>	23	30.7	25	33.3	3	4.0	24	32.0
<i>Slightly Low</i>	17	22.7	15	20.0	11	14.7	15	20.0
<i>Neither Low/High</i>	26	34.7	22	29.3	18	24.0	22	29.3
<i>Moderately High</i>	5	6.7	9	12.0	29	38.7	11	14.7
<i>High</i>	4	5.3	4	5.3	14	18.7	3	4.0
μ	2.33		2.36		3.53		2.39	
<i>SD</i>	1.143		1.215		1.082		1.196	

D7: Inter-organisational Product Flows

Table D7a: Inter-organisational Product Inflows

Frequency and % (n=75)	Percentage of Inputs Received																							
	0%		1-5 %		6-10 %		11-20 %		21-30 %		31-40 %		41-50 %		51-60 %		61-70 %		71-80 %		81-90 %		91-100 %	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%
From HQ	26	<u>35</u>	8	<u>11</u>	5	7	1	1	7	9	3	4	2	3	4	5	7	9	7	9	1	1	4	5
From Subsidiaries in NZ	55	<u>74</u>	2	3	3	4	1	1	3	4	0	0	1	1	0	0	0	0	0	0	3	4	7	9
From Subsidiaries Abroad	37	<u>50</u>	10	<u>14</u>	9	<u>12</u>	4	5	11	<u>15</u>	1	1	1	1	0	0	1	1	1	1	0	0	0	0
From External Suppliers / Customers in NZ	29	<u>39</u>	11	<u>15</u>	9	<u>12</u>	7	9	6	8	4	6	1	1	1	1	1	1	1	1	3	4	2	3
From External Suppliers / Customers Abroad	34	<u>45</u>	11	<u>15</u>	8	<u>11</u>	6	8	5	7	4	5	2	3	0	0	2	3	1	1	2	3	0	0

Table D7b: Inter-organisational Product Outflows

Frequency and % (n=75)	Percentage of Outputs Supplied																							
	0%		1-5 %		6-10 %		11-20 %		21-30 %		31-40 %		41-50 %		51-60 %		61-70 %		71-80 %		81-90 %		91-100 %	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%
To HQ	54	<u>72</u>	5	7	5	7	1	1	3	4	1	1	2	3	0	0	1	1	2	3	1	1	0	0
To Subsidiaries in NZ	57	<u>76</u>	2	3	4	6	3	4	1	1	0	0	1	1	1	1	2	3	0	0	1	1	3	4
To Subsidiaries Abroad	48	<u>64</u>	7	<u>10</u>	8	<u>11</u>	3	4	4	6	1	1	1	1	0	0	0	0	1	1	1	1	1	1
To External Suppliers / Customers in NZ	24	<u>32</u>	4	5	5	7	0	0	3	4	1	1	2	3	3	4	5	7	3	4	7	9	18	<u>24</u>
to External Suppliers / Customers Abroad	46	<u>62</u>	15	<u>20</u>	5	7	3	4	2	3	1	1	1	1	1	1	0	0	1	1	0	0	0	0

D8: Motives of Operations

Table D8a: Current Motives of Operations

Motives (429)	Not at All		Minor Extent		Moderate Extent		Major Extent		Sole		μ
	<i>F</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	
Access to resources	248	57.8	73	17	50	11.7	52	12.1	6	1.4	1.82
Access to the local market	37	8.6	24	5.6	37	8.6	196	45.7	135	31.5	3.86
Access to technology, or Research and Development activity	269	62.7	98	22.8	37	8.6	22	5.1	3	0.7	1.58
Important customers are located in New Zealand	103	24	57	13.3	74	17.2	152	35.4	43	10	2.94
*Other	406	94.6	0	0	0	0	17	4.0	6	1.4	1.17

Table D8b: Other Motives

Motives (Others)*	Extent
Access to Asia	Major
Access to Asian, and Australian markets; Efficient Operations; Skilled Staff	Major
Access to NZ scenery, tourism Business	Sole
Access to product supply	Major
Difficult to quantify	-
Founder technology from NZ	Major
Global Footprint	-
Grow portfolio	-
Historical (2)	-
Historical - none of the above	-
Historical reasons - originally for resources no real reason	Sole
Independent business unit operating in NZ	Sole
Infrastructure assets that generate stable cash flows	Sole
Large investment already in NZ factory	Major
Long term investment	Sole
Manufacturing	Major
Manufacturing Capacity	Major
Market reputation and influence	Major
Part of a global network	Sole
Part of a Network	Major
Profitable Dividend	Major
Serve Asia-Pacific market	Major
Servicing Multinational customers	Major
Skill set of NZ software developers that can be hired	Major
Was a great potential market that no one else at the time had really taken our approach with	-

D9: Subsidiary Resources

Table D9: Subsidiary Resources

Subsidiary Resources/ Capability (n=75)	Research & Development		Innovation and entrepreneurship		Production/ Manufacturing		Marketing & sales		Logistics	
	<i>f</i>	%	<i>f</i>	%	<i>F</i>	%	<i>F</i>	%	<i>f</i>	%
<i>N/A</i>	-	-	-	-	1	1.3	1	1.3	1	1.3
<i>Lowest</i>	12	16.0	5	6.7	11	14.7	-	-	2	2.7
<i>Low</i>	22	29.3	10	13.3	13	17.3	5	6.7	5	6.7
<i>Slightly Low</i>	9	12.0	9	12.0	8	10.7	6	8.0	7	9.3
<i>Neither Low/High</i>	14	18.7	23	30.7	18	24.0	24	32.0	34	45.3
<i>Moderately High</i>	12	16.0	19	25.3	14	18.7	22	29.3	18	24.0
<i>High</i>	3	4.0	8	10.7	7	9.3	16	21.3	7	9.3
<i>Extremely High</i>	3	4.0	1	1.3	3	4.0	1	1.3	1	1.3
μ	3.17		3.92		3.55		4.49		4.11	
<i>SD</i>	1.663		1.440		1.758		1.267		1.247	

Table D9 Continued: Subsidiary Resources

Subsidiary Resources/ Capability (n=75)	Human resource		Financial management		IT/Information Systems		Managing international activities	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
<i>N/A</i>	-	-	-	-	2	2.7	1	1.3
<i>Lowest</i>	3	4.0	2	2.7	3	4.0	9	12.0
<i>Low</i>	6	8.0	5	6.7	10	13.3	9	12.0
<i>Slightly Low</i>	10	13.3	3	4.0	14	18.7	8	10.7
<i>Neither Low/High</i>	21	28.0	22	29.3	14	18.7	19	25.3
<i>Moderately High</i>	22	29.3	27	36.0	17	22.7	15	20.0
<i>High</i>	11	14.7	11	14.7	14	18.7	11	14.7
<i>Extremely High</i>	2	2.7	5	6.7	1	1.3	3	4.0
μ	4.25		4.60		3.96		3.85	
<i>SD</i>	1.376		1.325		1.623		1.745	

D10: Subsidiary Capability

Table D10: Subsidiary Capability

Subsidiary Management Capability (n=75)	New product development		Cost control		Personnel development		Product quality		Innovation		Sales growth		Market share	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%
<i>N/A</i>	9	12.0	2	2.7	1	1.3	7	9.3	1	1.3	3	4.0	3	4.0
<i>Lowest</i>	5	6.7	-	-	-	-	1	1.3	-	-	-	-	-	-
<i>Low</i>	14	18.7	2	2.7	6	8.0	2	2.7	5	6.7	8	10.7	3	4.0
<i>Slightly Low</i>	8	10.7	4	5.3	8	10.7	3	4.0	7	9.3	8	10.7	6	8.0
<i>Neither Low/High</i>	8	10.7	11	14.7	19	25.3	11	14.7	17	22.7	16	21.3	18	24.0
<i>Moderately High</i>	17	22.7	15	20.0	23	30.7	20	26.7	14	18.7	18	24.0	17	22.7
<i>High</i>	12	16.0	32	42.7	15	20.0	24	32.0	25	33.3	18	24.0	19	25.3
<i>Extremely High</i>	2	2.7	9	12.0	3	4.0	7	9.3	6	8.0	4	5.3	9	12.0
μ	3.47		5.20		4.51		4.68		4.81		4.40		4.77	
<i>SD</i>	2.062		1.470		1.369		1.932		1.477		1.652		1.624	

D11: Subsidiary Performance

Table D11: Subsidiary Performance

Subsidiary Financial Performance (n=75)	Return on investment		Profit		Productivity		Cash flow from operations	
	f	%	f	%	f	%	f	%
<i>N/A</i>	3	4.0	2	2.7	1	1.3	1	1.3
<i>Lowest</i>	-	-	4	5.3	-	-	2	2.7
<i>Low</i>	10	13.3	11	14.7	5	6.7	8	10.7
<i>Slightly Low</i>	12	16.0	9	12.0	10	13.3	7	9.3
<i>Neither Low/High</i>	11	14.7	7	9.3	15	20.0	18	24.0
<i>Moderately High</i>	9	12.0	12	16.0	22	29.3	13	17.3
<i>High</i>	19	25.3	20	26.7	17	22.7	16	21.3
<i>Extremely High</i>	11	14.7	10	13.3	5	6.7	10	13.3
μ	4.48		4.41		4.63		4.56	
<i>SD</i>	1.899		1.980		1.431		1.710	

D12: Isolation from MNE

Table D12: Isolation from MNE

Isolation from the MNE (n=75) Rank	Geographic isolation		Cultural isolation		Economic isolation		Financial isolation		Administrative isolation		Knowledge isolation		Social isolation		Overall isolation	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
<i>N/A</i>	-	-	3	4.0	1	1.3	1	1.3	2	2.7	2	2.7	1	1.3	1	1.3
<i>Strongly Disagree</i>	4	5.3	5	6.7	3	4.0	4	5.3	6	8.0	9	12.0	4	5.3	2	2.7
<i>Disagree</i>	1	1.3	15	20.0	14	18.7	13	17.3	12	16.0	18	24.0	14	18.7	6	8.0
<i>Somewhat Disagree</i>	8	10.7	8	10.7	15	20.0	20	26.7	8	10.7	14	18.7	17	22.7	15	20.0
<i>Neutral</i>	9	12	24	32.0	24	32.0	20	26.7	14	18.7	12	16.0	12	16.0	14	18.7
<i>Somewhat Agree</i>	14	18.7	15	20.0	10	13.3	9	12.0	20	26.7	10	13.3	16	21.3	27	36.0
<i>Agree</i>	27	36	5	6.7	7	9.3	8	10.7	12	16.0	8	10.7	7	9.3	9	12.0
<i>Strongly Agree</i>	12	16	-	-	1	1.3	-	-	1	1.3	2	2.7	4	5.3	1	1.3
μ	5.09		3.47		3.61		3.51		3.85		3.29		3.75		4.15	
<i>SD</i>	1.595		1.536		1.423		1.408		1.714		1.730		1.645		1.392	

D13: Isolation and Subsidiary Performance, Resources, and Capability

Table D13: Isolation and Subsidiary Performance, Resources, and Capability

Impact of Overall Isolation (n=75) Rank	Performance		Capability		Resources	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
<i>N/A</i>	1	1.3	-	-	-	-
<i>Strongly Disagree</i>	12	16.0	8	10.7	5	6.7
<i>Disagree</i>	19	25.3	24	32.0	16	21.3
<i>Somewhat Disagree</i>	10	13.3	9	12.0	11	14.7
<i>Neutral</i>	17	22.7	20	26.7	19	25.3
<i>Somewhat Agree</i>	8	10.7	9	12.0	14	18.7
<i>Agree</i>	7	9.3	3	4.0	9	12.0
<i>Strongly Agree</i>	1	1.3	2	2.7	1	1.3
μ	3.16		3.20		3.69	
<i>SD</i>	1.653		1.507		1.524	

Appendix E

E1: Analysis of Variance across Industry

Table E1: Analysis of Variance across Industry

Dimensions	Industry											
	Primary and Manufacturing				Manufacturing and Services				Services and Primary			
	Mean Rank (Primary)	Mean Rank (Manufacturing)	H	Sig	Mean Rank (Manufacturing)	Mean Rank (Services)	H	Sig	Mean Rank (Primary)	Mean Rank (Services)	H	Sig
Local Market Focus	42.9	97.93	5.756	0.016	197.94	223.99	5.901	0.015	40.7	123.2	8.687	0.003
International Market Focus	152.8	94.99	5.64	0.018	229.16	199.36	6.665	0.010	205.6	119.73	8.009	0.005
Global Initiatives	---	---	---	---	228.55	199.83	6.416	0.011	---	---	---	---
Product Specialist Strategy in the Global Market	27.5	15.21	5.948	0.015	---	---	---	---	41.5	22.68	7.364	0.007
MNE favours innovation and development in home region	---	---	---	---	228.44	199.92	6.019	0.014	---	---	---	---
Product Inflows from Local Suppliers	---	---	---	---	---	---	---	---	40.5	22.73	7.708	0.005
Product Outflows to Overseas Suppliers	---	---	---	---	40.79	34.5	8.026	0.005	34.5	23	22	0.000

H: Chi-Square; --- (no significant difference)

Table E1 continued: Analysis of Variance across Industry

Dimensions	Industry											
	Primary and Manufacturing				Manufacturing and Services				Services and Primary			
	Mean Rank (Primary)	Mean Rank (Manufacturing)	H	Sig	Mean Rank (Manufacturing)	Mean Rank (Services)	H	Sig	Mean Rank (Primary)	Mean Rank (Services)	H	Sig
Product Outflows to Local Subsidiaries	---	---	---	---	32.5	39.97	6.645	0.010	---	---	---	---
Product Outflows to Overseas Subsidiaries	---	---	---	---	40.98	34.38	6.501	0.011	---	---	---	---
Market-seeking Motives	50.10	97.74	3.951	0.047	199.38	222.85	4.46	0.03	52.7	122.95	5.833	0.016
Resource-seeking Motives	177.7	94.33	13.72	0.00	---	---	---	---	228.6	119.24	14.76	0.000
Industry Dynamism	---	---	---	---	199.45	222.8	4.997	0.025	62.9	122.74	4.935	0.026
Export Opportunities	---	---	---	---	227.26	200.85	5.492	0.019	---	---	---	---
Growth Opportunities	---	---	---	---	197.63	224.23	5.456	0.019	---	---	---	---

H: Chi-Square; --- (no significant difference)

E2: Analysis of Variance across Hierarchy and Heterarchy

Table E2: Analysis of Variance across Hierarchy and Heterarchy

Dimensions	MNE Management Structures			
	'Hierarchy (F)' versus 'Heterarchy (L)'			
	Mean Rank (F)	Mean Rank (L)	H	Sig
Strategic Independent Strategy in the Regional Market	34.59	45.25	6.122	0.013
Global Integration	41.53	30.50	4.431	0.035
Parent Investment Support	207.5	233.02	4.126	0.042
Knowledge Outflows to HQ	34.99	44.4	4.423	0.048
Resource-seeking Motives	207.28	233.56	5.008	0.025
Market-seeking Motives	228.18	183.31	13.365	0.000
Export Opportunities	204.5	240.26	8.384	0.004
Growth Opportunities	207.14	233.9	4.594	0.032
Subsidiary Resources	33.53	47.5	7.369	0.007
Isolations' Negative Influences on Subsidiary Capability	41.77	29.98	5.065	0.024

H: Chi-Square; --- (no significant difference)

Table E2 continued: Analysis of Variance across Hierarchy and Heterarchy

Dimensions	MNE Management Structures			
	'Hierarchy (F)' versus 'Heterarchy (L)'			
	Mean Rank (F)	Mean Rank (L)	H	Sig
Perceptions of Autonomy	235.51	165.69	31.663	0.000
Contributory Role	206.41	235.67	6.612	0.010
Local Initiative	207.7	232.56	4.359	0.037
Global Initiative	197.15	257.94	23.879	0.000
Strategic Autonomy	189.98	275.16	48.212	0.000
Operational Autonomy	190.11	274.85	47.372	0.000
International Market Focus	206.24	236.06	5.546	0.019
Subsidiary Age	208	231.85	4.185	0.041
Subsidiary Size	205.35	238.2	7.554	0.006

H: Chi-Square; --- (no significant difference)

E3: Analysis of Variance across Hierarchical Structures

Table E3: Analysis of Variance across Hierarchical Structures

Dimensions*	MNE (Hierarchical) Management Structures																			
	CHQ and RHQ				CHQ and DHQ				CHQ and Mandated Subsidiary (M)				RHQ and DHQ				DHQ and Mandated Subsidiary (M)			
	Mean Rank (CHQ)	Mean Rank (RHQ)	H	Sig	Mean Rank (CHQ)	Mean Rank (DHQ)	H	Sig	Mean Rank (CHQ)	Mean Rank (M)	H	Sig	Mean Rank (RHQ)	Mean Rank (DHQ)	H	Sig	Mean Rank (DHQ)	Mean Rank (M)	H	Sig
Parent Resource Support Received	110.57	140.35	6.3	0.01	27.43	37.53	4.8	0.02	--	--	--	--	--	--	--	--	--	--	--	--
Product Outflows to Local Subsidiaries	--	--	--	--	4	8	4	0.04	--	--	--	--	20.01	39.5	10	0.00	--	--	--	--
Strategic-asset seeking Motives	--	--	--	--	26.6	39.97	8.3	0.00	--	--	--	--	117.48	174.03	12.4	0.00	22.7	12.25	12	0.00
Market-seeking Motives	--	--	--	--	33.53	19.63	8.1	0.00	--	--	--	--	124.76	64.37	12.4	0.00	12.13	21.06	7.5	0.00
Isolations' Negative Influences on Subsidiary Resource	35.21	21.4	6.62	0.01	--	--	--	--	7.57	3.25	4.8	0.02	--	--	--	--	--	--	--	--
Local Market Focus	--	--	--	--	33.28	20.37	7.72	0.00	--	--	--	--	124.5	68.4	11.6	0.00	12.07	21.11	8.2	0.00
Contributory Role	--	--	--	--	25.98	41.8	10.9	0.00	--	--	--	--	117.1	179.77	13.8	0.00	22.37	12.53	9.5	0.00

H: Chi-Square; -- (no significant difference); * (no variations found on any dimension across RHQ and Mandated subsidiaries)

E4: Subsidiary Configuration

Table E4: Subsidiary Configuration

Dimensions	Subsidiary Configuration											
	Entrepreneurial (E) and Constrained Autonomous (CA)				Entrepreneurial (E) and Constrained (C)				Constrained Autonomous (CA) and Constrained (C)			
	Mean Rank (CA)	Mean Rank (E)	H	Sig	Mean Rank (C)	Mean Rank (E)	H	Sig	Mean Rank (C)	Mean Rank (CA)	H	Sig
Miniature Replica Strategy in Global Market	26.53	35.06	7.229	0.007	---	---	---	---	---	---	---	---
Product Specialist Strategy in Regional Market	26.4	35.25	5.769	0.016	16	23.5	5.786	0.016	---	---	---	---
Product Specialist Strategy in Global Market	25.53	36.52	10.737	0.001	16.5	23.17	4.741	0.029	---	---	---	---
Product Specialist Strategy in Internal Market	28	32.92	6.152	0.013	---	---	---	---	---	---	---	---
Strategic Independent Strategy in Regional Market	24.71	37.71	12.438	0.000	16.5	23.17	4.202	0.04	---	---	---	---
Strategic Independent Strategy in Global Market	26.19	35.56	9.323	0.002	---	---	---	---	---	---	---	---
Strategic Independent Strategy in Internal Market	28.5	32.19	4.531	0.033	---	---	---	---	---	---	---	---
PCN Expatriation	---	---	---	---	25.94	16.88	5.959	0.015	---	---	---	---
TCN Expatriation	---	---	---	---	25.56	17.13	5.411	0.02	---	---	---	---

H: Chi-Square; --- (no significant difference)

Table E4 continued: Subsidiary Configuration

Dimensions	Subsidiary Configuration											
	Entrepreneurial (E) and Constrained Autonomous (CA)				Entrepreneurial (E) and Constrained (C)				Constrained Autonomous (CA) and Constrained (C)			
	Mean Rank (CA)	Mean Rank (E)	H	Sig	Mean Rank (C)	Mean Rank (E)	H	Sig	Mean Rank (C)	Mean Rank (CA)	H	Sig
MNE Investment Support	---	---	---	---	109.5	152.82	22.547	0.000	112.11	159.11	25.241	0.000
Parent Resource Support Requested	141.39	173.75	15.149	0.000	114.57	148.92	18.549	0.000	---	---	---	---
Parent Resource Support Received	147.19	157.53	4.599	0.032	118.76	145.71	9.158	0.002	---	---	---	---
Knowledge Outflows to HQ	25.87	36.02	5.608	0.018	14.5	24.5	8.433	0.004	---	---	---	---
Knowledge Outflows to other Subsidiaries	26.16	35.60	4.696	0.03	---	---	---	---	---	---	---	---
Product Outflows to Overseas Subsidiaries	27.89	33.08	4.742	0.029	---	---	---	---	---	---	---	---
Product Outflows to Overseas Suppliers	27.5	33.65	7.822	0.005	---	---	---	---	---	---	---	---
Market-seeking Motives	191.25	120.25	55.026	0.000	156.41	116.78	19.58	0.000	125.66	149.41	7.013	0.008
Resource-seeking Motives	128.66	187.4	39.943	0.000	110.16	152.31	22.775	0.000	---	---	---	---

H: Chi-Square; --- (no significant difference)

Table E4 continued: Subsidiary Configuration

Dimensions	Subsidiary Configuration											
	Entrepreneurial (E) and Constrained Autonomous (CA)				Entrepreneurial (E) and Constrained (C)				Constrained Autonomous (CA) and Constrained (C)			
	Mean Rank (CA)	Mean Rank (E)	H	Sig	Mean Rank (C)	Mean Rank (E)	H	Sig	Mean Rank (C)	Mean Rank (CA)	H	Sig
Strategic-asset seeking Motives	127.65	188.49	44.801	0.000	104.07	156.99	37.941	0.000	---	---	---	---
Industry Dynamism	178.32	134.13	27.210	0.000	---	---	---	---	106.63	163.03	45.847	0.000
Export Opportunity	147.64	167.04	4.124	0.042	118.03	146.26	9.983	0.002				
Growth Opportunity	---	---	---	---	114.67	148.85	14.119	0.000	123.47	150.98	8.601	0.003
Autonomy Perception	---	---	---	---	116.41	112.94	28.692	0.000	166.18	120.40	24.159	0.000
Subsidiary Resources	22.93	40.31	16.319	0.000	13.44	25.21	10.700	0.001	---	---	---	---
Subsidiary Capability	26.49	35.13	4.309	0.038	---	---	---	---	---	---	---	---
Isolations' Negative Influences on Subsidiary Capability	33.53	24.85	3.899	0.048	26.94	16.21	8.691	0.003	---	---	---	---
Isolations' Negative Influences on Subsidiary Performance	---	---	---	---	25.84	16.94	5.784	0.016	31.97	23.27	3.893	0.048
Internal Isolation	---	---	---	---	25.13	17.42	4.713	0.03	32.03	23.24	4.243	0.039

H: Chi-Square; --- (no significant difference)

Appendix F:

SUBSIDIARY STRATEGY AND MANAGEMENT SURVEY

The survey asks questions about the management of your operations in New Zealand. We would like you to answer the questionnaire in full, but a partly completed return will also be of value.

Section A: New Zealand Operations

- 1 In which country are your parent company's operations mainly located? (*Tick one only*)
- United States Australia Japan United Kingdom
 Netherlands Hong Kong China Taiwan
 Germany Italy Canada
 Other, please specify _____
- 2 What is the legal status of the company's operation in New Zealand? (*Tick one only*)
- A branch of a foreign company (i.e. operates as part of a company registered outside of New Zealand)
 A subsidiary of a foreign company (i.e. operates as a New Zealand registered company)
 Other, please specify _____
- 3 What are the origins of the company's operations in New Zealand? (*Tick all that apply*)
- Established as a new venture Acquisition of an existing operation
 A merger with an existing operation A franchise or a licensing agreement
 A joint venture with a New Zealand partner
 A joint venture with a non New Zealand partner
 Other, please specify _____
- 4 How many years has the company had operations in New Zealand? (*Tick one only*)
- Less than 5 years
 5-10 years
 11-20 years
 More than 20 years
- 5 Approximately how many people does the company employ in New Zealand? (*Tick one only*)
- Less than 50
 50-200
 201-500
 501-1000
 More than 1000
- 6a Which of the following best describes how operations in New Zealand are managed? (*Tick the option that most closely matches your situation*)
- Directly by the parent company head office (*go to Q7*)
 By a regional office/headquarters that in turn reports to the parent company head office
 By another office which is not a regional office/headquarters or parent company head office
 Through a network of reporting channels where there is no single controlling office (*go to Q7*)
 New Zealand operations are managed independently (*go to Q7*)
 Others, please specify _____

6b Where is the office that manages New Zealand operations located?

- Australia Singapore Japan Malaysia
 United States Hong Kong New Zealand
 Other, please specify _____

7 To what extent do the following explain your parent company's current motives for being in New Zealand?

(Tick one box for each motive)

<i>Motives</i>	<i>None (1)</i>	<i>Minor extent (2)</i>	<i>Moderate extent (3)</i>	<i>Major extent (4)</i>	<i>Sole Motive (5)</i>	<i>N/A (0)</i>
Access to resources	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Access to the local market	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Access to technology, or Research and Development activity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Important customers are located in New Zealand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please specify _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8 To what extent are operations in New Zealand performing the following roles?

(Tick one box for each role)

<i>Roles</i>	<i>None (1)</i>	<i>Minor extent (2)</i>	<i>Moderate extent (3)</i>	<i>Major extent (4)</i>	<i>Sole Role (5)</i>	<i>N/A (0)</i>
Serve New Zealand market	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Serve markets outside of New Zealand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Supply inputs to other parts of the organisation internationally	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Research and Development for the organisation internationally	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Product management for the organisation internationally	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please specify _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9a What level of decision-making authority does the New Zealand business unit have in respect of the following actions?

(Tick one box for each decision)

<i>Decisions</i>	<i>Decision-making Authority</i>					
	<i>None (1)</i>	<i>Minor (2)</i>	<i>Moderate (3)</i>	<i>Major (4)</i>	<i>Complete (5)</i>	<i>N/A (0)</i>
Hiring senior personnel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Outsourcing production/services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
New market development	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
New product development	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Annual budget setting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Changes in the organisation of activity in New Zealand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Changes in standard operating procedures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Changes in product/service design	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Financing (debt/equity)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Day to day management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Choice of technology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9b Overall how much decision-making autonomy is given to New Zealand operations?

(Tick one only)

None *Minor* *Moderate* *Major* *Complete* *N/A*

Section B: New Zealand Country Manager

10a Is there a person whose main responsibility is to provide overall management of operations in New Zealand (i.e. a New Zealand country manager)?

(Tick one only)

No *(go to Q13)* Yes *(go to Q10b)*
 Other, please specify _____ *(go to Q10b)*

10b Is the country manager located in New Zealand? *(Tick one only)*

Yes No → If No, Please indicate their location _____
 N/A

11 What is the current employment term of the New Zealand country manager?

(Tick one only)

Not known On temporary assignment to New Zealand (1-5 years)
 Ongoing employee Short term contract (less than 3 years)
 Other, please specify _____

- 12 What managerial experience did the New Zealand country manager have prior to their present appointment?

(Tick all that apply)

<i>Prior Managerial Experience</i>	<i>With same corporation (years)</i>					<i>With another corporation (years)</i>				
	<i>Less than 5</i>	<i>5-10</i>	<i>More than 10</i>	<i>None</i>	<i>Not Known</i>	<i>Less than 5</i>	<i>5-10</i>	<i>More than 10</i>	<i>None</i>	<i>Not Known</i>
Prior managerial experience gained in New Zealand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Prior managerial experience gained overseas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section C: New Zealand Initiatives

- 13 In the last 5 years, to what extent have New Zealand operations engaged in the following activities?

(Tick one box for each activity)

<i>Activities</i>	<i>None (1)</i>	<i>Minor extent (2)</i>	<i>Moderate extent (3)</i>	<i>Major extent (4)</i>	<i>N/A (0)</i>
Offering new products/services in New Zealand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Developed new products/services in New Zealand to be sold internationally	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Enhancements to existing products/services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Market development	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Expanding Research and Development activity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Expanding company operations in New Zealand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Transfer of production process to New Zealand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Acquisition of local companies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
New technology adaptation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- 14 In the last 5 years, has the company requested and/or received resources (finance, human, technology etc.) from company outside of New Zealand for the following activities?

(Tick all that apply)

<i>Activities</i>	<i>Resource Support</i>						
	<i>Requested</i>			<i>Received</i>			
	<i>Yes</i>	<i>No</i>	<i>N/A</i>	<i>None (1)</i>	<i>Partial (2)</i>	<i>Full (3)</i>	<i>N/A (0)</i>
Offering new products/services in New Zealand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Developing new products/services in New Zealand to be sold internationally	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Enhancements to existing products/services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Market development	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Expanding Research and Development activity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Expanding company operations in New Zealand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Transfer of production process to New Zealand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Acquisition of local companies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
New technology adaptation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

15 To what extent do the following statements apply to New Zealand?

<i>Statements</i>	<i>(Tick one box for each statement)</i>					
	<i>None (1)</i>	<i>Minor extent (2)</i>	<i>Moderate extent (3)</i>	<i>Major extent (4)</i>	<i>Don't know (0)</i>	<i>N/A (0)</i>
Getting investment support from the parent company is difficult	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The parent company favours innovation and development in their home region	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Divisions in other countries tend to oppose giving support to operations in New Zealand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Opportunities to use New Zealand as an export base are not recognised sufficiently by the parent company	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The parent company resists innovation and development outside their home region	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
New Zealand operations would benefit if greater decision-making authority was placed in New Zealand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
New Zealand is not seen as a location for the company to grow	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Getting investment support for operations in New Zealand requires considerable effort to negotiate support	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Personal contacts in the parent company help in getting investment support	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Earlier successful projects provide leverage in getting support for new projects	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The parent company resists investment support for activities that are not strategically aligned with the corporation's goals internationally	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of autonomy is a problem for operations in New Zealand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
New Zealand operations face competition in the local New Zealand market	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
New Zealand operations face competition in the international market	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
New Zealand operations form collaborative agreements with other New Zealand firms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional Comments (If you need additional space, please use the blank page provided at the end of the survey):

Appendix G:

SUBSIDIARY CONFIGURATION SURVEY

Q1 New Zealand operations face isolation from the rest of the Multinational Enterprise group with respect to the following dimensions? (1 = Strongly disagree; 4 = Neutral; 7 = Strongly agree)

	1	2	3	4	5	6	7	N/A (0)
Geographic isolation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cultural isolation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Economic isolation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Financial isolation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Administrative isolation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Knowledge isolation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Social isolation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Overall isolation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q2 On average in the last 5 years, how do you evaluate your subsidiary financial performance relative to other operational units within the Multinational Enterprise (1 = Lowest; 4 = Neither High / Low; 7 = Extremely High)

	1	2	3	4	5	6	7	N/A (0)
Return on investment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Profit	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Productivity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cash flow from operations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q3 How do you evaluate your subsidiary management capability relative to other units in the Multinational Enterprise in respect of each of the following dimensions (1 = Lowest; 4 = Neither High / Low; 7 = Extremely High)

	1	2	3	4	5	6	7	N/A (0)
New product development	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cost control	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Personnel development	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Product quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Innovation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sales growth	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Market share	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q4 How do you evaluate your subsidiary resources/capabilities relative to other units in the Multinational Enterprise (1 = Lowest; 4 = Neither High / Low; 7 = Extremely High)

	1	2	3	4	5	6	7
Research & Development	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Innovation and entrepreneurship	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Production/Manufacturing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Marketing & sales	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Logistics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Human resource	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Financial management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
IT/Information Systems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Managing international activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q5 Overall isolation from the rest of the Multinational Enterprise group has affected subsidiary in the following areas: (1 = Strongly disagree; 4 = Neutral; 7 = Strongly agree)

	1	2	3	4	5	6	7	N/A (0)
Subsidiary financial performance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Subsidiary management capability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Subsidiary resources / capabilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q6 To what extent does the subsidiary engage in the transfer / receive of knowledge and skills with respect to: product design, marketing, distribution, management systems & practices? (1 = Lowest; 3 = Neither High / Low; 5 = Very High)

	Product design					Marketing					Distribution					Management systems & practices				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
From NZ to Headquarters	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
From NZ to other subsidiaries	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
From Headquarters to NZ	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
From other subsidiaries to NZ	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q7a Please give your best estimate of the percentage of the inputs incorporated in your subsidiary's final product / service delivered (e.g. parts, semi-manufactured items) that come from the following sources:

	Headquarters	Subsidiaries in NZ	Subsidiaries abroad	External Suppliers / Customers in NZ	External Suppliers / Customers abroad
Inputs received from	%	%	%	%	%

Q7b Please give your best estimate of the percentage of the outputs supplied by your subsidiary: (e.g. parts, semi-manufactured items) to the following destinations:

	Headquarters	Subsidiaries in NZ	Subsidiaries abroad	External Suppliers / Customers in NZ	External Suppliers / Customers abroad
Outputs supplied to	%	%	%	%	%

Q8 To what extent over the last 5 years have the executives in this subsidiary participated with the Headquarters and/or other subsidiaries, in the following groups (1 = Lowest; 4 = Neither High / Low; 7 = Extremely High)

	1	2	3	4	5	6	7	N/A (0)
In international committees or task forces to deal with issues such as new product ideas; resolution of internal conflicts etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In international management programs that deal mostly with the transfer of company-specific knowledge	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In informal communication through personal contacts and relationships	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q9 With regards to how the subsidiary is managed, please tick the appropriate option: (1 = Strongly disagree; 4 = Neutral; 7 = Strongly agree)

	1	2	3	4	5	6	7	N/A (0)
The Headquarters coordinates subsidiaries' activities using a comprehensive planning system, including strategic plans, functional area plans, production plans, consolidated budgets, etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is a high degree of formalisation in the relationship between Headquarters and subsidiary in terms of clear definitions of policies, rules, job descriptions, and standard operating procedures to be followed.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Subsidiary operations are coordinated by means of a continuous evaluation of the results based on detailed written reports or ERP (Enterprise Resource Planning) data on financial positions, sales, inventory, expenses, personnel, etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Management through parent company nationals in top management (e.g. Managing Director, Head of Finance, Head of Marketing etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Management through third country nationals in top management (e.g. Managing Director, Head of Finance, Head of Marketing etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q10 Please select which ever that apply.

	Local Market (NZ)	Regional Market (Asia - Pacific)	Global Market (World)	Multinational Enterprise internal market (other units of the Multinational Enterprise)	N/A
The subsidiary sells products/services produced outside NZ by the parent organisation to the following markets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The subsidiary sells products/services produced in NZ to the following markets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The subsidiary has freedom and resources to produce new products/services for the following markets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The subsidiary produces products/services not produced elsewhere within the Multinational Enterprise for the following markets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q11 Please tick the appropriate option (1 = Strongly disagree; 4 = Neutral; 7 = Strongly agree)

	1	2	3	4	5	6	7	N/A (0)
Senior managers in the subsidiary communicate with their counterparts and bosses in the head office/immediate parent units?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The subsidiary has a history of delivering what it has promised to the parent company	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The subsidiary makes a significant value-added contribution to the corporation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The subsidiary is globally competitive in the main area of operation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The subsidiary is regarded by the parent as a strategically important subsidiary	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The subsidiary business activities are susceptible to global integration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
New product introductions occur in all major markets served simultaneously	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Multinational Enterprise aims to standardize customer needs worldwide	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Multinational Enterprise encourages calculated risk taking by NZ subsidiary	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Multinational Enterprise supports entrepreneurial activity by NZ subsidiary	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The width of the subsidiary product range manufactured is narrow as compared to the total product range manufactured by the Multinational Enterprise	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Additional Comments

Appendix H:

SUBSIDIARY STRATEGY AND MANAGEMENT SURVEY RESULTS - RAW DATA

Company Number	Industry	Parent Country	CME LME	Legal Status	Entry Mode	Age	Size	MNE Mgmt Structures	Mgmt_Off_Loc	Q6b TEXT
1	2	3	2	2	1	3	1	2	1	
2	3	3	2	2	2	4	3	5		
3	2	4	1	2	1	4	2	5		
4	3	5	2	2	2	2	2	2	6	
5	2	33	2	2	2	2	1	5		
6	3	2	1	2	3	4	1	1		
7	3	4	1	2	1	4	1	4		
8	3	2	1	2	2	3	2	2	1	
9	2	4	1	2	1	4	1	1		
10	2	9	2	2	1	4	1	5		
11	3	3	2	2	2	4	1	5		
12	2	9	2	2	2	3	2	1		
13	3	3	2	2	1	4	1	1		
14	3	2	1	2	1	4	1	5		
15	3	1	1	2	2	4	1	4		
16	2	4	1	2	2	4	1	2	1	
17	3	14	2	2	2	4	2	5		
18	2	13	2	2	2	4	1	2	6	
19	3	3	2	2	2	3	3	2	2	
20	2	29	2	2	2	1	1	5		
21	2	12	2	2	1	4	1	5		
22	2	2	1	2	1	2	1	1		
23	2	9	2	2	1	3	1	1		
24	3	1	1	2	1	4	1	2	1	
25	2	32	2	2	2	4	3	5		
26	3	4	1	2	2	4	1	5		
27	3	4	1	2	2	4	1	2	1	
28	3	2	1	2	1	4	2	5		
29	3	1	1	2	2	4	3	1		
30	2	4	1	2	1	4	3	3	1	
31	2	4	1	2	1	4	2	2	2	
32	3	3	2	2	1	4	1	2	1	
33	2	1	1	2	2	4	1	2	8	China
34	3	2	1	2	6	4	3	2	6	
35	2	1	1	2	2	4	1	2	1	
36	3	4	1	2	1	3	1	2	6	
37	3	4	1	2	2	3	1	3	1	
38	3	2	1	2	2	3	3	5		
39	3	4	1	2	1	3	1	2	6	
40	3	22	1	2	1	2	1	3	8	South Africa
41	3	2	1	2	2	4	3	2	6	
42	2	1	1	2	1	4	3	5		
43	2	23	2	2	2	2	2	5		
44	3	3	2	2	2	3	2	5		

Company Number	Industry	Parent Country	CME LME	Legal Status	Entry Mode	Age	Size	MNE Mgmt Structures	Mgmt_Off_Loc	Q6b TEXT
45	2	25	2	2	2	4	1	5		
46	2	1	1	2	2	4	2	5		
47	2	33	2	2	2	4	3	2	6	
48	3	33	2	2	3	4	2	5		
49	2	16	2	2	2	4	2	4		
50	3	6	2	2	2	3	3	2	6	
51	3	7	2	2	2	4	1	2	2	
52	2	9	2	2	2	3	2	2	1	
53	3	1	1	2	1	4	3	5		
54	3	3	2	1	1	4	1	2	6	
55	2	4	1	2	6	3	3	2	1	
56	3	32	2	2	1	4	1	2	1	
57	2	1	1	2	1	4	2	2	6	
58	2	2	1	2	2	4	1	1		
59	3	1	1	2	1	4	1	2	1	
60	1	25	2	2	2	4	3	5		
61	2	2	1	2	2	2	3	1		
62	2	2	1	2	2	2	1	2	1	
63	2	9	2	2	3	3	1	2	6	
64	1	33	2	2	2	4	2	2	7	
65	2	3	2	2	2	4	2	5		
66	2	15	2	2	1	3	1	2	1	
67	2	1	1	2	2	4	3	5		
68	3	31	2	1	1	4	1	2	2	
69	2	1	1	2	1	3	2	1		
70	2	4	1	2	2	3	1	2	8	United Kingdom
71	2	1	1	1	1	4	1	2	1	
72	2	2	1	2	1	4	2	2	6	
73	2	1	1	2	1	3	1	2	1	
74	3	3	2	2	2	4	2	2	3	
75	2	1	1	2	2	3	1	2	6	
76	1	1	1	2	2	3	3	2	1	
77	3	2	1	2	1	4	1	2	1	
78	2	11	1	2	1	2	2	5		
79	2	9	2	1	1	4	1	2	1	
80	2	2	1	2	2	3	3	2	6	
81	3	2	1	2	2	3	3	2	6	
82	3	3	2	2	2	4	3	2	8	Bangkok
83	3	3	2	2	1	4	1	2	1	
84	3	2	1	2	2	3	1	2	1	
85	2	2	1	2	2	2	2	1		
86	2	25	2	2	2	3	3	5		
87	3	2	1	2	1	4	1	5		
88	3	9	2	2	1	3	1	2	6	

Company Number	Industry	Parent Country	CME LME	Legal Status	Entry Mode	Age	Size	MNE Mgmt Structures	Mgmt_Off_Loc	Q6b TEXT
89	3	35	2	1	1	2	2	2	1	
90	2	1	1	2	2	2	2	2	1	
91	3	2	1	2	3	4	3	5		
92	3	2	1	2	2	4	3	2	1	
93	3	2	1	2	2	3	3	2	6	
94	2	2	1	2	1	4	2	5		
95	3	3	2	2	1	4	1	3	1	
96	3	1	1	2	1	4	2	2	2	
97	2	2	1	2	2	4	3	2	1	
98	3	9	2	2	2	1	1	5		
99	2	7	2	2	2	1	2	1		
100	3	1	1	1	2	4	1	2	1	
101	2	2	1	1	1	1	1	2	1	
102	2	1	1	2	2	4	3	5		
103	2	3	2	2	2	3	1	5		
104	2	1	1	2	2	4	2	4		
105	2	1	1	2	2	4	1	4		
106	3	4	1	2	2	4	1	2	6	
107	2	1	1	2	2	3	1	5		
108	2	2	1	3	4	3	1	5		
109	2	17	2	2	1	4	1	5		
110	3	9	2	2	6	4	1	2	2	
111	3	1	1	2	1	4	1	2	1	
112	3	3	2	2	1	4	1	5		
113	3	23	2	2	2	2	1	2	6	
114	3	9	2	2	1	3	1	5		
115	2	3	2	2	3	4	2	5		
116	3	1	1	2	2	4	2	2	1	
117	2	2	1	2	2	4	1	1		
118	2	1	1	2	2	2	2	2	6	
119	3	19	2	2	6	3	1	5		
120	3	2	1	2	5	4	1	5		
121	3	33	2	2	2	3	1	2	1	
122	2	11	1	2	1	4	2	2	1	
123	3	1	1	2	2	2	2	2	1	
124	2	1	1	2	2	2	3	3	6	
125	2	15	2	2	1	3	1	2	2	
126	3	2	1	2	2	3	1	5		
127	3	20	2	2	2	3	1	2	1	
128	2	33	2	2	2	2	1	2	2	
129	3	4	1	2	3	3	2	2	2	
130	3	2	1	1	2	4	3	2	2	
131	2	1	1	2	1	4	1	2	1	
132	3	1	1	2	2	4	2	2	4	

Company Number	Industry	Parent Country	CME LME	Legal Status	Entry Mode	Age	Size	MNE Mgmt Structures	Mgmt_Off_Loc	Q6b TEXT
133	3	1	1	2	2	1	1	2	1	
134	3	2	1	1	2	2	3	2	1	
135	3	1	1	1	2	3	1	2	1	
136	2	15	2	2	1	4	1	5		
137	3	1	1	1	2	4	1	2	1	
138	3	2	1	2	2	4	1	2	1	
139	2	1	1	2	1	3	1	2	1	
140	3	23	2	2	5	4	2	5		
141	2	2	1	2	2	3	3	2	6	
142	3	2	1	2	5	2	1	1		
143	3	1	1	2	1	3	1	2	1	
144	3	3	2	2	1	4	1	2	1	
145	2	15	2	2	1	4	1	5		
146	3	20	2	2	1	2	3	2	2	
147	3	2	1	2	2	4	1	2	1	
148	3	1	1	2	2	3	2	5		
149	3	3	2	2	3	4	1	2	1	
150	3	1	1	2	2	4	3	1		
151	3	1	1	2	1	4	1	1		
152	3	2	1	2	5	4	1	2	6	
153	2	2	1	2	2	4	2	2	6	
154	2	1	1	2	6	4	1	2	2	
155	3	2	1	2	1	2	1	2	6	
156	3	17	2	2	2	1	2	2	8	Korea
157	2	3	2	2	1	4	1	2	1	
158	3	1	1	1	4	4	1	5		
159	2	3	2	2	2	4	2	5		
160	3	1	1	2	2	1	2	2	1	
161	3	4	1	2	2	4	2	4		
162	3	3	2	2	2	1	1	2	6	
163	3	23	2	2	1	3	1	1		
164	3	17	2	2	2	3	1	2	4	
165	2	2	1	2	1	4	3	2	1	
166	3	4	1	2	3	4	1	5		
167	2	3	2	2	2	3	2	5		
168	2	4	1	2	1	4	3	5		
169	3	36	2	1	1	4	1	1		
170	3	2	1	2	1	2	2	2	1	
171	2	2	1	2	1	3	1	1		
172	3	3	2	1	1	3	1	2	2	
173	3	1	1	2	1	4	1	2	1	
174	3	1	1	2	1	4	2	3	8	China
175	2	2	1	1	1	3	1	5		
176	3	2	1	2	2	2	3	2	1	

Company Number	Industry	Parent Country	CME LME	Legal Status	Entry Mode	Age	Size	MNE Mgmt Structures	Mgmt_Off_Loc	Q6b TEXT
177	3	4	1	1	1	4	1	2	1	
178	3	18	2	1	1	3	1	2	8	French Polynesia
179	2	1	1	2	2	4	1	2	6	
180	3	15	2	2	2	2	5	2	2	
181	3	2	1	2	1	4	4	5		
182	3	1	1	2	2	4	5	5		
183	3	2	1	2	2	4	4	5		
184	3	1	1	2	1	4	5	2	6	
185	2	2	1	3	2	4	5	5		
186	2	2	1	2	2	4	5	5		
187	2	1	1	2	1	4	4	5		
188	3	2	1	2	2	3	5	2	6	
189	3	4	1	2	2	3	5	2	6	
190	2	2	1	2	2	4	4	2	1	
191	3	32	2	1	1	4	1	1		
192	3	2	1	2	1	2	1	2	6	
193	2	2	1	2	1	3	2	3	1	
194	3	1	1	2	2	2	1	2	1	
195	2	2	1	1	1	4	1	1		
196	3	33	2	1	3	3	1	2	1	
197	3	1	1	2	2	4	3	4		
198	3	9	2	2	2	4	1	4		
199	3	1	1	2	5	4	3	5		
200	3	1	1	2	1	2	1	2	6	
201	3	1	1	2	2	4	3	5		
202	2	9	2	2	6	4	1	5		
203	3	1	1	2	2	2	1	2	5	
204	3	2	1	2	2	3	1	1		
205	3	11	1	2	1	4	2	2	1	
206	3	2	1	2	1	1	1	3	1	
207	2	3	2	2	5	4	1	1		
208	3	9	2	2	2	4	1	3	1	
209	2	1	1	1	1	1	1	2	1	
210	2	2	1	1	1	3	1	2	6	
211	3	4	1	2	2	4	2	2	1	
212	3	2	1	2	2	3	3	5		
213	2	32	2	3	2	2	3	2	1	
214	3	1	1	2	1	1	1	2	1	
215	3	2	1	2	1	3	3	2	1	
216	3	2	1	2	2	3	5	2	1	
217	3	1	1	2	3	3	1	2	1	
218	2	2	1	2	6	4	2	5		
219	2	5	2	2	2	4	2	5		
220	3	1	1	2	2	4	1	5		

Company Number	Industry	Parent Country	CME LME	Legal Status	Entry Mode	Age	Size	MNE Mgmt Structures	Mgmt_Off_Loc	Q6b TEXT
221	3	1	1	2	2	2	2	2	2	
222	2	9	2	2	1	2	1	2	1	
223	2	1	1	2	2	4	3	2	1	
224	3	25	2	2	2	4	5	5		
225	3	1	1	2	1	4	1	2	1	
226	2	5	2	2	2	4	2	2	1	
227	3	4	1	2	1	4	2	2	1	
228	3	1	1	2	2	4	1	2	1	
229	3	3	2	2	3	4	1	2	2	
230	3	9	2	2	2	3	1	2	1	
231	3	3	2	2	2	3	2	2	2	
232	2	3	2	2	2	4	3	5		
233	2	11	1	2	2	4	2	2	6	
234	2	2	1	2	1	4	1	5		
235	3	4	1	2	1	2	2	2	2	
236	3	2	1	2	1	2	1	1		
237	2	5	2	2	2	3	2	2	8	Korea
238	3	2	1	2	1	4	4	5		
239	3	31	2	2	2	4	3	5		
240	1	1	1	2	1	4	2	5		
241	2	24	2	2	1	3	1	2	4	
242	2	9	2	1	1	1	1	2	1	
243	3	4	1	2	1	1	1	2	6	
244	3	27	2	1	1	4	1	2	1	
245	3	2	1	2	2	4	5	4		
246	3	33	2	1	1	1	2	2	1	
247	3	2	1	2	2	4	2	5		
248	3	2	1	2	2	1	2	5		
249	2	32	2	2	1	4	2	2	8	Sweden
250	2	1	1	2	3	4	4	2	1	
251	3	1	1	2	2	4	1	5		
252	3	2	1	2	2	3	1	2	1	
253	2	21	2	2	2	4	2	2	1	
254	2	2	1	2	1	2	1	1		
255	3	2	1	2	2	4	5	5		
256	3	1	1	2	3	4	2	5		
257	2	1	1	1	1	2	1	4		
258	3	1	1	2	2	4	1	2	2	
259	3	2	1	1	5	4	1	1		
260	3	1	1	2	1	4	1	1		
261	2	2	1	2	2	4	2	5		
262	3	2	1	1	1	4	1	2	1	
263	3	33	2	2	5	4	1	5		
264	3	2	1	2	1	3	1	1		

Company Number	Industry	Parent Country	CME LME	Legal Status	Entry Mode	Age	Size	MNE Mgmt Structures	Mgmt_Off_Loc	Q6b TEXT
265	3	2	1	2	2	2	1	5		
266	2	1	1	1	2	4	1	3	1	
267	3	2	1	2	1	4	1	2	6	
268	3	1	1	2	2	4	1	5		
269	2	2	1	2	1	4	2	2	1	
270	3	1	1	2	1	4	2	2	1	
271	3	20	2	2	2	1	1	2	1	
272	2	9	2	2	2	4	1	2	1	
273	2	3	2	2	2	4	2	5		
274	2	32	2	2	1	4	1	2	1	
275	3	20	2	2	1	2	1	5		
276	3	9	2	2	2	3	1	2	1	
277	3	2	1	2	2	4	5	5		
278	3	2	1	2	2	3	1	1		
279	2	4	1	2	2	4	1	2	6	
280	3	17	2	2	1	3	1	1		
281	2	3	2	2	2	4	4	2	6	
282	3	25	2	2	2	4	1	5		
283	3	4	1	2	1	4	2	2	1	
284	2	4	1	2	1	2	1	5		
285	3	2	1	2	2	4	2	2	6	
286	3	1	1	2	2	4	1	4		
287	3	4	1	2	2	4	4	2	2	
288	2	1	1	2	2	4	1	5		
289	2	1	1	2	1	4	1	3	1	
290	3	1	1	2	1	3	1	2	1	
291	3	9	2	2	1	3	2	2	1	
292	2	33	2	2	1	4	2	2	2	
293	3	1	1	2	1	3	1	2	6	
294	3	1	1	2	2	4	2	2	6	
295	3	5	2	2	1	3	2	5		
296	3	1	1	2	1	4	2	2	1	
297	3	3	2	2	2	4	2	2	1	
298	3	9	2	2	1	4	1	2	6	
299	2	2	1	2	1	1	1	1		
300	2	3	2	3	5	1	1	5		
301	3	4	1	2	1	3	2	5		
302	2	2	1	2	1	3	4	5		
303	3	3	2	2	2	4	1	3	1	
304	3	5	2	2	1	4	2	5		
305	3	2	1	2	3	4	1	5		
306	3	4	1	1	1	1	1	2	1	
307	3	9	2	2	1	4	2	2	2	
308	3	4	1	2	1	2	2	5		

Company Number	Industry	Parent Country	CME LME	Legal Status	Entry Mode	Age	Size	MNE Mgmt Structures	Mgmt_Off_Loc	Q6b TEXT
309	2	1	1	2	2	4	2	5		
310	3	13	2	2	1	4	1	2	1	
311	2	1	1	2	2	3	1	2	1	
312	2	33	2	2	1	4	1	2	1	
313	2	4	1	2	2	3	1	5		
314	2	1	1	1	2	4	2	2	1	
315	3	2	1	2	1	4	2	5		
316	3	1	1	2	2	3	2	2	1	
317	3	2	1	2	1	4	1	2	6	
318	3	1	1	2	1	4	3	2	1	
319	3	1	1	2	2	4	2	2	1	
320	3	33	2	2	2	4	1	2	1	
321	2	9	2	2	1	4	2	1		
322	3	31	2	2	2	4	2	1		
323	2	17	2	2	2	3	2	5		
324	2	10	2	2	1	2	1	2	1	
325	3	1	1	2	3	4	1	2	1	
326	2	4	1	2	2	4	3	5		
327	3	2	1	2	2	3	3	1		
328	3	2	1	2	2	4	1	2	6	
329	2	1	1	2	5	2	3	5		
330	3	9	2	2	1	4	2	5		
331	3	2	1	2	2	4	2	1		
332	2	2	1	2	1	3	3	3	1	
333	2	2	1	2	1	4	1	2	1	
334	2	11	1	2	2	4	1	5		
335	2	2	1	2	5	4	1	2	6	
336	3	33	2	2	1	4	2	2	6	
337	2	4	1	2	2	1	5	5		
338	2	2	1	2	1	4	2	2	1	
339	2	2	1	2	1	4	1	5		
340	3	23	2	2	2	1	1	3	1	
341	2	9	2	2	6	4	1	2	2	
342	2	2	1	2	1	3	1	2	1	
343	2	9	2	2	1	4	1	2	1	
344	3	1	1	2	1	4	1	5		
345	3	1	1	2	1	4	1	2	1	
346	3	20	2	2	1	1	1	5		
347	2	16	2	2	2	4	1	2	2	
348	3	2	1	2	1	4	1	5		
349	2	9	2	2	2	4	1	5		
350	2	1	1	2	2	4	2	2	1	
351	2	2	1	2	2	4	1	1		
352	2	1	1	2	2	3	1	2	2	

Company Number	Industry	Parent Country	CME LME	Legal Status	Entry Mode	Age	Size	MNE Mgmt Structures	Mgmt_Off_Loc	Q6b TEXT
353	2	30	2	2	2	2	2	5		
354	2	1	1	2	1	4	1	2	1	
355	2	2	1	1	2	3	1	5		
356	2	2	1	1	2	4	1	2	1	
357	2	17	2	2	1	4	2	2	8	Brazil
358	3	23	2	1	1	3	1	5		
359	3	2	1	2	1	4	1	2	1	
360	3	3	2	2	2	4	2	2	3	
361	3	1	1	2	2	1	1	2	1	
362	2	2	1	2	2	2	2	1		
363	3	2	1	2	1	3	4	5		
364	2	1	1	2	1	4	1	5		
365	3	9	2	2	1	4	2	4		
366	3	5	2	2	2	4	1	2	1	
367	2	31	2	2	4	4	2	1		
368	3	2	1	2	1	2	1	5		
369	2	1	1	2	3	4	2	4		
370	2	2	1	2	1	3	3	2	6	
371	3	1	1	2	1	4	1	2	1	
372	3	15	2	2	6	3	1	2	1	
373	2	1	1	2	2	4	3	1		
374	3	26	1	3	5	4	5	2	1	
375	3	1	1	2	4	4	2	5		
376	2	2	1	1	1	4	2	2	1	
377	2	9	2	2	1	3	2	2	1	
378	2	28	2	2	2	4	1	3	1	
379	2	3	2	2	2	4	2	1	3	
380	3	1	1	2	1	3	1	2	1	
381	2	2	1	1	1	2	1	2	1	
382	2	32	2	2	5	3	1	5		
383	2	26	1	3	1	3	1	5		
384	3	2	1	2	2	3	1	1		
385	3	5	2	3	1	3	1	5		
386	2	27	2	2	2	3	3	2	1	
387	3	4	1	2	2	3	2	2	8	Taiwan
388	2	1	1	2	1	4	2	2	1	
389	2	2	1	1	1	3	1	1		
390	2	3	2	2	1	3	1	5		
391	2	1	1	2	2	4	3	4		
392	2	3	2	2	1	2	1	5		
393	3	1	1		2	3	2	2	1	
394	2	5	2	2	3	4	2	2	1	
395	2	3	2	1	1	3	1	2	1	
396	2	9	2	2	5	3	1	2	8	Germany

Company Number	Industry	Parent Country	CME LME	Legal Status	Entry Mode	Age	Size	MNE Mgmt Structures	Mgmt_Off_Loc	Q6b TEXT
397	2	1	1	2	1	4	1	5		
398	2	1	1	2	2	4	2	5		
399	3	9	2	2	2	4	2	2	1	
400	2	17	2	1	1	3	2	2	1	
401	3	2	1	2	2	4	3	5		
402	2	4	1	2	2	4	1	5		
403	2	1	1	2	1	4	1	2	6	
404	2	1	1	2	2	3	2	2	1	
405	2	9	2	1	1	4	1	2	1	
406	3	4	1	2	2	4	3	1		
407	3	2	1	2	2	4	1	2	1	
408	2	10	2	2	2	2	1	2	1	
409	3	6	2	2	2	4	3	5		
410	3	2	1	2	1	3	1	5		
411	3	2	1	1	1	4	3	2	6	
412	3	33	2	1	1	3	2	3	1	
413	2	33	2	2	2	3	2	4		
414	3	1	1	1	1	1	1	2	1	
415	2	2	1	2	1	3	2	2	1	
416	2	17	2	2	2	4	1	5		
417	3	2	1	2	1	2	1	1		
418	3	1	1	2	2	4	4	5		
419	2	1	1	2	1	4	1	3	1	
420	3	3	2	1	1	4	1	3	1	
421	3	1	1	2	1	4	2	2	2	
422	2	17	2	2	2	4	1	2	1	
423	2	2	1	2	5	4	1	2	6	
424	2	11	1	2	2	4	3	2	1	
425	3	1	1	2	1	3	1	2	1	
426	3	1	1	2	1	3	2	2	1	
427	1	11	1	2	2	3	2	2	6	
428	3	6	2	2	1	2	1	2	1	
429	3	2	1	2	1	4	5	5		

Q7_1	Q7_2	Q7_3	Q7_4	Q7_5	Q8_1	Q8_2	Q8_3	Q8_4	Q8_5	Q8_6	Q9a_1	Q9a_2	Q9a_3	Q9a_4	Q9a_5
1	5	1	3	1	5	2	1	1	1	1	5	5	5	5	5
1	5	1	2	1	5	1	1	1	1	1	4	5	1	1	4
1	4	1	4	1	4	2	2	3	2	1	4	5	4	4	5
2	4	2	4	1	4	3	3	2	2	1	4	4	4	4	5
2	2	4	1	1	2	4	3	4	2	1	5	5	3	3	4
1	5	1	5	1	4	3	1	1	1	1	3	5	5	4	4
3	3	2	1	1	2	4	3	2	2	1	4	3	4	4	3
1	3	1	1	1	4	4	1	1	1	1	4	4	5	1	4
1	4	3	3	1	4	2	3	2	1	1	5	5	5	5	4

Q7_1	Q7_2	Q7_3	Q7_4	Q7_5	Q8_1	Q8_2	Q8_3	Q8_4	Q8_5	Q8_6	Q9a_1	Q9a_2	Q9a_3	Q9a_4	Q9a_5
1	4	2	3	1	4	2	2	1	1	1	4	4	4	2	4
1	4	1	3	1	4	2	1	1	1	1	5	5	5	1	4
3	4	3	4	1	4	3	3	3	3	1	5	5	5	5	4
1	5	1	5	1	4	4	4	1	1	1	5	3	4	1	5
4	2	1	2	1	3	4	2	1	4	1	4	4	4	4	4
1	3	2	5	1	5	2	1	1	3	1	4	4	3	3	5
3	4	2	4	1	5	1	2	2	1	1	5	5	4	4	5
1	5	1	1	1	3	4	2	1	1	1	5	5	5	5	5
1	3	2	3	1	4	2	1	1	1	1	3	3	4	4	3
1	5	1	3	1	5	2	2	1	1	1	4	5	4	1	4
3	3	3	2	1	3	4	2	3	2	1	4	5	5	5	4
1	4	1	2	4	4	4	4	1	3	1	4	1	4	3	4
1	4	1	4	1	5	1	2	1	1	1	3	3	4	1	4
1	4	1	3	1	4	2	1	1	1	1	3	3	3	1	4
1	5	1	3	1	4	2	2	1	1	1	4	3	4	3	3
2	4	2	4	1	4	4	4	2	2	1	5	5	5	5	5
1	4	1	4	1	4	3	1	1	1	1	5	5	5	5	5
1	4	4	1	1	5	3	2	2	1	1	2	4	4	1	3
2	5	1	5	1	5	1	1	1	4	1	5	5	2	2	5
1	5	1	1	1	4	2	1	1	1	1	5	5	3	3	4
1	5	1	1	1	4	1	3	1	1	1	1	2	3	3	3
1	1	1	4	1	5	2	2	2	3	1	4	2	3	3	3
4	3	1	3	1	4	2	3	1	3	1	1	2	4	4	4
3	4	2	4	1	5	2	2	2	1	1	4	4	5	2	4
3	4	2	4	1	5	2	1	1	1	1	4	4	4	4	4
1	5	1	1	1	4	1	2	1	1	1	4	4	1	1	3
2	5	1	1	1	5	2	2	1	1	1	4	4	3	3	3
1	5	1	5	1	5	2	1	1	1	1	1	1	3	1	3
1	3	1	2	1	5	1	1	1	1	1	5	3	5	1	4
3	4	4	3	1	4	4	3	3	3	1	4	4	4	4	4
2	5	1	3	1	5	1	1	1	1	1	1	1	1	1	1
1	5	1	5	1	4	2	2	2	2	1	4	5	5	5	4
1	4	3	4	1	4	3	3	3	1	1	4	4	4	3	4
4	4	2	4	1	4	4	2	2	2	1	4	4	4	4	4
1	5	1	1	1	5	1	1	1	1	1	4	1	4	2	4
2	2	2	2	1	4	4	1	1	1	1	4	5	5	5	3
2	4	3	4	1	4	4	3	3	2	1	4	4	4	3	4
2	4	1	3	1	4	2	1	1	1	1	5	5	5	5	5
1	5	1	5	1	4	1	3	1	2	1	3	2	4	4	4
3	1	4	1	1	2	2	4	4	3	1	2	3	2	4	3
2	4	3	4	1	4	3	3	1	3	1	4	4	4	4	4
2	4	2	1	1	5	1	1	1	1	1	4	5	5	5	5
1	4	2	4	1	4	2	1	1	1	1	3	3	4	3	4
3	4	1	4	1	4	3	3	1	1	1	5	5	5	2	4
1	4	1	3	1	4	2	2	1	1	1	3	3	3	2	4

Q7_1	Q7_2	Q7_3	Q7_4	Q7_5	Q8_1	Q8_2	Q8_3	Q8_4	Q8_5	Q8_6	Q9a_1	Q9a_2	Q9a_3	Q9a_4	Q9a_5
1	5	1	3	1	4	3	2	1	1	1	5	5	4	1	1
1	5	1	5	1	4	1	1	1	1	1	2	4	4	1	2
2	5	3	4	1	4	3	3	3	3	1	4	4	3	3	4
3	3	1	3	1	3	1	3	1	1	1	3	3	3	3	3
4	4	1	4	1	5	1	2	1	1	1	4	5	5	5	3
4	1	3	1	1	2	4	1	2	1	1	5	5	5	5	5
1	5	3	4	1	4	2	1	2	2	1	5	3	3	2	5
2	4	2	2	1	4	2	1	1	1	1	4	4	2	2	4
1	4	1	1	1	4	2	1	2	1	1	5	5	5	2	4
4	5	1	1	1	4	2	1	1	1	1	1	2	2	1	2
3	4	1	2	1	4	1	1	1	1	1	3	4	4	2	3
1	5	1	2	1	5	2	1	1	1	1	5	5	5	2	5
4	2	1	1	1	3	4	3	1	1	1	4	4	4	4	3
1	3	1	3	1	4	4	3	1	2	1	1	2	1	1	3
1	1	3	2	4	2	4	3	3	4	1	3	2	3	4	2
4	2	3	2	1	2	4	4	4	4	1	4	4	2	4	3
1	5	1	4	1	5	1	1	1	1	1	4	3	3	2	4
1	4	1	4	1	4	3	3	2	2	1	3	3	4	4	4
1	3	1	4	1	4	3	1	1	2	1	1	1	1	1	2
1	4	1	1	1	5	1	1	1	1	1	5	5	4	4	4
3	4	4	4	1	4	2	1	4	3	1	3	4	5	3	4
4	1	3	1	1	1	5	1	3	1	1	5	1	1	1	4
1	4	1	3	1	4	4	1	1	1	1	4	1	1	1	3
4	1	2	1	4	2	4	4	3	2	1	3	4	3	4	3
2	4	1	2	1	4	1	1	1	1	1	3	3	3	3	2
1	4	1	4	1	4	2	2	2	2	1	5	5	5	5	4
1	5	1	5	1	5	1	1	1	1	1	4	5	5	5	4
1	5	1	1	1	5	1	1	1	1	1	4	5	3	1	4
4	2	1	3	1	2	4	4	1	1	1	3	4	4	1	4
1	2	1	4	1	4	2	2	1	1	1	5	3	2	3	4
1	5	1	1	1	5	1	1	1	1	1	1	2	2	3	4
1	1	1	1	5	5	5	1	1	1	1	5	5	5	5	5
1	5	1	1	1	4	2	3	2	1	1	5	5	5	5	4
2	5	1	5	1	5	3	2	1	1	1	5	1	5	1	4
1	4	1	4	1	4	3	1	1	1	1	1	3	3	3	3
1	5	1	2	1	5	1	1	1	1	1	4	3	3	4	2
2	4	1	4	1	4	2	3	2	2	1	4	4	4	4	4
1	4	1	2	1	5	2	1	1	1	1	4	4	4	1	3
1	4	1	4	1	4	3	1	1	1	1	5	5	4	4	5
3	1	1	3	1	5	2	1	1	1	1	5	5	1	1	5
1	5	1	3	1	4	2	1	1	1	1	2	1	4	1	3
1	4	1	4	4	4	4	3	3	2	1	4	4	4	4	4
1	4	1	2	4	4	3	4	4	4	1	5	4	4	5	4
1	2	1	2	1	5	1	1	1	1	1	5	5	5	2	3
2	5	1	3	1	5	1	1	1	1	1	4	4	1	4	4

Q7_1	Q7_2	Q7_3	Q7_4	Q7_5	Q8_1	Q8_2	Q8_3	Q8_4	Q8_5	Q8_6	Q9a_1	Q9a_2	Q9a_3	Q9a_4	Q9a_5
1	4	1	3	1	4	3	3	2	3	1	4	5	3	3	3
1	4	1	4	1	4	1	1	1	1	1	3	4	4	1	4
4	4	4	4	1	4	4	3	1	1	1	5	5	5	5	5
1	4	1	4	1	5	4	2	2	1	1	5	1	1	2	4
1	1	4	2	1	4	4	4	4	4	1	4	4	3	3	4
4	2	4	2	1	2	4	3	1	2	1	4	4	2	2	4
1	4	1	4	1	4	3	2	1	1	1	5	4	5	3	5
1	4	2	3	1	4	3	3	2	1	1	4	5	4	4	5
1	5	4	1	1	5	2	1	1	1	1	5	5	3	2	5
4	4	1	3	1	3	4	2	2	2	1	4	5	4	1	5
1	4	3	1	1	4	1	1	3	1	1	5	4	5	5	4
1	4	1	2	1	4	2	2	1	1	1	2	3	3	2	3
4	2	3	1	1	2	4	4	3	2	1	5	5	4	4	5
1	5	1	5	1	4	4	1	1	1	1	5	5	5	2	5
4	4	1	1	1	4	2	2	1	1	1	4	5	5	4	4
1	4	2	2	1	4	3	2	2	1	1	5	5	5	4	4
2	4	2	4	1	4	2	2	2	2	1	3	3	3	3	3
1	4	1	4	1	4	3	1	1	1	1	5	5	5	3	5
4	4	4	4	1	4	4	4	4	4	1	4	4	4	4	4
3	4	2	4	1	4	2	2	2	3	1	5	4	3	3	4
1	5	1	3	1	5	1	1	1	1	1	4	5	5	4	5
1	4	1	4	1	5	1	1	1	1	1	2	3	1	1	2
1	5	1	5	1	5	3	1	1	1	1	4	5	5	5	5
1	5	1	1	1	4	3	3	2	2	1	4	4	4	2	4
2	5	2	2	1	4	3	2	2	2	1	5	4	4	2	4
1	4	1	4	1	4	1	1	1	1	1	4	3	1	1	4
1	3	1	4	1	5	1	2	1	1	1	4	4	3	3	4
1	4	2	2	1	5	2	2	2	1	1	5	3	4	4	3
4	2	3	1	1	2	4	2	4	4	1	5	2	5	5	3
1	4	3	4	1	4	3	3	3	1	1	5	5	5	3	4
1	5	1	2	1	5	1	1	1	1	1	4	3	2	4	4
1	4	2	1	1	4	2	1	2	1	1	2	4	4	4	4
3	4	1	1	4	4	1	3	3	3	1	4	3	4	4	3
2	4	2	3	1	5	1	1	1	1	1	4	2	4	4	3
1	4	1	4	1	5	1	2	1	1	1	4	4	4	4	4
1	1	1	5	1	4	2	3	1	1	1	3	1	2	2	1
3	4	1	3	1	4	2	2	1	1	1	1	2	1	1	3
1	5	1	4	1	5	1	2	1	1	1	4	4	4	2	4
1	4	3	4	1	4	1	3	3	1	1	4	4	4	2	4
3	4	2	4	1	4	2	3	2	3	1	4	3	4	1	3
1	1	1	1	1	4	1	1	1	1	1	4	5	5	5	5
2	5	1	4	1	5	1	2	1	1	1	4	5	5	1	5
1	4	1	5	1	4	2	2	1	2	1	3	2	4	3	2
2	4	1	3	1	4	2	2	1	2	1	1	1	2	2	3
4	3	2	3	1	3	4	4	1	2	1	3	2	3	3	4

Q7_1	Q7_2	Q7_3	Q7_4	Q7_5	Q8_1	Q8_2	Q8_3	Q8_4	Q8_5	Q8_6	Q9a_1	Q9a_2	Q9a_3	Q9a_4	Q9a_5
1	4	1	1	1	4	1	1	1	1	1	5	1	1	1	5
3	5	1	5	1	5	1	3	1	1	1	4	4	4	4	4
1	5	2	4	1	4	1	1	1	1	1	3	4	4	4	4
1	4	1	4	1	5	3	1	1	1	1	5	5	5	5	4
2	5	1	4	1	4	4	2	1	1	1	4	3	3	3	4
3	3	1	4	1	4	2	3	1	1	1	4	5	4	3	4
2	4	2	5	1	4	2	2	1	2	1	5	5	5	5	3
2	4	1	3	1	4	3	3	3	3	1	4	4	4	3	4
1	5	1	5	1	4	2	2	1	1	1	5	5	5	5	4
2	4	2	4	1	4	2	1	1	1	1	1	2	4	3	4
3	4	2	4	1	4	4	4	1	1	1	3	3	4	1	2
3	4	3	2	1	4	2	2	1	1	1	4	4	4	2	4
2	4	2	4	1	4	2	3	1	1	1	4	3	5	2	4
2	4	2	4	1	4	3	3	2	1	1	4	4	4	1	4
5	2	1	1	1	1	1	1	1	5	1	4	4	3	3	4
1	4	1	2	1	5	1	1	1	1	1	4	4	4	3	4
4	4	4	3	1	4	4	4	3	2	1	5	5	4	4	4
1	4	1	5	1	5	1	3	1	1	1	3	1	4	1	4
1	5	1	1	1	1	5	1	1	4	1	1	4	4	4	4
1	3	1	4	1	3	3	2	1	1	1	5	1	3	2	3
1	5	1	3	1	4	2	1	1	1	1	5	4	3	3	5
1	4	2	4	1	5	1	3	2	3	1	5	4	5	4	5
1	1	5	1	1	2	2	2	4	2	1	4	2	1	4	3
1	5	1	2	1	4	3	1	1	1	1	5	4	4	3	4
2	4	2	4	1	4	2	2	2	1	1	4	3	4	4	4
2	5	2	4	1	5	1	1	1	1	1	4	4	4	3	3
1	5	1	1	1	4	2	2	1	2	1	2	1	1	2	3
1	1	1	4	1	1	1	1	1	4	1	3	4	2	2	3
4	5	3	5	1	5	3	2	1	1	4	4	4	4	4	4
1	5	1	4	1	4	1	1	1	2	1	4	4	4	2	5
1	5	1	1	1	5	1	1	1	1	1	2	4	3	3	4
1	5	1	1	1	4	2	3	2	1	1	5	4	5	5	4
1	4	1	4	1	4	2	3	2	2	1	3	3	3	3	3
2	5	1	3	1	4	4	3	2	2	1	4	2	3	2	4
1	5	1	1	1	5	1	1	1	1	1	5	1	1	1	4
1	1	1	4	1	4	1	1	1	1	1	5	5	5	5	4
2	4	1	4	1	4	4	2	1	1	1	4	5	4	4	4
1	5	1	1	1	5	1	1	1	1	1	5	3	3	3	5
2	4	1	4	1	5	1	1	1	1	1	5	4	4	4	4
3	4	1	3	1	4	3	3	2	1	1	4	4	3	3	4
1	3	4	1	1	4	1	2	1	1	1	5	4	3	4	4
1	5	1	1	1	5	2	1	1	1	1	5	5	5	5	5
4	4	3	1	1	4	4	4	3	1	1	4	4	4	4	4
2	4	2	4	1	4	2	3	3	3	1	5	5	5	5	3
1	5	1	1	5	5	1	1	1	1	1	4	4	4	4	4

Q7_1	Q7_2	Q7_3	Q7_4	Q7_5	Q8_1	Q8_2	Q8_3	Q8_4	Q8_5	Q8_6	Q9a_1	Q9a_2	Q9a_3	Q9a_4	Q9a_5
1	4	1	4	1	5	2	3	2	2	1	5	4	5	4	4
1	1	1	5	1	4	3	2	1	1	1	4	1	1	1	4
2	5	1	5	1	5	2	2	1	2	1	4	4	4	2	4
4	4	1	1	1	4	2	4	3	4	1	4	5	5	4	4
1	5	1	1	1	4	1	1	1	1	1	3	2	3	1	1
2	4	2	4	1	4	2	1	1	2	1	2	3	3	2	2
1	4	1	4	1	4	4	1	1	1	1	5	1	1	1	4
3	1	5	1	1	1	1	1	5	3	1	3	1	1	3	2
1	4	2	3	1	4	2	1	3	1	1	4	3	5	4	4
2	4	2	3	1	5	1	2	2	1	1	5	5	5	5	5
2	1	4	1	1	2	3	4	4	3	1	3	2	2	4	2
3	4	2	4	1	4	3	3	3	2	1	5	5	5	5	3
2	4	1	4	1	4	4	1	2	1	1	3	5	5	4	5
1	3	4	3	1	3	4	4	4	4	1	4	4	4	4	4
2	4	1	4	1	5	1	1	1	1	1	4	3	4	2	2
1	4	1	4	1	4	2	1	1	1	1	5	1	5	5	4
2	4	2	4	1	5	2	2	1	1	1	1	3	4	2	2
1	4	1	3	1	5	1	1	1	1	1	2	1	4	1	3
1	5	1	2	1	5	1	3	1	1	1	4	5	3	2	4
1	4	1	4	1	4	2	1	1	1	1	1	2	1	1	3
2	5	2	4	1	4	2	1	2	1	1	3	3	4	2	4
3	4	2	4	1	4	2	2	1	2	1	4	5	5	5	4
1	5	2	1	1	5	1	1	2	1	1	5	5	1	1	4
2	5	2	5	1	4	3	2	1	2	1	4	4	4	4	4
2	4	1	4	1	4	1	2	1	1	1	1	1	4	2	2
1	5	1	1	1	5	1	1	1	1	1	3	3	2	3	3
2	4	2	4	1	4	2	3	2	2	1	5	5	3	5	4
1	4	1	3	1	4	2	2	2	1	1	4	1	3	3	3
3	3	2	3	4	4	4	4	3	2	1	5	4	2	3	5
3	4	3	3	1	4	3	3	3	1	1	2	4	5	4	3
1	1	1	1	5	5	2	2	2	1	1	5	5	5	5	3
4	4	2	4	1	4	3	3	2	2	1	5	5	4	4	4
1	5	1	2	1	4	2	2	1	1	1	3	2	1	1	3
1	4	1	4	1	5	1	1	1	1	1	4	2	3	2	4
4	4	3	3	1	4	4	4	4	3	1	5	5	5	5	5
1	4	1	4	1	4	2	2	1	1	1	2	2	2	2	4
5	2	1	1	1	4	3	2	1	1	1	3	3	1	1	3
1	5	2	5	1	5	2	2	2	2	1	4	4	4	4	4
1	5	1	5	1	5	1	1	1	1	1	1	3	4	2	3
1	5	1	1	1	5	1	1	1	1	1	4	1	5	1	4
1	5	1	4	1	5	2	2	1	1	1	4	5	4	2	4
4	2	4	2	1	4	3	3	4	2	1	5	4	4	4	4
1	1	1	1	4	1	4	1	1	1	1	5	5	5	5	4
3	3	2	3	1	4	2	2	2	1	1	3	3	3	3	3
3	4	2	3	1	5	2	1	3	2	1	5	1	5	2	5

Q7_1	Q7_2	Q7_3	Q7_4	Q7_5	Q8_1	Q8_2	Q8_3	Q8_4	Q8_5	Q8_6	Q9a_1	Q9a_2	Q9a_3	Q9a_4	Q9a_5
1	5	1	1	1	5	1	1	1	1	1	5	4	4	4	5
1	4	1	4	1	4	2	2	1	1	1	4	1	4	2	4
1	5	2	3	1	5	1	2	3	1	1	4	4	3	2	4
2	4	1	4	1	4	3	3	1	1	1	5	4	5	1	4
1	1	1	1	1	4	3	1	3	3	1	5	5	5	5	5
4	3	2	2	4	2	4	3	1	2	1	4	4	4	4	4
1	5	1	3	1	5	2	1	1	1	1	5	1	5	2	5
1	4	1	4	1	4	1	1	1	1	1	4	4	4	3	4
2	4	1	2	1	4	4	1	1	1	1	3	4	5	5	4
2	4	1	4	1	4	4	3	1	2	1	1	1	2	1	4
1	5	1	5	1	5	1	3	1	1	1	3	3	3	3	4
1	4	1	4	1	4	2	2	1	1	1	4	4	3	3	4
1	5	1	1	1	4	1	2	1	1	1	5	2	3	3	4
3	4	2	4	1	4	3	3	2	3	1	4	4	2	2	4
1	5	1	3	1	5	2	1	1	1	1	3	3	3	2	4
2	3	2	4	1	4	2	1	1	1	1	4	3	3	2	3
1	1	1	5	1	4	1	1	1	1	1	4	3	5	3	4
1	4	1	4	1	4	2	1	1	1	1	3	4	4	2	3
1	4	1	4	1	4	1	3	1	3	1	5	5	5	5	4
2	4	2	2	1	4	3	3	3	3	1	4	4	4	4	4
1	4	1	4	1	4	1	1	1	1	1	5	4	4	4	4
1	5	1	1	1	5	1	1	1	1	1	4	1	1	2	4
4	1	4	2	4	1	1	4	4	4	1	4	5	4	4	4
1	3	1	4	1	4	2	2	1	1	1	3	4	3	3	3
1	5	1	4	1	4	2	2	1	2	1	1	1	1	1	1
1	4	1	4	1	4	1	1	1	1	1	4	3	4	1	3
1	4	1	3	1	3	2	1	1	3	1	4	4	5	2	4
3	5	3	5	1	5	3	3	1	1	1	4	4	2	3	4
1	5	1	2	1	5	1	2	2	1	1	4	4	4	1	4
1	5	4	4	1	5	1	2	1	1	1	5	2	5	2	5
1	4	1	4	1	4	1	2	1	1	1	4	4	4	4	3
1	5	1	1	1	5	1	1	1	1	1	2	3	1	1	2
1	4	1	4	1	4	1	1	1	1	1	3	1	4	1	3
4	4	3	1	1	5	2	1	2	1	1	5	5	4	4	5
1	5	1	4	1	5	1	1	1	1	1	2	4	4	4	4
3	4	2	3	1	3	3	1	1	1	1	3	2	2	3	3
1	4	1	1	1	4	1	1	1	1	1	2	2	2	3	3
1	5	1	3	1	5	2	1	1	1	1	4	4	4	1	4
1	4	2	4	4	4	3	4	2	2	1	5	5	4	4	4
1	5	1	2	1	5	1	1	1	1	1	4	3	1	1	1
1	4	1	4	1	4	2	3	1	3	1	4	4	4	4	4
1	4	1	4	1	4	2	3	1	1	1	3	3	1	3	3
1	5	1	4	1	4	2	2	1	1	1	5	4	5	5	4
3	3	2	4	1	4	3	2	1	1	1	3	3	3	3	4
1	5	1	2	1	4	2	2	2	2	1	4	4	4	3	4

Q7_1	Q7_2	Q7_3	Q7_4	Q7_5	Q8_1	Q8_2	Q8_3	Q8_4	Q8_5	Q8_6	Q9a_1	Q9a_2	Q9a_3	Q9a_4	Q9a_5
3	4	2	4	1	4	4	3	2	3	1	1	4	4	1	3
1	1	1	5	1	4	4	3	4	3	1	4	5	4	5	4
4	2	1	1	1	3	4	1	1	1	1	5	5	5	5	5
1	4	1	4	1	4	3	1	1	1	1	5	5	5	5	5
1	5	1	1	1	4	1	1	2	2	1	3	4	4	4	4
2	5	1	1	1	4	2	1	1	1	1	3	4	4	2	4
1	4	2	4	1	4	2	3	2	3	1	3	1	3	1	3
3	4	1	5	1	5	1	1	1	1	1	4	4	4	4	4
1	4	1	3	1	4	3	3	1	1	1	4	4	4	2	4
1	3	1	3	1	4	2	2	1	1	1	4	4	3	1	4
1	4	2	3	1	4	2	1	2	1	1	4	2	3	2	3
1	5	3	4	1	4	1	2	2	1	1	4	2	3	2	2
1	5	1	1	1	5	1	1	1	1	1	4	5	4	4	4
4	4	2	3	1	4	3	3	2	2	1	3	4	4	4	4
3	4	1	5	1	5	1	1	1	1	1	4	4	3	1	3
1	4	1	2	1	5	1	1	1	1	1	4	5	4	4	5
1	5	1	3	1	4	2	2	2	1	1	3	1	4	3	3
1	5	2	2	1	5	1	1	1	1	1	4	3	1	3	4
1	5	1	5	1	5	1	1	1	1	1	4	1	5	1	5
1	5	1	1	1	5	1	1	1	1	1	3	3	4	1	3
4	2	2	2	1	2	4	4	2	1	1	4	4	5	5	3
4	4	2	2	1	5	1	3	2	2	1	4	5	5	5	3
4	2	1	2	1	2	4	1	2	1	1	4	4	1	1	2
1	4	1	4	1	4	1	1	1	3	1	4	4	4	3	4
2	4	2	4	1	5	1	4	2	4	1	4	4	4	2	3
4	2	3	1	1	2	4	3	3	3	1	4	2	1	1	2
2	4	2	4	4	3	4	4	2	2	1	1	4	4	3	4
2	4	2	4	1	4	2	2	2	1	1	4	3	4	2	4
4	2	1	2	1	3	4	3	2	2	1	4	3	4	4	4
4	3	1	2	1	2	4	2	1	1	1	5	5	4	3	4
1	4	1	3	1	4	3	1	1	1	1	2	2	4	4	3
1	3	1	1	1	5	1	1	1	1	1	2	4	4	1	4
2	4	2	4	1	4	2	3	2	1	1	3	3	4	4	4
4	4	4	3	1	4	4	3	4	1	1	4	5	4	4	4
1	5	1	3	1	5	3	1	1	1	1	4	3	3	3	3
3	4	3	4	1	4	4	3	2	2	1	4	4	4	4	4
4	4	2	4	1	4	2	2	2	2	1	4	4	4	4	4
4	5	4	4	1	5	3	4	4	4	1	5	4	4	4	5
2	4	3	4	1	4	3	2	4	2	1	4	1	2	2	1
1	4	2	2	1	5	2	1	2	1	1	4	4	4	1	3
2	5	2	5	1	5	1	1	2	2	1	5	5	5	1	5
1	3	4	2	1	5	4	2	3	2	1	4	4	4	4	4
1	3	1	1	1	4	3	3	2	1	1	5	5	5	5	5
1	5	1	2	1	5	2	1	1	1	1	4	4	2	2	4
1	5	1	4	1	5	1	1	1	1	1	5	5	5	1	4

Q7_1	Q7_2	Q7_3	Q7_4	Q7_5	Q8_1	Q8_2	Q8_3	Q8_4	Q8_5	Q8_6	Q9a_1	Q9a_2	Q9a_3	Q9a_4	Q9a_5
4	4	3	4	1	5	3	1	2	2	1	3	3	4	3	4
1	1	1	1	4	1	5	1	1	1	1	5	5	5	5	4
3	4	3	4	1	4	3	3	3	3	1	2	3	4	2	4
1	5	1	5	1	5	1	1	1	1	1	5	5	5	3	5
4	2	2	1	1	2	4	4	2	2	1	5	5	5	5	5
3	4	1	3	1	4	3	3	2	1	1	4	4	3	4	4
3	4	3	3	1	5	1	1	1	1	1	4	4	5	5	4
5	1	1	1	1	3	3	2	2	2	1	3	4	4	4	4
1	5	1	4	1	5	3	2	2	2	1	4	4	5	2	5
1	3	1	1	4	5	2	1	2	1	1	5	5	5	5	4
1	1	1	1	5	1	4	4	1	3	1	2	1	1	1	3
4	4	2	4	1	4	2	2	2	1	1	4	4	4	2	4
1	5	1	1	1	5	1	1	2	1	1	5	5	4	4	4
1	1	1	1	1	3	3	4	4	4	1	4	4	4	5	4
1	4	2	4	1	4	3	2	2	1	1	1	2	5	5	4
1	5	1	5	1	5	2	3	1	1	1	4	4	4	4	3
1	4	1	3	1	4	3	3	1	1	1	4	4	4	3	4
2	5	2	5	1	4	2	4	2	3	1	3	4	4	3	4
1	5	1	5	1	5	1	1	1	1	1	4	1	5	1	4
1	5	1	1	1	4	2	2	2	1	1	4	4	5	5	4
4	4	3	2	1	4	1	2	2	1	1	4	2	2	2	3
3	3	2	4	1	4	3	2	2	2	1	5	5	5	5	5
2	4	2	4	1	4	2	3	2	3	1	5	5	5	4	5
1	5	1	5	1	5	1	1	1	1	1	5	5	5	5	5
4	1	3	1	1	1	4	4	4	4	1	4	5	1	4	1
2	4	2	3	1	4	2	2	1	1	1	3	3	3	2	3
1	4	1	2	1	5	1	1	1	1	1	1	4	3	2	2
1	4	2	2	1	4	2	2	2	1	1	2	2	2	2	4
4	1	4	1	1	1	5	1	1	1	1	4	4	4	4	4
3	4	2	5	1	5	1	3	2	2	1	3	2	3	1	4
1	5	2	3	1	4	2	2	1	1	1	3	3	4	4	4
1	5	1	1	1	4	1	1	1	1	1	1	3	4	1	2
1	4	3	4	1	4	4	4	4	2	1	5	5	4	4	4
3	3	2	3	1	4	3	2	2	2	1	3	3	3	3	3
1	5	1	1	1	4	2	1	1	1	1	3	3	2	1	4
1	5	1	2	1	5	1	1	1	1	1	5	5	1	1	4
2	5	1	3	1	4	2	2	1	1	1	5	2	4	2	4
1	5	1	1	1	5	1	1	1	1	1	1	1	4	4	4
3	4	2	4	1	5	1	2	2	2	1	5	5	5	5	5
1	5	1	1	1	5	1	1	1	1	1	4	5	5	3	4
5	1	1	1	1	1	2	4	2	2	1	4	3	3	3	4
1	5	1	1	1	4	1	2	1	1	1	1	2	4	1	3
1	3	1	1	4	5	4	4	2	1	1	4	4	5	5	4
1	4	1	4	1	5	3	1	1	1	1	4	5	4	1	1
4	2	2	1	1	2	4	4	1	2	1	4	5	3	4	4

Q7_1	Q7_2	Q7_3	Q7_4	Q7_5	Q8_1	Q8_2	Q8_3	Q8_4	Q8_5	Q8_6	Q9a_1	Q9a_2	Q9a_3	Q9a_4	Q9a_5
4	4	1	4	1	4	4	3	1	4	1	5	5	4	3	4
1	4	1	4	1	5	2	3	3	1	1	2	2	3	2	3
1	5	1	5	1	5	1	1	1	1	1	5	4	3	2	4
1	5	1	1	1	5	2	1	1	1	1	5	4	4	2	4
1	4	4	4	1	5	4	1	1	1	1	3	3	3	3	3
1	4	1	3	1	4	2	2	1	1	1	4	3	4	3	3
3	1	1	1	1	4	3	3	3	2	1	3	4	5	4	4
1	4	1	4	1	4	3	1	1	1	1	3	4	5	2	3
2	4	2	2	1	5	1	1	1	1	1	4	2	4	4	4
1	1	1	1	5	2	4	1	2	1	1	3	4	5	4	3
1	4	1	4	1	4	4	3	1	1	1	5	5	1	1	5
3	4	1	4	1	4	4	2	1	1	1	2	3	3	1	4
2	4	2	4	1	4	3	2	3	2	1	4	5	5	4	5
1	1	1	1	1	4	2	1	1	1	1	4	5	1	1	5
1	4	1	4	1	4	2	2	1	2	1	4	4	3	1	4
1	4	1	3	1	4	3	2	2	2	1	4	4	4	4	4
2	2	1	2	1	3	4	1	1	1	1	4	5	3	3	5
4	4	2	3	4	4	4	3	2	3	1	5	4	3	3	4
1	5	1	1	1	4	1	2	1	2	1	2	3	4	1	1
1	4	2	2	1	4	1	1	1	1	1	1	1	3	3	1
4	2	5	4	1	4	2	3	3	2	1	4	4	5	3	4
1	5	1	1	1	4	2	2	1	1	1	3	4	3	3	3
1	5	1	4	1	5	1	1	1	1	1	4	4	5	2	4
2	5	2	2	1	5	2	2	2	2	1	4	4	5	4	5
1	3	1	4	1	2	4	4	1	3	1	3	3	2	2	3
2	2	3	1	1	2	5	5	2	3	1	4	5	4	5	5
1	4	1	4	1	5	3	3	1	1	1	4	5	4	5	4
1	5	2	2	1	4	3	1	2	2	1	4	5	5	2	5
1	5	1	1	1	5	1	1	1	1	1	5	5	5	5	4
5	5	2	5	1	4	3	3	1	1	1	3	3	3	3	5
1	5	1	4	1	5	1	2	1	1	1	5	5	5	3	4
1	1	1	1	5	5	1	1	1	1	1	4	4	3	3	4
2	3	3	4	1	4	4	4	3	2	1	2	4	3	3	3
1	5	1	1	1	5	1	1	1	1	1	4	2	3	3	4
2	3	2	4	1	4	2	2	2	2	1	4	5	5	3	4
2	4	1	4	1	4	2	3	1	2	1	4	2	2	2	3
1	5	1	1	1	4	1	3	1	1	1	4	5	5	5	5
2	4	1	3	1	5	1	1	1	1	1	5	5	5	3	4
1	4	1	2	1	4	3	1	1	1	1	2	2	3	2	3
1	3	1	3	4	4	3	4	3	4	1	5	2	5	5	5
1	5	1	4	1	5	1	1	1	1	1	1	1	3	2	4
3	5	2	5	1	5	5	5	3	1	1	4	3	4	3	4
2	5	1	3	1	5	2	2	1	1	1	4	3	3	2	4
1	4	1	2	1	4	2	1	1	1	1	5	5	5	1	5
2	4	1	5	1	4	2	2	1	1	1	4	3	3	2	3

Q7_1	Q7_2	Q7_3	Q7_4	Q7_5	Q8_1	Q8_2	Q8_3	Q8_4	Q8_5	Q8_6	Q9a_1	Q9a_2	Q9a_3	Q9a_4	Q9a_5
1	4	1	4	1	5	2	1	1	1	1	4	3	5	3	1
4	1	1	1	1	2	4	3	1	1	1	5	5	4	5	5
1	5	1	4	1	5	3	1	1	1	1	1	3	4	4	3
2	4	1	4	1	4	1	2	1	2	1	3	3	4	4	4
3	4	1	1	1	4	3	1	1	1	1	2	3	3	2	4
1	1	1	4	1	4	1	1	1	1	1	3	1	3	2	2
3	4	2	4	1	4	2	3	2	1	1	4	5	3	1	3
1	5	2	5	1	5	1	2	2	1	1	1	1	4	1	2
1	4	2	4	1	4	3	3	2	2	1	3	4	4	3	4
4	3	2	3	1	3	4	2	1	1	1	2	1	2	2	3
1	5	1	3	1	5	1	1	1	1	1	4	4	4	2	4
1	4	1	4	1	1	2	1	1	1	1	4	4	4	1	3
5	1	1	1	1	4	4	1	1	1	1	4	4	3	2	4
1	3	1	1	1	4	2	1	1	1	1	3	3	4	3	4
3	4	3	3	1	4	2	2	2	2	1	4	4	4	4	4

Q9a_6	Q9a_7	Q9a_8	Q9a_9	Q9a_10	Q9a_11	Q9_b	Q1_0a	Q1_0b	Q_11	Q12_1_1	Q12_1_2	Q12_2_1	Q12_2_2	Q13_1	Q13_2
5	5	3	5	5	5	4	2	1	3	4	1			4	1
5	5	5	4	5	5	4	2	1	3	4	2	1	1	4	1
4	4	5	5	5	4	4	3	1	3	4	1			4	3
4	5	4	4	5	3	4	2	1	3	1	1	4	4	3	3
3	4	4	2	4	4	4	2	1	3	1	1	1	2	2	3
3	4	4	3	4	3	3	2	1	3	3	1	2	1	3	1
4	1	2	1	5	2	1	2	1	3	2	2	4	2	3	3
4	4	4	1	5	1	4	2	1	3	1	1	1	4	1	1
5	4	3	3	5	4	4	2	1	3	2	2			3	3
3	4	2	3	5	4	4	2	1	3	4	1	1	1	3	1
5	4	1	5	5	4	5	2	1	3	4	1	3	1	4	1
4	4	4	4	5	5	4	2	1	2	2	4	2		4	4
4	5	1	4	5	3	4	2	1	3	4	1			3	1
4	4	4	2	4	4	3	2	1	3	1	1			2	4
4	4	4	4	4	4	4	2	1	3	3				4	2
4	5	4	3	5	4	4	2	1	3	2	1	4	1	3	3
5	5	5	2	5	5	5	2	1	3	4	1			3	3
2	4	3	2	5	3	3	2	1	3	1	1	4	1	3	1
5	4	2	3	5	3	5	2	1	3	3	2			4	2
5	5	5	4	5	5	5	2	1	3			4	2	3	4
4	4	3	4	4	4	4	2	1	3	4	4			4	3
4	3	3	2	4	3	3	2	1	3	1	1	4	0	4	2
3	2	2	3	4	2	3	2	1	3	1		2		2	1
4	3	2	3	4	2	3	2	1	3	2	1			3	1
5	5	5	5	5	5	5	2	1	3	1	3	1	4	4	4
5	5	5	5	5	5	5	1							3	3
2	3	2	1	4	3	4	1							4	2

Q9a_6	Q9a_7	Q9a_8	Q9a_9	Q9a_10	Q9a_11	Q9_b	Q1_0a	Q1_0b	Q_11	Q12_1_1	Q12_1_2	Q12_2_1	Q12_2_2	Q13_1	Q13_2
5	5	2	1	4	3	4	2	1	2	1	4			4	1
5	4	3	5	5	3	4	2	1	3	2		3		3	1
4	4	3	1	5	1	4	2	1	2	2	4			4	3
4	2	1	2	4	2	3	2	1	2		4			2	2
3	3	1	2	4	2	2	2	1	2	1	2	1	1	3	4
4	4	2	4	5	4	4	2	1	3	4	2	2	0	4	1
4	4	4	2	5	4	4	2	2	3	4				4	2
4	3	2	4	4	2	4	2	1	3	3	1	1	1	3	1
3	2	2	2	4	3	3	2	2	3	2	4			3	1
3	2	1	1	3	1	3	1							4	1
5	3	1	1	5	4	4	1							1	1
5	5	4	5	5	3	4	2	1	3	4	2	4	4	3	1
1	1	1	1	1	1	1	2	2	3	1	2	1	3	3	2
4	5	5	2	5	3	4	2	1	3	2	1	4	1	4	2
4	3	3	2	4	3	4	2	1	3	2	2	2	4	4	3
4	4	4	3	5	4	4	2	1	3	0	0	4	4	4	4
4	2	3	4	5	2	3	2	1	3	3	1	4	2	4	1
4	5	5	3	5	5	5	2	1	3	3	1	4	1	3	3
4	4	4	4	5	2	4	2	1	3	3	3			4	2
5	5	5	5	5	5	5	2	1	3	4	2	4		4	1
4	2	2	1	5	2	3	2	1	3	2	1	4	1	3	1
3	5	4	3	4	4	4	2	1	3	4	1	1	1	2	2
4	4	4	2	5	1	4	2	1	3	3	3	4	2	4	4
4	5	5	4	5	5	4	2	1	3	4	1			3	1
4	3	4	2	4	3	3	2	1	3	1	0	3	0	4	1
5	5	3	4	5	1	5	2	1	3	2		3	4	4	3
3	2	2	1	4	3	3	2	1	3			3	1	4	1
4	4	4	3	5	4	4	2	1	3	2	1	4	1	4	1
4	4	3	3	5	2	4	2	1	3	1	4	1	1	4	1
4	4	4	4	5	3	4	2	1	3			2	4	3	3
4	4	4	1	4	3	3	2	1	3	2		3	3	3	3
3	4	5	2	5	3	4	2	1	3	4	2	1	1	4	2
4	5	5	4	5	5	4	2	1	5	2	4	2	2	3	3
5	5	2	5	2	5	4	1							4	2
3	4	4	2	5	4	3	2	1	3	4	1	3	1	2	1
4	4	2	2	5	5	4	2	1	3	1	1	4	1	3	3
1	1	1	1	4	1	2	2	1	3	4	1			2	1
3	4	2	3	4	4	4	2	1	2	1	2	1	4	4	1
5	4	2	4	5	2	4	2	1	3		2			3	1
5	5	5	2	5	2	4	2	1	3	3				4	4
4	3	2	1	5	2	3	2	1	3	4	1	1	1	3	2
5	3	4	2	2	3	4	2	1	3	3	2	0	0	3	2
4	4	4	4	5	4	4	2	1	3	1		2		2	4
4	3	2	1	4	2	4	2	1	2	1	4			3	1
4	4	4	3	5	4	4	2	1	3	4	1	2	1	2	2

Q9a_6	Q9a_7	Q9a_8	Q9a_9	Q9a_10	Q9a_11	Q9_b	Q1_0a	Q1_0b	Q_11	Q12_1_1	Q12_1_2	Q12_2_1	Q12_2_2	Q13_1	Q13_2
2	3	1	3	4	4	3	2	1	3			4	2	3	1
2	5	5	4	5	4	4	2	1	3	1	1	4	2	3	1
4	4	4	3	5	3	4	2	1	3		1	4	1	4	2
1	4	1	2	5	4	4	2	1	2	1	4	1	4	2	1
4	2	1	3	5	1	3	2	1	3	4	4			1	1
4	4	4	2	4	4	3	2	1	3	3		4	2	2	4
2	3	1	1	3	1	2	1							4	1
4	3	5	1	5	4	4	2	1	3	4	4		3	3	2
4	5	4	4	5	4	4	2	1	1	2	4		2	4	1
4	5	1	4	5	2	4	2	1	4	4	1			4	1
4	2	1	3	5	1	3	2	1	2	4	2	1	1	3	1
4	4	2	1	5	1	4	2	1	3			4	2	4	1
2	1	3	2	4	1	2	2	1	3	3	2	3		2	1
5	5	5	5	5	5	5	2	1	3	1	1	1	4	4	4
5	4	4	2	5	3	4	2	1	3		2	4		3	1
3	3	1	4	5	3	5	2	1	3	4		2	3	4	1
4	2	2	1	2	1	3	2	1	3	4	1	4	1	4	1
4	4	3	3	5	3	4	2	1	3	3	2			3	1
4	4	4	4	4	5	4	2	1	3	3	1	3	1	4	3
4	4	3	2	5	4	4	2	1	3	4	1	4	1	4	1
4	5	4	3	5	4	4	1							2	1
4	2	1	4	5	1	4	3	1	3	4	3			4	1
3	3	1	1	3	1	3	1							4	1
4	4	4	4	5	4	4	2	1	3		4		3	4	4
5	4	5	3	5	5	4	2	1	3	2	2	3	4	3	2
5	4	1	5	5	5	5	2	1	3			3	1	4	1
3	3	4	3	5	3	4	2	1	3			3		3	1
4	4	2	3	5	2	4	2	2	3	3	4			3	1
4	2	2	1	4	3	3	2	1	3	2	1	4	1	4	1
5	5	5	5	5	5	5	1							4	4
5	5	2	2	5	2	4	2	1	3	1	1	4	1	4	1
4	4	3	2	5	4	4	2	1	3			4	1	3	4
3	5	2	3	5	2	3	2	1	3	2	1	4	1	1	2
5	5	5	4	4	3	4	2	1	3	3		3		4	2
4	4	4	4	4	4	4	2	1	3	2	2			4	2
5	3	3	5	5	5	5	2	1	5			3		2	2
4	5	5	4	5	5	5	2	1	3	3	2			4	2
4	4	4	1	5	3	4	2	1	1	1	4	1	0	4	1
3	3	2	1	4	3	3	2	1	3	1	1	1	1	2	1
3	3	3	4	5	5	5	2	1	3	4	1			2	4
4	5	2	4	5	3	4	2	1	5	3	4		4	3	1
5	5	5	1	5	5	4	2	1	3	3	1			3	1
3	4	4	4	5	4	4	2	1	3	3	1	3	1	4	4
4	4	3	3	5	3	3	2	1	3	4	1	1	1	3	2
4	4	3	4	5	4	4	2	1	3	3				4	1

Q9a_6	Q9a_7	Q9a_8	Q9a_9	Q9a_10	Q9a_11	Q9_b	Q1_0a	Q1_0b	Q_11	Q12_1_1	Q12_1_2	Q12_2_1	Q12_2_2	Q13_1	Q13_2
4	4	4	2	4	3	4	2	1	5	3	1	2	1	4	4
3	3	3	4	5	4	4	2	1	3	2	3	2	1	4	2
4	4	4	2	5	4	4	2	1	3	2	1	2	1	4	1
3	2	1	1	2	3	2	2	2	3	4	1			2	1
5	5	5	4	5	5	4	2	1	3	4	1			4	1
4	4	2	3	5	1	4	2	1	3	2		3		4	2
4	3	2	2	5	3	4	2	1	3	2	2	1	2	3	2
4	4	2	4	5	4	4	2	1	3		1	3		4	1
4	4	4	4	4	4	4	2	1	3	4	2	3	2	4	2
3	3	4	1	5	3	4	2	1	3	4	2	4	2	3	2
5	4	5	2	5	5	4	2	1	3	2	1			2	4
5	4	4	2	5	2	4	2	1	3	2	2	3		4	4
4	4	4	2	5	4	4	2	1	3			4	1	3	1
3	2	3	2	5	2	3	2	1	3	2	2			3	1
4	3	4	2	5	4	4	2	1	3	2		4		4	3
4	4	4	2	5	3	3	2	1	3	4	1	2		1	1
4	5	5	2	5	4	4	1							4	1
1	1	1	1	3	2	2	2	1	3			4	2	4	1
4	3	1	1	4	1	3	2	1	2	1	2			4	1
4	3	2	2	4	3	3	2	1	3	3	1	4	1	4	1
4	4	2	4	5	2	4	2	1	3	2		4		4	1
4	3	1	1	5	2	3	2	1	3			4	2	4	1
4	4	4	4	4	4	4	2	1	3	4	3			2	3
4	3	5	2	5	3	5	2	1	3	4	1	1	3	2	1
3	2	4	1	4	3	3	2	1	3	2	2	3	3	4	2
3	3	3	1	4	2	3	1							3	1
4	2	3	1	3	2	3	2	1	3	4	3			4	4
1	5	1	5	5	1	4	2	1	3		2			4	1
4	2	4	3	5	2	4	2	1	3	1	1	4	2	4	1
4	4	4	2	5	3	4	2	1	3	4	1	1	1	2	1
4	5	5	5	5	3	4	2	1	3	3		4	2	4	1
4	2	3	1	4	2	4	2	1	3	4				3	1
4	4	3	4	5	4	4	2	1	3	4	2	4	2	3	1
3	5	5	3	4	5	4	2	1	3	2				3	1
3	4	3	3	4	2	4	2	1	3	2		2	4	4	4
4	5	5	4	5	4	5	2	1	2	4	4	2	2	4	3
3	3	2	2	4	2	3	2	1	3	2	1	4	1	4	1
3	3	2	2	5	4	5	2	1	3	2	1	2	1	3	3
4	4	2	3	5	3	4	2	1	3	3		2		4	2
4	4	2	2	5	3	4	2	1	3			4	3	4	1
4	4	1	3	5	4	4	2	1	3	4		2		3	2
4	5	5	4	5	5	4	2	1	2	1	2	1	2	1	1
4	2	3	2	5	2	4	2	1	3			4	1	4	1
4	4	4	3	4	4	4	2	1	3	2		4	3	4	2
3	3	3	4	4	4	4	1							1	1

Q9a_6	Q9a_7	Q9a_8	Q9a_9	Q9a_10	Q9a_11	Q9_b	Q1_0a	Q1_0b	Q_11	Q12_1_1	Q12_1_2	Q12_2_1	Q12_2_2	Q13_1	Q13_2
4	4	4	4	5	5	4	2	1	3			3	1	1	1
3	2	2	2	5	2	4	2	1	3	1	1	4	1	2	1
4	4	3	1	5	3	4	2	1	4		4			3	3
2	4	4	4	5	3	4	2	1	3	2	1	4	1	4	2
2	4	4	2	5	4	3	2	1	3	3	2			3	4
4	4	4	4	5	4	4	2	1	3	3			3	3	2
4	2	3	1	4	2	4	2	1	3	1	1	4	3	3	1
4	4	2	2	5	4	4	2	1	3	1	0	4	0	2	2
2	2	2	1	4	2	3	1							4	1
2	2	2	2	3	2	2	2	1	3	3			3	2	2
4	3	1	3	5	4	4	2	1	3	4	2	4	4	3	3
4	3	3	4	5	4	4	2	1	2		4			4	1
4	4	3	3	5	2	4	2	1	2				2	3	2
4	5	5	4	5	4	4	2	1	3	2	1	2	3	4	2
3	3	3	3	4	3	3	2	1	3			3	0	2	1
4	2	2	1	5	3	3	2	1	3			2	2	1	2
5	5	1	1	5	3	3	2	1	3	4	1	2	1	4	1
5	5	5	2	5	5	4	2	1	3	2		4		4	1
4	4	4	3	5	4	4	2	1	3	4	2	3	2	3	2
5	3	3	4	5	3	4	2	1	3	2	4			4	3
4	5	4	2	5	1	4	2	1	3	2	1	4	2	3	1
4	3	3	4	4	4	4	2	1	3	1	3			4	1
4	5	5	3	5	4	4	2	1	3	2	1	3	4	3	2
4	5	5	2	5	3	4	2	1	3		3		2	4	1
4	4	4	2	4	4	4	2	1	3					4	3
5	4	3	3	5	5	5	2	1	3		3			4	4
4	4	3	4	4	3	4	2	1	3	3	1	4	2	4	2
3	3	4	2	5	3	4	2	1	3	4	1			4	1
4	4	1	1	4	1	4	2	1	3	3				1	1
4	4	3	1	5	4	4	2	1	3	0	0	0	0	3	1
4	3	3	2	3	2	3	2	1	3		3		3	4	4
2	1	1	1	2	2	2	1							2	1
3	2	2	1	4	2	2	2	1	3	1	1	4	1	3	1
5	1	1	3	5	1	3	2	1	3			4		3	3
2	3	1	1	4	2	3	2	1	3	4	1			1	4
3	3	4	2	5	2	4	2	1	3	1	4			4	2
5	5	5	5	5	5	5	2	1	3	2	1	4	1	2	2
3	1	2	1	2	4	3	2	1	3	2	2			2	4
4	4	4	2	5	4	4	2	1	3	4	1			3	3
5	4	2	1	5	2	4	2	1	3					2	3
3	3	4	1	5	4	4	2	1	3		2		4	4	4
4	4	2	2	5	2	4	2	1	3					2	1
4	4	4	3	4	4	4	2	1	3	3	1	3	1	3	1
3	2	2	2	3	2	2	2	2	3	1	2	1	4	3	1
3	4	2	2	5	4	3	2	1	2	1	4	1	1	3	1

Q9a_6	Q9a_7	Q9a_8	Q9a_9	Q9a_10	Q9a_11	Q9_b	Q1_0a	Q1_0b	Q_11	Q12_1_1	Q12_1_2	Q12_2_1	Q12_2_2	Q13_1	Q13_2
4	4	3	4	5	3	4	2	1	3	4	3			2	2
4	2	2	1	4	1	3	2	1	3	2	1	4	1	3	1
4	3	3	4	4	4	4	2	1	3					4	2
4	4	5	4	5	5	4	2	1	3	2	1	3	1	3	2
4	5	5	2	5	4	4	1							2	1
4	3	3	4	4	4	3	1							2	1
2	1	2	1	3	2	2	2	1	3	1		3	2	4	1
3	4	3	2	4	3	3	2	1	3	3				2	1
4	5	4	4	5	4	4	2	1	3					3	3
3	2	3	1	5	2	4	2	1	3					4	2
4	5	3	2	5	3	4	2	1	3	3	1	1	1	3	2
4	2	3	3	5	2	4	2	1	3	4	2			4	3
4	5	5	3	5	5	5	2	1	3					4	2
4	4	4	4	5	3	5	2	1	3	4	1			4	2
3	2	2	1	4	3	3	2	1	3					3	1
3	3	2	3	4	2	3	2	2	3	2	3	0	0	3	1
5	5	5	4	5	5	5	2	1	3	4	1	4	2	4	4
2	2	2	1	3	1	3	2	1	3	4	1			4	1
4	5	3	1	4	4	2	2	1	3	4	1	1	1	2	2
4	2	4	2	5	4	4	2	1	3	3	4			4	3
5	1	2	1	5	1	3	2	1	3	1	1	4	1	4	1
1	1	1	4	5	1	4	2	2	3	4		4		3	1
4	4	1	4	4	2	4	2	1	3	4				2	1
4	5	5	3	5	4	4	2	1	3	3	2			3	3
4	5	5	3	5	5	4	2	1	3	3	1	4	1	3	3
3	2	2	1	4	2	3	2	1	3	4	1	1	1	3	3
5	4	3	4	5	3	4	2	1	3	4	1	3	1	3	3
4	4	4	4	5	4	4	2	1	5	4				4	4
3	3	2	1	5	1	2	2	1	3	2	2	4	3	4	2
4	5	2	1	5	2	4	1							4	2
5	5	1	3	5	4	4	2	1	3	1			4	4	2
5	5	5	4	5	5	5	2	1	3	4	2	3		4	4
4	4	4	4	4	3	4	2	1	3	4	2	4	4	3	3
5	5	1	3	5	1	4	2	1	3	2	4			4	1
4	3	3	3	5	4	4	2	1	3		0	4	0	4	1
4	5	4	3	5	5	4	2	1	3	1	1	2	3	1	1
1	2	2	1	3	1	2	1							2	1
3	4	4	2	5	2	3	1							4	1
4	4	4	1	5	3	4	2	1	3					4	1
3	3	3	1	5	1	4	2	1	3	4	1			3	3
4	4	3	2	5	4	3	2	1	3	1	1	4	2	3	3
3	3	2	3	4	2	3	2	1	3	4				3	2
3	4	3	2	4	2	3	2	1	3	4	2	3	3	2	1
4	2	2	1	4	2	4	2	1	3					3	1
3	3	3	1	4	3	3	2	1	3	2	1	2	1	3	1

Q9a_6	Q9a_7	Q9a_8	Q9a_9	Q9a_10	Q9a_11	Q9_b	Q1_0a	Q1_0b	Q_11	Q12_1_1	Q12_1_2	Q12_2_1	Q12_2_2	Q13_1	Q13_2
5	5	5	4	5	4	4	2	1	3	4	2	4	2	3	1
4	4	4	2	4	3	4	2	2	3	4				4	4
4	4	4	3	5	4	4	2	1	1	1	4	1	4	4	1
4	2	2	4	5	2	4	2	1	3					4	1
5	5	1	4	5	5	4	2	1	3					1	1
3	3	3	2	4	3	3	2	1	3	1	1	1	1	2	2
1	1	1	1	2	2	2	1							2	1
3	4	4	1	4	2	3	2	1	3	2	2	3	2	4	1
4	3	3	3	5	3	3	2	1	3	4		4	1	3	2
4	4	2	2	5	4	4	2	1	3					4	2
4	5	2	1	5	3	4	2	1	3	3	1	1	1	4	1
3	2	2	1	5	5	4	2	1	3	1	1			3	2
3	4	4	1	5	2	4	2	1	3	3	1	3	2	2	1
3	2	3	1	4	1	2	1							4	1
2	3	1	1	4	2	3	2	1	3	2	1	4	1	2	1
5	5	5	4	5	5	5	2	1	3	3	1	4	0	3	1
4	4	4	2	5	4	4	2	1	3	4	1			3	1
4	2	3	1	3	2	3	2	1	3	3	2			3	1
2	2	3	2	3	3	2	1							4	1
4	4	1	2	5	3	4	2	1	3	2	1	4	1	4	1
4	5	4	2	5	4	4	2	1	3	2	1	4	2	2	3
4	1	1	1	4	1	3	2	1	3	2	4	2	2	3	1
4	4	4	3	4	4	4	2	1	3	4	4		4	4	4
4	3	3	3	5	3	3	2	1	3	2	1	3	1	3	1
5	4	5	4	5	4	5	2	1	3	2	4			4	1
4	4	2	2	5	3	3	2	1	3	3	3			2	1
4	2	4	2	4	3	4	2	1	3	1	4	2	2	4	1
3	3	2	1	4	2	3	2	1	3					4	1
4	5	5	4	5	4	4	2	1	3	2	2	4	4	4	3
5	5	5	3	5	5	4	2	1	3					2	1
5	5	5	1	5	1	5	2	1	3		4			4	4
3	4	4	4	5	3	4	2	1	3	2	2		2	4	1
4	5	3	1	5	2	4	2	1	2	1	4			3	1
4	2	1	1	4	1	2	1							4	1
4	4	4	3	5	3	4	2	1	3	4	1	4	1	4	2
4	3	3	2	5	3	4	2	1	2	1	4	1	4	4	1
4	2	2	1	5	2	4	2	1	3	3	3	4		4	1
4	2	2	1	4	2	3	2	1	3	2	1			3	2
3	2	2	1	5	1	3	2	1	3					4	2
4	4	4	1	5	4	4	2	1	3	3				4	1
4	4	3	4	5	4	4	2	1	3					3	4
4	4	2	4	5	2	4	2	1	2	2	4			4	1
5	5	4	3	5	4	4	2	1	3		3		2	4	2
3	2	4	2	4	3	4	2	1	2	3	3	1	1	3	2
4	4	4	3	4	4	4	2	2	3	1	4	1	0	3	1

Q9a_6	Q9a_7	Q9a_8	Q9a_9	Q9a_10	Q9a_11	Q9_b	Q1_0a	Q1_0b	Q_11	Q12_1_1	Q12_1_2	Q12_2_1	Q12_2_2	Q13_1	Q13_2
4	5	1	4	5	1	4	2		3	3	0	0	0	4	1
2	3	2	2	4	3	3	3	1	3	4	1	4	1	3	1
4	4	3	2	4	3	4	2	2	3	1	4	1	1	2	4
4	4	4	3	5	2	4	2	1	3	1	1	2	2	3	2
3	4	2	2	5	2	4	2	1	3	2	2			3	3
4	4	4	2	5	4	4	2	1	3	2	4	1		3	1
4	3	3	3	5	2	4	2	1	3	4	1	1	1	3	2
2	3	2	2	4	3	3	2	1	3	1	1	1	1	1	1
4	4	2	4	5	3	4	2	1	3	2	3	1	2	4	1
4	2	2	2	5	3	4	2	1	3	1	2	4	3	4	1
2	4	3	2	5	3	4	2	1	3	3		2		4	2
4	4	4	4	5	4	4	2	1	3	3		2	3	2	3
4	3	3	2	4	2	3	2	1	3	2	1	1	1	4	1
3	4	2	1	5	2	3	2	1	3	2	2	2	4	4	1
4	2	3	2	4	3	3	2	1	3	1	3			4	3
4	4	4	2	5	5	4	2	1	3	4	1	2	1	4	4
3	3	3	2	4	4	3	2	1	3	4	2	4	1	3	2
4	3	3	2	4	3	3	2	1	3	4	1	4	1	3	2
4	3	4	2	4	3	4	2	1	3	4	1	1	1	3	1
4	4	4	2	5	4	4	2	1	3	2		2		4	4
2	1	1	1	4	1	3	2	1	3	3	2	3	3	4	3
4	3	1	3	5	2	3	3	1	3	3	1	2	1	3	1
2	2	2	5	5	5	4	2	1	3	2		4		4	1
3	3	5	2	3	3	3	2	1	1	2	2	2	2	4	3
5	4	4	4	5	4	4	2	1	3	4	1	2		4	3
4	4	2	2	5	3	4	2	1	2	1	4	1	3	3	1
5	3	1	1	1	1	4	2	1	3	1	1	1	1	1	1
4	3	3	2	5	5	4	2	1	3	2	2	4	2	4	4
4	5	5	4	5	5	5	2	1	3	4	4			1	4
4	3	3	1	4	2	3	2	1	5	2		3		3	3
5	5	3	1	5	1	4	2	1	3	4		4		4	1
5	5	4	4	5	4	5	2	1	4	3	1	3	1	4	4
2	2	1	3	5	2	4	2	1	3	3	1	4	1	4	1
4	3	4	2	4	3	4	2	1	3	3			3	4	1
4	4	4	2	5	4	4	2	1	3	2		4	4	4	4
3	5	2	5	5	3	4	2	1	3	2		4	2	4	1
5	5	5	2	5	5	5	2	1	3	1		2	4	4	1
4	3	3	2	4	3	4	2	1	3	2	1	3	1	2	3
5	3	1	2	5	2	4	2	1	2	3	3	1	2	4	1
4	5	5	2	5	4	4	2	1	3	2	1	4	1	3	1
4	5	5	5	5	5	5	2	2	4	2	2	4	4	4	4
2	3	3	1	4	2	3	2		3	1	1	2	1	4	1
4	4	4	3	4	4	4	2	1	3	1	1	4	2	4	1
4	4	4	3	4	4	4	2	1	3	2	2	2	2	4	3
3	3	3	3	4	3	3	2	1	3	2		2		3	2

Q9a_6	Q9a_7	Q9a_8	Q9a_9	Q9a_10	Q9a_11	Q9_b	Q1_0a	Q1_0b	Q_11	Q12_1_1	Q12_1_2	Q12_2_1	Q12_2_2	Q13_1	Q13_2
5	5	1	4	5	1	4	2	1	3	2		3		4	1
4	5	5	2	5	4	4	2	1	3	3	1	2	1	4	2
4	2	2	1	4	3	3	2	1	3	3	1	2	1	4	2
5	5	5	5	5	3	5	2	1	2		4			2	1
4	5	5	3	5	4	4	2	1	3	4	2	3	1	4	3
5	5	5	4	5	5	4	2	1	3			4		3	2
1	5	4	1	5	4	4	2	1	3	3	1	4	2	1	4
4	3	3	1	4	2	3	2	1	3	4	1			3	1
2	2	2	1	2	1	2	1							1	1
4	3	3	3	4	2	2	2	1	3	2				3	1
2	5	5	1	5	1	4	1							1	1
4	3	2	3	4	3	3	1							4	1
4	3	3	1	5	4	3	2	1	3	4	1	4	1	3	3
1	1	1	1	5	4	3	1							4	1
5	4	4	4	5	4	4	2	1	3	4	4			4	4
5	5	5	5	5	3	5	2	1	2	2	4			3	3
4	2	1	1	4	2	3	2	1	3	2	1			3	1
4	4	4	3	5	3	4	2	1	2	2	3		4	4	1
3	2	2	1	5	1	3	2	1	3			4	1	2	1
4	5	4	4	4	4	4	1							4	1
5	5	5	3	5	2	4	2	1	3	1	4			3	3
4	4	3	2	5	3	4	2	1	3	1	1	3	1	3	1
3	2	3	1	5	2	3	2	1	3	3	4			1	3
2	2	1	1	4	2	3	2	1	3			2		3	1
4	4	4	3	5	4	4	2	1	3	2	1	4	4	4	1
4	4	1	4	5	4	4	2	1	3	3	1	3	1	3	1
5	5	4	4	5	4	4	3	1	3	4	2	2		3	3
5	3	2	5	5	3	4	2	1	3	4	4	0	0	3	3
4	3	3	1	4	2	4	2	1	3	3				3	2
3	3	2	3	5	2	4	2	1	3	2	1	4	1	4	1
4	4	3	3	5	3	4	2	1	3	4		3		4	2
3	4	4	5	5	4	4	2	1	3	4				4	2
3	4	2	4	4	2	3	2	1	3	4				3	2
3	4	4	3	5	3	4	2	1	5	4	1	4	1	3	3
3	2	2	2	5	2	3	2	1	3	4				3	1
5	4	5	1	5	2	4	2	1	3			3	4	3	2
2	5	5	2	4	4	3	2	1	3	2	2	2	2	3	3
5	5	1	1	5	1	4	2	1	4		4			3	1
4	3	2	1	4	1	3	2	1	2		2		2	2	1
4	5	4	3	5	5	4	2	1	3	3	4	3	1	4	2
5	5	1	5	5	5	5	1							1	1
4	3	2	3	5	3	4	2	1	3			2	3	4	1
4	4	4	4	4	4	4	2	1	3	2	2			4	2
4	5	3	2	5	4	3	2	1	3	4	2	1	1	1	1
5	4	3	4	5	3	4	2	1	3	2	1	3	1	4	3

Q9a_6	Q9a_7	Q9a_8	Q9a_9	Q9a_10	Q9a_11	Q9_b	Q1_0a	Q1_0b	Q_11	Q12_1_1	Q12_1_2	Q12_2_1	Q12_2_2	Q13_1	Q13_2
3	3	1	1	4	2	3	2	1	3	4	2	2	1	4	1
1	1	1	1	2	1	2	2	2	3	2	3		3	2	1
4	4	3	4	5	3	4	2	1	3	2	4	1	1	4	2
3	3	3	1	5	2	3	1							3	2
4	4	5	4	5	1	4	2	1	3	3		4		3	1
5	5	4	4	5	4	4	2	1	3			4	4	4	2
3	2	2	1	3	2	3	2	1	3			3	1	2	1
4	4	5	4	5	4	4	2	1	3	4	1	4	3	3	3
5	5	5	5	5	5	4	2	1	3	3	1			3	4
5	4	3	5	5	4	4	2	1	3	3	1	2		4	4
5	4	5	3	5	5	4	2	1	3	3				3	1
4	4	4	5	5	2	3	2	1	3	1	2			3	3
5	5	4	3	5	4	4	2	1	3	2	4			4	3
4	5	5	4	5	5	5	2	1	3	3	1	2		4	1
3	4	4	1	4	3	3	2	1	3	4	1	4	1	4	4
4	2	3	2	5	2	4	2	1	3	3	2			4	2
4	3	3	3	5	4	4	3	1	3	2	1			3	2
4	3	3	2	4	2	3	2	1	3	2	1	1	1	2	1
4	5	5	3	5	5	4	2	1	3			4	1	3	1
5	5	3	4	5	1	4	2	1	3	2			4	4	1
2	4	2	1	4	1	3	1							2	1
5	2	2	5	5	1	5	2	1	3	4	1			4	3
4	4	3	3	5	2	3	2	1	3			4	1	4	1
4	4	3	4	5	3	4	2	1	2	4	3			3	3
4	3	2	2	5	2	4	2	1	3	4	3	4	2	2	2
3	3	1	5	5	1	4	2	1	3	4	2			4	1
4	3	3	3	4	2	3	2	1	3	3	3			3	1
4	3	3	4	5	3	4	2	1	2	1	4	1	1	3	1
4	4	4	5	5	5	5	2	1	3	2		2	2	1	3
3	3	3	2	4	2	3	2	1	3	1	1	3	1	4	1
4	4	4	3	5	3	4	2	1	3	1	1	3	3	3	1
3	3	3	1	4	2	3	1							3	1
3	3	3	2	4	2	2	2	1	3			3		4	1
3	2	2	1	5	3	4	2	1	3	3	4			3	2
2	3	2	1	3	3	2	2	2	3	1	4			4	1
4	4	3	3	5	4	4	2	1	3			4	1	4	2
2	3	3	1	3	3	3	1							3	2
4	4	2	3	5	3	4	2	1	3	2				1	1
4	5	4	1	5	3	4	2	1	3	0	0	4	4	4	1
4	2	2	3	5	4	3	2	1	2	1	4		2	2	4
4	3	3	2	4	3	3	1							4	1
4	4	4	4	4	4	4	2	1	1	4	0	0	0	3	1

Q13_3	Q13_4	Q13_5	Q13_6	Q13_7	Q13_8	Q13_9	Q14_1_1	Q14_1_2	Q14_1_3	Q14_1_4	Q14_1_5	Q14_1_6
3	4	1	1	2	1	3	2	0	1	1	1	1
4	3	2	2	1	1	3	1	0	1	1	1	1
4	4	4	3	3	1	3	1	2	1	1	1	1
3	3	2	2	2	1	2	2	2	2	2	2	1
4	2	2	1	1	1	2	1	2	1	1	2	1
3	3	1	3	1	1	3	2	1	1	2	0	2
3	4	2	2	2	1	2	2	1	2	2	1	1
4	3	1	1	1	1	1	0	0	2	0	0	0
2	4	3	4	2	4	3	2	0	2	2	2	2
2	3	2	4	2	1	2	2	1	2	2	0	2
2	3	1	3	1	1	3	1	1	1	2	1	1
4	4	3	4	1	2	2	0	0	0	0	0	0
1	3	1	3	1	1	1	0	0	0	0	0	0
4	2	1	2	1	2	2	1	1	1	2	1	2
4	4	2	2	1	3	3	2	0	2	2	0	0
3	3	2	1	1	1	2	2	1	2	1	1	1
3	2	2	2	2	1	2	1	1	1	1	1	1
3	2	1	1	1	1	1	0	0	2	0	0	0
4	3	1	3	1	2	4	2	1	1	1	1	2
4	4	3	4	1	1	3	2	1	1	2	2	2
3	4	2	3	3	1	3	2	2	2	2	0	2
2	4	1	2	1	1	1	2	0	2	2	0	1
2	2	1	2	1	1	1	2	0	2	2	0	0
1	3	1	2	1	1	3	0	0	1	1	0	1
4	4	4	4	1	1	4	1	2	1	1	1	1
3	2	1	2	1	1	3	0	0	0	0	0	0
3	2	3	1	1	1	2	2	2	2	1	1	2
4	1	3	4	1	1	4	2	0	2	0	2	2
3	3	1	3	1	1	2	2	0	2	0	0	2
3	4	2	3	1	4	3	2	2	2	2	2	2
2	3	2	1	1	1	2	1	1	1	2	2	0
2	3	2	3	1	1	1	1	1	1	1	1	1
3	4	1	4	1	4	1	1	1	2	2	0	2
4	3	1	4	1	2	2	2	0	2	0	0	2
2	2	1	1	1	3	3	2	1	1	1	1	1
1	3	1	1	1	1	2	1	1	2	2	1	2
3	3	1	3	1	1	1	2	0	2	2	0	1
2	2	1	2	1	1	2	0	0	0	0	0	2
3	3	3	2	1	4	4	1	1	1	2	1	1
2	2	1	3	1	1	3	1	1	1	1	1	1
4	4	2	4	2	4	3	2	2	2	1	1	2
3	2	3	2	3	1	2	1	1	1	1	1	1
4	4	2	3	1	1	2	2	2	2	2	0	2
2	3	1	3	1	3	2	2	2	2	2	1	1
3	2	3	2	1	3	3	1	1	1	1	1	1

Q13_3	Q13_4	Q13_5	Q13_6	Q13_7	Q13_8	Q13_9	Q14_1_1	Q14_1_2	Q14_1_3	Q14_1_4	Q14_1_5	Q14_1_6
4	4	2	4	2	2	3	2	1	2	2	2	2
3	2	1	3	1	3	2	0	0	0	0	0	0
2	2	1	2	1	1	1	2	0	2	2	0	2
3	2	2	2	1	1	2	2	2	2	1	2	1
4	4	2	2	1	1	2	2	0	2	2	0	0
3	3	1	2	1	1	1	0	0	0	0	0	0
3	4	2	3	3	3	2	2	1	2	2	0	0
3	3	2	2	1	1	1	1	1	2	1	1	1
4	4	1	3	1	1	3	2	1	2	2	1	2
3	4	1	4	1	4	4	1	1	1	2	0	2
4	3	1	2	1	1	1	2	1	2	1	1	1
4	3	2	3	3	3	3	2	2	2	1	2	2
3	2	1	1	1	1	1	2	2	1	2	0	0
4	4	1	4	1	4	4	1	2	1	1	0	2
3	4	3	4	1	4	3	1	1	1	2	1	2
2	2	2	2	1	3	2	2	1	1	2	1	1
4	2	1	1	1	4	2	2	1	2	2	1	1
2	2	2	4	4	4	2	2	2	2	2	2	0
2	2	1	1	1	1	1	2	1	1	1	1	1
2	4	1	2	1	1	3	2	1	2	2	1	1
2	4	1	3	2	1	3	2	1	2	2	0	1
4	4	1	4	1	4	4	1	1	1	1	1	1
2	3	1	3	1	1	2	1	0	0	1	1	2
3	2	3	4	1	1	4	1	1	1	1	2	2
4	2	4	2	3	1	3	0	2	2	2	2	2
2	3	1	3	1	1	2	2	1	1	2	1	2
3	3	2	3	2	1	2	1	1	1	2	1	0
1	1	1	2	1	1	3	1	1	1	1	1	1
3	3	2	2	1	1	4	1	1	1	2	1	1
2	3	2	3	1	4	4	2	1	2	2	2	2
1	1	2	4	2	1	3	0	0	0	0	2	2
1	3	1	1	1	1	1	0	0	0	0	0	0
4	4	4	2	1	1	3	1	2	2	1	2	2
1	2	2	1	1	1	1	2	1	2	2	2	2
3	4	3	3	2	3	4	2	2	2	2	2	2
4	4	1	1	2	3	4	2	1	2	2	1	2
3	3	1	3	1	1	3	1	0	0	1	0	1
3	3	1	2	1	3	1	1	0	2	1	0	2
2	4	1	4	4	1	4	2	1	2	2	2	2
2	2	1	2	1	2	1	2	0	2	2	1	2
4	4	4	4	1	4	4	1	1	1	1	1	1
3	3	3	3	1	1	3	2	0	1	1	1	1
3	4	1	3	1	1	1	0	0	0	0	0	0
3	3	1	3	2	1	3	2	2	2	2	1	2
3	2	2	2	2	1	2	2	1	2	2	1	2

Q13_3	Q13_4	Q13_5	Q13_6	Q13_7	Q13_8	Q13_9	Q14_1_1	Q14_1_2	Q14_1_3	Q14_1_4	Q14_1_5	Q14_1_6
4	4	2	4	1	4	4	2	1	2	1	1	2
3	4	1	3	1	2	1	2	0	2	2	0	2
2	1	1	4	1	4	2	0	0	0	0	0	2
1	2	1	3	1	1	1	1	1	1	1	1	2
1	3	1	4	1	1	3	2	0	0	2	0	2
4	4	3	4	4	1	3	2	2	2	2	2	2
3	2	2	3	4	1	2	1	2	1	2	2	2
1	4	1	4	1	1	4	1	1	2	2	1	1
3	3	1	4	1	4	3	1	1	2	1	1	2
2	2	1	2	1	1	3	1	1	1	2	1	1
3	3	1	3	4	1	1	2	1	2	2	1	2
4	4	4	1	1	1	3	1	1	1	1	1	1
2	4	1	4	1	1	3	2	1	2	1	1	1
4	2	4	1	1	1	3	1	2	2	0	2	1
2	2	1	3	3	1	2	1	1	2	1	1	2
4	4	2	4	1	1	1	2	2	2	2	0	2
4	2	2	3	1	1	3	0	1	1	1	1	1
3	4	3	4	4	1	2	2	1	1	2	2	1
2	4	2	4	1	2	2	2	0	0	2	0	2
3	4	3	2	1	1	2	2	0	2	2	2	0
2	3	1	2	1	1	1	2	1	1	1	0	1
3	4	3	2	2	1	2	1	1	1	1	1	1
2	3	1	2	1	1	2	1	1	2	2	0	2
2	3	1	3	1	1	2	1	0	1	1	0	1
4	4	4	3	1	1	2	2	2	2	1	1	1
3	3	2	3	1	3	3	2	1	1	2	1	2
4	4	1	3	1	1	4	2	1	2	2	1	2
4	4	4	4	1	1	4	2	2	2	2	2	2
3	3	2	3	2	1	3	2	1	2	2	2	2
4	4	1	1	1	1	1	1	1	2	1	1	1
2	1	1	3	3	1	1	1	1	1	1	0	1
4	4	3	3	2	1	3	1	1	2	2	1	1
3	4	2	3	3	1	4	2	2	2	2	2	2
2	3	1	4	1	1	2	2	1	2	1	0	2
1	4	1	3	1	1	2	2	1	2	2	1	2
4	2	2	4	1	2	4	2	1	2	2	2	2
3	3	2	2	1	1	2	2	2	2	1	1	1
4	4	3	3	2	1	3	2	2	2	2	2	0
4	4	3	2	2	2	2	2	2	2	2	1	1
3	3	2	3	2	1	4	1	1	1	1	1	1
2	3	4	1	1	1	1	1	1	1	1	1	1
4	4	4	4	1	1	3	1	1	1	1	1	1
4	2	1	2	1	1	1	2	1	2	2	2	2
2	2	2	4	1	4	2	1	1	1	1	1	2
3	1	1	3	1	1	1	2	0	2	0	0	2

Q13_3	Q13_4	Q13_5	Q13_6	Q13_7	Q13_8	Q13_9	Q14_1_1	Q14_1_2	Q14_1_3	Q14_1_4	Q14_1_5	Q14_1_6
1	2	1	3	1	1	1	2	0	0	2	0	2
1	2	1	2	1	1	2	1	1	1	2	1	2
2	4	2	2	1	1	2	2	1	1	2	2	1
2	3	1	4	1	1	4	2	1	2	2	1	2
2	2	2	2	2	2	2	1	1	1	1	1	1
3	4	1	4	1	3	2	1	0	1	1	0	1
3	4	2	4	2	1	4	2	1	2	2	1	2
2	3	1	1	1	1	1	1	1	1	1	1	1
3	3	1	1	1	1	1	2	2	1	2	1	1
4	4	1	1	1	1	4	0	0	0	0	0	0
4	4	1	4	4	1	3	0	0	0	0	0	0
3	3	2	4	2	4	3	1	0	2	2	2	2
3	4	2	4	3	1	2	0	0	2	2	1	1
2	2	1	2	1	1	1	2	2	2	2	2	2
3	3	2	4	1	3	2	2	1	1	1	1	1
3	4	4	4	3	1	3	2	2	2	2	2	2
4	4	2	3	1	1	2	2	2	2	2	2	1
3	3	2	2	3	1	2	2	2	2	1	1	2
3	3	1	3	2	1	2	2	1	2	2	1	2
3	2	1	1	1	1	1	0	0	0	0	0	0
3	3	1	3	3	1	3	2	0	2	2	0	2
3	4	1	2	1	1	3	2	1	2	2	2	1
3	3	2	3	1	1	3	1	1	1	1	1	1
3	1	1	1	1	4	1	2	2	2	2	2	2
4	4	1	4	1	1	3	2	1	2	2	0	2
2	3	2	3	2	1	2	2	2	2	2	0	2
1	1	1	1	1	1	1	0	0	2	0	0	0
1	1	1	2	3	1	1	1	1	1	1	1	1
2	1	1	1	1	1	2	0	0	0	0	0	0
3	2	1	2	2	1	1	2	2	2	1	1	1
3	2	2	3	1	1	1	1	1	1	1	1	1
3	2	2	1	1	1	3	1	2	2	1	2	1
3	3	2	4	1	4	4	2	1	2	2	1	2
3	3	2	2	1	1	2	1	1	1	1	1	1
3	4	3	4	2	2	3	2	0	2	2	2	2
1	2	1	2	1	1	1	1	1	1	1	1	1
3	2	1	2	1	1	2	1	1	2	1	1	1
1	1	1	2	1	1	1	0	0	2	2	0	2
4	4	1	1	1	1	3	2	1	2	2	1	1
3	3	2	2	3	1	1	2	1	2	2	1	2
4	3	3	1	1	1	4	2	1	2	1	2	0
2	2	1	1	1	1	2	2	0	2	1	0	0
1	1	1	2	1	1	1	1	1	1	2	1	1
1	3	1	3	1	1	1	0	0	0	0	2	1
3	4	1	4	1	3	2	1	2	2	1	1	2

Q13_3	Q13_4	Q13_5	Q13_6	Q13_7	Q13_8	Q13_9	Q14_1_1	Q14_1_2	Q14_1_3	Q14_1_4	Q14_1_5	Q14_1_6
3	3	2	4	1	1	2	1	1	1	1	1	1
4	4	2	4	2	2	3	2	0	2	2	2	2
3	2	1	2	1	1	4	1	1	1	1	1	1
2	2	1	4	2	2	2	2	0	0	2	0	2
3	3	3	3	1	2	2	2	2	2	2	2	2
4	4	4	4	1	2	3	2	0	1	1	1	2
2	3	4	2	2	1	3	1	1	1	1	1	1
4	3	2	4	2	2	4	1	1	1	2	1	1
3	4	3	4	2	3	4	2	1	2	2	1	1
4	4	2	4	2	1	4	2	0	2	2	2	2
3	4	1	1	1	1	1	2	0	0	0	0	0
2	1	2	4	2	2	3	2	1	2	1	1	2
3	2	3	2	3	1	2	2	1	1	1	1	1
1	1	1	1	1	1	1	0	0	0	0	0	0
2	3	1	4	1	2	2	2	1	1	2	0	2
2	1	1	1	1	1	1	2	0	0	0	0	0
4	2	4	2	1	1	3	0	0	0	0	0	0
4	4	3	3	1	3	3	2	2	2	2	2	2
3	3	2	3	1	2	2	2	1	1	1	1	1
4	2	4	3	2	1	3	2	2	2	2	2	2
3	4	3	4	2	2	2	2	1	2	2	1	1
4	3	3	2	1	1	2	2	2	1	1	1	1
4	4	4	4	4	3	4	2	2	2	2	2	2
3	4	2	4	1	1	1	2	1	2	2	1	2
4	4	1	4	1	3	3	0	0	1	1	0	2
2	2	1	2	1	1	1	2	1	1	1	1	2
4	3	1	3	1	1	3	0	0	1	1	1	1
3	4	1	2	1	1	2	1	1	2	2	1	1
2	3	1	1	1	1	1	2	0	2	2	0	0
3	4	2	2	1	1	3	2	1	2	2	1	1
3	3	2	2	1	2	3	1	1	1	1	1	2
1	2	2	2	1	1	2	1	0	1	1	0	1
2	2	2	2	1	2	2	2	1	2	1	1	1
1	2	1	2	1	1	1	2	1	1	2	1	2
2	2	1	3	1	1	2	2	0	2	1	1	2
3	4	3	4	3	4	3	2	2	2	2	2	2
3	3	2	1	1	1	3	2	1	2	2	1	1
2	2	3	3	3	4	3	0	0	2	2	2	2
3	3	2	3	2	3	3	2	2	2	2	2	2
4	4	2	4	2	1	4	1	1	1	1	1	1
3	2	1	3	1	1	1	1	1	1	1	1	1
2	1	1	1	1	1	2	2	1	1	1	1	2
2	3	1	4	1	3	2	2	1	2	2	1	2
4	4	3	4	3	2	4	1	1	1	1	1	1
2	3	1	2	3	1	2	2	1	2	2	2	1

Q13_3	Q13_4	Q13_5	Q13_6	Q13_7	Q13_8	Q13_9	Q14_1_1	Q14_1_2	Q14_1_3	Q14_1_4	Q14_1_5	Q14_1_6
3	3	3	3	2	1	3	2	1	2	2	1	0
3	3	2	4	2	2	4	2	0	2	2	0	1
3	3	1	1	1	1	1	1	1	2	2	2	1
4	4	1	1	1	1	2	0	0	2	1	0	0
3	4	1	4	1	1	3	0	0	0	2	0	0
4	2	1	1	1	1	3	1	1	2	1	2	1
4	3	4	2	1	1	3	2	2	2	2	2	0
2	2	2	1	2	1	2	2	2	2	2	2	1
3	4	3	4	4	1	3	2	2	2	1	2	0
4	4	4	4	4	4	4	2	0	2	2	0	0
4	3	1	2	1	1	3	2	1	2	2	1	1
2	4	2	1	1	2	2	2	1	2	1	2	1
4	4	1	4	1	2	2	2	1	2	1	0	2
3	3	1	1	1	1	4	1	1	1	1	0	2
3	4	2	3	1	2	2	1	1	1	1	1	1
2	4	1	3	1	1	1	1	1	1	1	1	1
2	3	1	4	1	1	3	2	0	2	2	0	2
2	4	1	4	1	1	1	0	0	2	2	0	2
3	2	2	1	1	1	2	1	0	2	1	0	1
3	2	1	3	1	1	3	2	1	2	2	0	2
3	3	1	2	1	1	3	2	0	2	1	0	1
3	2	1	2	2	1	2	2	1	2	1	1	1
4	4	3	4	1	1	3	2	2	2	1	2	1
3	2	1	3	3	1	3	2	1	2	2	1	2
2	2	1	2	1	1	2	2	1	2	2	0	2
2	4	2	4	1	1	2	1	1	2	1	1	1
1	4	1	4	1	1	1	2	0	0	2	0	1
3	3	1	3	1	3	2	1	1	1	1	1	2
4	4	4	3	1	1	3	1	1	1	1	1	1
4	3	2	4	1	4	3	1	1	1	1	1	2
3	1	1	1	1	1	1	2	1	2	1	1	1
1	1	4	4	4	1	4	0	0	0	0	2	2
2	3	1	3	1	1	1	1	1	1	1	1	1
1	1	1	2	1	1	1	2	0	0	1	0	1
3	4	1	3	1	1	2	1	1	1	1	1	2
2	4	2	4	3	2	4	2	2	2	2	1	1
3	3	2	4	1	1	2	2	2	2	0	0	2
2	1	1	3	1	2	3	2	0	1	0	0	1
3	1	1	1	1	1	1	1	1	1	1	1	1
2	3	1	3	1	1	2	2	1	2	2	1	2
2	1	1	2	1	1	2	2	1	1	1	1	2
2	4	1	2	1	1	3	0	0	0	0	0	0
3	2	2	1	1	1	3	1	1	1	1	1	1
2	3	2	3	1	3	1	2	1	2	2	1	2
3	1	1	4	3	3	2	2	0	2	2	0	2

Q13_3	Q13_4	Q13_5	Q13_6	Q13_7	Q13_8	Q13_9	Q14_1_1	Q14_1_2	Q14_1_3	Q14_1_4	Q14_1_5	Q14_1_6
3	3	1	3	1	2	1	2	1	2	2	2	2
4	4	1	3	1	1	3	2	1	2	2	1	2
3	3	3	1	1	1	2	1	2	2	2	2	1
1	3	1	1	1	1	1	2	1	1	2	1	2
4	4	3	4	3	1	4	2	2	2	2	2	2
3	4	1	3	1	1	2	2	0	2	2	0	2
4	4	4	4	3	4	4	1	0	2	1	1	1
2	2	1	1	1	1	1	2	0	2	1	1	1
4	4	1	1	1	1	1	2	0	1	1	1	1
2	4	2	3	1	1	2	1	1	1	2	1	1
4	4	4	4	4	4	4	2	2	2	2	2	2
2	2	1	3	1	1	2	1	1	1	1	1	1
3	1	1	2	1	2	2	1	1	1	1	1	1
3	4	3	4	3	1	3	2	0	2	2	2	2
2	4	1	3	1	2	3	2	1	2	1	1	1
1	3	1	2	1	1	2	2	1	1	2	1	2
3	4	2	4	1	4	3	2	1	2	2	1	0
3	3	1	2	1	1	3	2	1	2	1	0	1
3	2	1	3	1	2	1	0	0	0	0	0	1
2	2	1	1	1	1	2	2	1	2	2	1	1
2	3	4	3	1	4	4	2	1	1	2	1	2
3	3	1	4	1	4	3	2	1	2	2	1	2
4	3	2	3	1	1	1	0	2	2	2	2	0
3	3	1	3	1	1	2	2	1	1	1	1	2
3	3	1	4	1	1	1	1	1	2	1	1	2
3	4	2	3	1	1	3	2	1	2	2	1	2
3	2	1	3	1	1	1	1	1	1	1	1	1
4	4	1	4	1	1	3	0	0	0	0	0	0
2	4	1	4	1	1	3	2	0	2	2	0	2
3	4	3	4	3	1	2	2	2	2	2	1	2
3	4	2	4	1	1	3	1	0	2	1	2	1
3	3	2	2	2	1	2	2	2	2	2	2	2
3	3	1	4	1	3	2	0	0	2	0	0	0
4	3	3	2	1	3	2	2	0	2	2	2	2
3	2	2	2	1	1	2	2	0	2	0	2	1
4	4	3	3	1	1	2	2	1	2	2	2	2
2	2	2	4	1	2	4	2	1	2	2	2	2
3	4	1	2	1	1	2	2	2	1	2	1	2
3	3	2	2	2	1	3	2	0	0	2	0	0
4	4	1	3	3	1	4	2	1	2	2	1	2
2	3	1	4	1	1	1	2	0	1	1	0	1
3	4	4	3	1	1	2	2	1	2	2	2	1
4	3	4	4	2	1	4	1	2	1	2	1	1
2	3	1	1	1	1	2	2	2	2	2	1	1
3	3	1	1	1	1	3	1	1	2	2	2	2

Q13_3	Q13_4	Q13_5	Q13_6	Q13_7	Q13_8	Q13_9	Q14_1_1	Q14_1_2	Q14_1_3	Q14_1_4	Q14_1_5	Q14_1_6
2	3	2	4	2	4	3	2	1	2	2	1	2
4	3	4	3	3	1	4	2	2	2	1	2	2
3	1	3	4	2	3	3	2	2	2	2	2	2
2	4	2	3	1	3	1	2	0	0	2	2	2
4	4	2	4	1	1	3	2	0	2	2	0	2
4	3	3	3	1	1	3	1	2	1	2	1	1
2	4	1	1	1	1	4	2	0	2	1	0	0
1	1	1	3	1	3	1	2	1	1	1	1	2
1	1	1	4	4	1	1	1	1	1	1	1	1
3	4	3	4	1	2	3	2	2	2	2	2	2
3	4	3	2	1	1	2	1	1	1	1	1	1
4	3	2	3	3	2	3	2	0	2	2	1	2
4	4	1	4	1	4	3	2	0	2	2	0	2
4	1	3	4	3	1	4	1	1	2	1	1	2
3	3	1	4	2	4	3	2	0	2	2	0	2
4	3	3	1	1	3	3	2	1	2	2	2	2
3	4	2	3	3	2	4	1	1	1	1	2	2
3	3	1	2	1	1	2	2	1	2	1	0	1
4	4	1	4	1	1	4	1	1	1	1	1	1
4	2	1	2	1	1	2	0	0	0	0	0	0
2	3	3	2	1	1	1	2	1	0	1	2	2
4	3	2	4	1	4	2	2	2	2	1	2	1
4	3	4	1	1	1	3	1	1	1	1	1	1
4	4	2	4	1	1	2	2	1	2	2	2	0
4	4	1	3	1	1	4	2	0	2	1	2	2
3	3	2	3	3	1	2	0	0	0	0	0	0
2	2	2	2	1	1	3	1	1	1	1	1	1
4	4	1	4	1	1	1	1	1	1	1	1	1
3	2	2	2	1	1	2	1	1	1	1	1	1
2	3	2	3	1	1	2	2	1	2	1	2	2
3	3	1	4	4	1	3	2	2	2	2	1	2
4	3	1	1	1	1	2	2	1	2	1	1	1
1	1	1	1	1	1	1	1	1	1	1	1	1
4	1	3	1	1	1	3	2	2	2	0	0	0
3	3	2	3	1	1	2	2	0	2	2	1	2
2	4	1	2	1	1	1	0	0	0	0	0	0
1	2	4	2	3	1	2	2	0	0	0	2	2
2	1	1	1	1	1	1	1	1	1	1	1	1
3	3	1	2	1	1	3	2	1	2	2	1	1
3	2	1	1	1	1	1	1	1	2	1	1	1
2	4	1	4	1	1	4	2	0	2	2	0	2
4	4	4	4	4	4	3	1	2	2	1	2	1
4	4	2	3	2	2	2	2	1	2	1	1	1
2	2	1	1	1	1	3	2	0	2	2	0	0
1	1	1	2	1	1	1	2	0	0	1	0	2

Q13_3	Q13_4	Q13_5	Q13_6	Q13_7	Q13_8	Q13_9	Q14_1_1	Q14_1_2	Q14_1_3	Q14_1_4	Q14_1_5	Q14_1_6
3	4	1	4	1	4	2	2	2	2	2	0	2
2	4	2	2	1	1	3	2	1	2	2	2	2
3	3	3	4	3	2	3	1	1	1	1	1	1
2	3	1	3	1	1	1	1	1	2	1	1	1
4	2	1	1	1	1	3	1	1	2	2	1	1
1	2	1	2	1	2	1	0	0	0	0	0	2
4	4	4	4	1	1	3	2	0	2	2	0	2
3	3	1	3	1	1	3	2	1	2	1	0	2
4	3	2	2	2	1	3	2	2	2	2	0	1
3	3	2	2	1	1	1	1	0	0	0	0	0
3	3	2	4	1	2	4	1	1	1	1	1	1
2	4	2	2	1	1	2	2	1	2	2	0	2
3	3	1	2	1	1	3	0	0	0	0	0	0
4	4	2	3	2	3	3	2	2	2	2	2	2
3	1	1	2	1	4	2	2	0	2	0	0	1
3	3	2	4	4	1	4	2	2	2	1	1	2
2	2	1	1	1	1	1	1	1	1	1	1	1
2	3	1	4	1	1	1	1	1	1	1	1	1
3	2	1	1	1	1	1	1	1	1	2	1	1
3	1	1	3	1	1	1	1	1	1	1	1	1
3	4	1	2	1	1	1	2	1	2	2	0	0
3	3	3	3	1	1	3	2	0	2	1	1	1
1	1	1	1	1	1	1	1	1	1	1	1	1
2	3	1	3	2	1	1	2	1	1	2	1	2
2	3	2	2	2	1	2	2	2	2	2	2	2
2	3	1	1	1	1	1	1	1	2	2	0	0
4	3	2	4	4	1	2	2	2	2	2	2	2
1	3	1	2	1	2	2	2	0	0	2	0	0
2	3	1	2	1	1	1	2	0	2	2	0	0
4	4	3	3	2	1	3	2	2	2	2	2	2
2	2	2	3	3	3	2	2	2	2	1	1	2
3	3	1	2	1	1	2	2	0	2	2	0	2
4	3	2	3	2	2	2	2	1	2	2	1	2
2	1	1	2	1	1	1	1	1	2	1	1	1
4	3	2	1	1	1	2	2	1	1	1	1	1
3	4	2	1	1	1	3	1	2	1	1	1	1
3	4	1	4	1	1	3	2	2	2	2	0	2
4	4	1	3	1	1	1	0	0	2	0	0	2
3	3	2	1	1	2	2	2	2	2	2	1	1
3	3	1	4	1	1	2	2	1	2	2	1	2
2	2	2	1	1	1	3	1	1	1	1	1	1
4	3	3	3	2	1	4	2	2	2	2	2	1
3	4	2	3	1	1	2	2	1	2	2	2	2
3	3	2	3	3	2	3	2	1	2	1	2	1
2	2	1	3	2	1	1	2	1	2	2	1	2

Q13_3	Q13_4	Q13_5	Q13_6	Q13_7	Q13_8	Q13_9	Q14_1_1	Q14_1_2	Q14_1_3	Q14_1_4	Q14_1_5	Q14_1_6
3	4	1	3	1	1	4	1	1	1	1	1	1
3	4	2	4	1	1	4	2	1	2	2	2	0
2	3	1	2	2	1	2	2	1	2	1	1	1
4	4	2	2	1	1	4	2	2	2	2	0	1
4	2	1	3	1	1	1	2	1	2	2	0	2
3	3	1	4	4	1	4	2	2	2	2	0	2
2	3	1	3	1	1	1	2	1	2	1	1	1
4	4	1	4	1	1	4	2	1	2	2	1	1
3	3	1	3	2	1	3	2	1	2	2	1	2
3	3	2	3	1	1	2	2	1	2	2	1	2
3	4	1	3	1	1	1	1	1	1	2	1	2
4	4	1	4	2	3	2	2	1	2	2	0	1
3	2	1	3	3	1	2	2	1	2	1	0	2
1	2	1	1	1	1	2	1	1	0	1	0	0
2	4	1	4	1	1	3	2	0	2	2	0	2
2	4	2	2	1	1	2	0	0	2	2	2	2
2	3	1	4	1	1	4	2	1	2	2	1	1
3	3	2	3	1	1	2	2	2	2	2	2	2
2	2	2	3	4	1	3	1	1	2	2	2	2
1	1	1	1	1	1	3	0	0	0	0	0	0
2	4	1	4	1	1	4	2	0	2	2	0	2
4	3	2	4	1	1	3	2	2	2	1	2	2
3	4	1	3	1	1	3	2	0	2	2	0	2
3	3	3	2	1	2	2	2	0	2	0	0	0

Q14_1_7	Q14_1_8	Q14_1_9	Q14_2_1	Q14_2_2	Q14_2_3	Q14_2_4	Q14_2_5	Q14_2_6	Q14_2_7	Q14_2_8	Q14_2_9	Q15_1
1	1	2	2	0	0	0	0	0	0	0	2	4
0	0	1	0	0	0	0	0	0	0	0	0	3
1	1	2	0	2	0	0	0	0	0	0	2	4
1	1	2	2	2	2	2	2	0	0	0	2	2
1	1	1	0	3	0	0	3	0	0	0	0	3
0	0	2	2	0	0	2	0	2	0	0	2	3
1	1	1	2	0	3	3	0	0	0	0	0	3
0	0	0	0	0	3	0	0	0	0	0	0	4
0	2	0	3	0	2	2	2	2	0	3	0	1
0	2	2	3	0	2	3	0	2	0	2	2	4
1	1	2	0	0	0	2	0	0	0	0	2	4
0	0	0	0	0	0	0	0	0	0	0	0	4
0	0	0	0	0	0	0	0	0	0	0	0	2
1	2	1	0	0	0	2	0	2	0	2	0	1
0	2	2	2	0	2	2	0	0	0	2	2	3
1	1	2	2	0	3	0	0	0	0	0	2	3
1	1	2	0	0	0	0	0	0	0	0	1	4
0	0	0	0	0	3	0	0	0	0	0	0	3

Q14_1_7	Q14_1_8	Q14_1_9	Q14_2_1	Q14_2_2	Q14_2_3	Q14_2_4	Q14_2_5	Q14_2_6	Q14_2_7	Q14_2_8	Q14_2_9	Q15_1
1	2	2	3	0	0	0	0	2	0	2	3	4
1	2	2	3	0	0	3	1	1	0	3	1	4
2	0	2	2	2	2	2	0	2	2	0	2	4
0	0	1	2	0	2	2	0	0	0	0	0	3
0	0	0	3	0	2	2	0	0	0	0	0	4
0	0	0	0	0	0	0	0	0	0	0	0	3
1	2	1	0	0	0	0	0	0	0	1	0	4
0	0	0	0	0	0	0	0	0	0	0	0	4
1	1	1	3	2	2	0	0	1	0	0	0	2
0	0	2	3	0	3	0	2	3	0	0	3	4
0	0	2	3	0	3	0	0	2	0	0	2	4
1	2	1	3	3	3	2	2	3	0	3	0	2
0	1	1	0	0	0	2	2	0	0	0	0	2
1	1	1	0	0	0	0	0	0	0	0	0	3
0	2	0	0	0	2	2	0	3	0	3	0	4
0	2	2	2	0	2	0	0	2	0	2	2	4
1	2	2	2	0	0	0	0	0	0	3	2	1
1	1	2	0	0	2	2	0	2	0	0	2	1
1	1	1	3	0	2	2	0	0	0	0	0	1
0	0	0	0	0	0	0	0	3	0	0	0	4
0	2	2	0	0	0	2	0	0	0	2	3	4
1	1	1	0	0	0	0	0	0	0	0	0	1
1	2	1	3	3	3	0	0	2	0	3	0	4
1	1	1	0	0	0	0	0	0	0	0	0	4
0	0	2	3	3	3	3	0	2	0	0	2	2
0	2	2	2	2	2	2	0	0	0	3	2	3
1	2	1	0	0	0	0	0	0	0	2	0	4
2	2	2	3	0	2	2	2	3	2	2	3	2
0	0	0	0	0	0	0	0	0	0	0	0	2
0	1	2	2	0	2	2	0	2	0	0	2	3
1	1	2	2	2	2	0	1	0	0	0	2	2
0	0	0	2	0	3	2	0	0	0	0	0	3
0	0	0	0	0	0	0	0	0	0	0	0	3
0	2	1	2	0	3	2	0	0	0	1	0	4
1	1	1	0	0	3	0	0	0	0	0	0	4
1	1	1	2	0	2	2	0	2	0	0	0	3
0	1	1	0	0	0	2	0	2	0	0	0	2
1	1	1	3	0	3	0	0	0	0	0	0	4
2	2	2	2	3	2	0	1	2	3	2	1	2
0	0	0	2	3	0	2	0	0	0	0	0	3
0	2	2	0	2	0	0	0	2	0	2	2	4
1	2	1	0	0	0	2	0	2	0	3	0	2
1	2	2	2	0	0	2	0	0	0	3	3	4
1	2	1	3	0	2	2	0	0	0	2	0	2
2	0	0	3	3	0	3	2	0	3	0	0	3

Q14_1_7	Q14_1_8	Q14_1_9	Q14_2_1	Q14_2_2	Q14_2_3	Q14_2_4	Q14_2_5	Q14_2_6	Q14_2_7	Q14_2_8	Q14_2_9	Q15_1
1	1	1	0	0	0	0	0	0	0	0	0	4
1	1	1	2	0	2	3	0	0	0	0	0	2
1	1	2	2	0	2	2	0	0	0	0	2	2
1	2	1	0	0	0	0	0	0	0	3	0	3
0	1	1	0	0	0	0	0	2	0	0	0	0
1	1	2	0	0	0	0	2	0	0	0	2	4
2	1	2	0	3	3	2	3	3	2	0	3	3
1	1	2	3	0	0	2	0	3	0	0	2	3
1	1	2	0	0	0	2	0	0	0	0	2	3
1	1	1	0	0	0	0	0	0	0	0	0	2
1	2	2	0	0	0	2	0	0	0	1	3	2
1	2	2	3	0	2	2	2	2	0	2	3	4
0	1	2	0	0	0	0	2	2	0	0	2	3
0	0	0	0	0	0	0	0	0	0	0	0	4
1	1	1	0	3	3	0	3	3	0	0	0	2
1	2	1	3	0	2	1	1	1	0	1	0	2
2	2	2	3	2	3	2	2	3	2	3	3	4
1	2	2	2	0	2	2	0	2	0	2	2	3
0	1	0	0	0	0	0	0	0	0	0	0	3
0	1	0	0	0	3	0	0	2	0	0	0	4
2	1	2	3	0	3	3	3	3	3	0	3	4
0	0	0	2	0	2	2	0	2	0	0	0	1
1	1	1	0	0	0	0	0	0	0	0	0	4
0	0	2	2	0	0	0	0	0	0	0	2	4
0	0	0	0	0	0	0	0	0	0	0	0	4
1	1	2	2	2	2	0	0	3	0	0	3	4
1	1	2	2	0	2	2	0	0	0	0	0	3
1	2	2	3	0	3	0	0	3	0	2	2	2
0	2	0	2	0	3	2	0	2	0	3	0	3
0	2	2	0	0	0	0	0	3	0	3	3	2
1	1	1	0	0	0	0	0	0	0	0	0	4
0	0	2	2	0	0	3	0	2	0	0	2	4
2	0	2	3	3	3	2	2	3	3	0	2	2
2	1	2	0	2	0	2	2	2	2	0	2	2
1	1	1	0	0	3	3	0	0	0	0	0	4
1	2	1	0	0	3	0	0	3	0	2	0	2
1	1	2	0	0	0	0	0	0	0	0	0	3
2	1	1	3	0	2	3	0	3	3	0	0	3
1	1	1	0	0	0	0	0	0	0	0	0	4
1	1	2	3	0	3	0	0	0	0	0	3	4
1	1	2	0	3	3	0	3	0	0	0	3	4
2	1	2	0	0	2	0	0	3	2	0	2	3
0	0	2	3	2	3	2	0	3	0	0	3	3
1	0	1	0	0	0	0	0	0	0	0	0	4
1	1	1	2	0	0	2	1	0	0	0	0	1

Q14_1_7	Q14_1_8	Q14_1_9	Q14_2_1	Q14_2_2	Q14_2_3	Q14_2_4	Q14_2_5	Q14_2_6	Q14_2_7	Q14_2_8	Q14_2_9	Q15_1
0	2	0	2	0	0	2	0	2	0	2	0	4
0	0	2	3	0	3	3	3	0	0	0	3	4
0	1	2	2	0	0	0	0	0	0	0	2	1
1	1	1	0	0	0	0	0	0	0	0	0	3
1	1	1	0	0	2	2	0	2	0	0	0	3
0	0	1	0	0	0	0	0	0	0	0	0	3
1	1	1	3	2	2	0	0	0	0	0	0	3
0	2	2	2	0	0	2	0	2	0	3	2	2
1	1	2	2	0	3	3	0	3	0	0	3	4
2	2	0	2	3	3	2	2	2	2	1	0	4
2	1	2	2	0	2	2	2	2	2	0	2	3
1	1	1	0	0	3	0	0	0	0	0	0	2
2	0	1	0	0	0	0	0	0	2	0	0	0
1	1	2	0	0	2	2	0	0	0	0	2	2
2	1	2	3	1	3	2	2	2	2	0	2	2
0	1	0	3	0	2	0	0	2	0	0	0	2
1	1	2	3	0	3	2	0	2	0	0	2	3
1	2	2	3	0	3	2	2	2	0	1	3	1
1	1	1	2	2	2	0	0	0	0	0	0	4
0	0	2	1	2	2	2	1	0	0	0	2	4
1	1	1	2	2	2	2	0	0	0	0	0	3
1	1	2	0	0	0	0	0	0	0	0	3	4
1	1	1	0	0	0	0	0	0	0	0	0	3
1	1	1	0	0	0	0	0	0	0	0	0	3
0	2	1	2	0	2	2	2	2	0	2	0	3
1	2	1	0	0	0	0	0	3	0	3	0	4
0	0	0	3	0	3	0	0	2	0	0	0	1
0	0	0	3	0	0	2	0	3	0	0	0	0
1	1	2	0	0	0	3	0	2	0	0	3	2
1	1	1	2	0	0	2	2	0	0	0	0	2
1	1	2	3	0	2	3	0	2	0	0	2	2
1	1	1	0	0	0	0	0	0	0	0	0	1
0	2	0	0	0	0	0	0	0	0	3	0	3
1	1	1	3	0	3	2	0	2	0	0	0	2
1	1	1	0	0	0	0	0	0	0	0	0	0
1	1	1	3	3	0	2	0	0	0	0	0	2
0	0	0	0	0	0	0	0	0	0	0	0	4
0	0	0	0	0	0	0	0	0	0	0	0	3
2	2	2	0	0	2	2	2	2	2	3	2	4
2	1	2	0	0	2	2	0	0	2	0	1	3
2	2	2	1	1	2	1	1	1	1	1	1	3
1	2	1	2	0	0	0	0	0	0	1	0	0
2	0	2	2	1	1	1	1	1	1	0	1	1
1	1	2	2	3	2	2	2	0	0	0	2	3
2	1	2	2	2	3	0	0	2	3	0	2	3

Q14_1_7	Q14_1_8	Q14_1_9	Q14_2_1	Q14_2_2	Q14_2_3	Q14_2_4	Q14_2_5	Q14_2_6	Q14_2_7	Q14_2_8	Q14_2_9	Q15_1
1	1	1	2	0	2	2	0	2	0	0	0	4
0	0	0	0	0	0	0	0	0	0	0	0	2
2	0	2	3	0	2	2	0	2	2	0	2	2
1	1	1	3	0	3	2	2	0	0	0	0	2
1	1	1	0	0	0	0	0	0	0	0	0	2
2	2	2	3	3	3	3	2	1	2	3	2	4
0	1	2	3	0	3	3	0	3	0	0	3	3
1	1	0	3	2	3	3	0	2	0	0	0	4
0	0	0	0	0	2	0	0	0	0	0	0	3
1	1	1	0	0	0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	0	0	0	0	0	4
1	1	1	3	3	3	0	0	0	0	0	0	2
1	1	1	0	0	0	0	0	0	0	0	0	4
1	1	2	0	3	3	0	3	0	0	0	3	2
1	2	2	3	0	2	2	0	3	0	3	3	3
1	1	1	0	0	0	0	0	0	0	0	0	4
0	2	2	3	0	3	3	3	3	0	3	3	4
1	1	1	0	0	0	0	0	0	0	0	0	3
1	1	2	0	0	2	0	0	0	0	0	2	4
0	0	0	0	0	3	3	0	3	0	0	0	1
1	1	2	3	0	3	2	0	0	0	0	2	4
2	1	1	3	0	3	3	0	2	2	0	0	4
0	0	2	3	0	3	0	2	0	0	0	3	4
0	0	2	3	0	3	0	0	0	0	0	3	4
2	1	1	0	0	0	3	0	0	2	0	0	2
1	1	2	0	0	0	0	1	0	0	0	2	4
1	1	1	0	3	3	0	0	2	0	0	0	4
1	1	1	0	0	0	0	0	0	0	0	0	4
0	0	2	3	0	3	2	2	3	0	0	3	4
1	1	2	0	0	0	0	0	0	0	0	3	3
0	0	2	2	0	0	2	0	3	0	0	2	3
1	2	2	2	2	2	2	2	2	0	2	2	2
0	2	2	3	0	0	0	0	3	0	3	3	4
1	1	1	0	0	0	0	0	0	0	0	0	2
1	1	2	0	0	0	3	0	0	0	0	3	4
1	2	2	3	0	3	3	0	0	0	3	3	3
1	1	2	3	0	3	3	2	3	0	0	3	4
0	0	0	2	0	0	0	0	0	0	0	0	0
2	2	2	3	0	3	0	0	3	3	3	3	0
2	1	1	2	0	0	0	0	0	3	0	0	3
0	0	0	0	0	0	0	0	0	0	0	0	1
0	2	0	3	0	0	3	0	3	0	2	0	4
0	0	0	3	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	4
1	2	2	3	3	3	3	3	3	0	3	3	3

Q14_1_7	Q14_1_8	Q14_1_9	Q14_2_1	Q14_2_2	Q14_2_3	Q14_2_4	Q14_2_5	Q14_2_6	Q14_2_7	Q14_2_8	Q14_2_9	Q15_1
1	1	2	2	0	0	0	0	0	0	0	2	1
1	1	2	2	3	3	2	3	3	0	0	2	2
1	1	1	2	0	2	2	0	0	0	0	0	3
1	1	2	2	2	0	0	0	0	0	0	2	3
2	2	2	3	3	3	3	3	3	3	3	3	4
1	1	2	3	0	3	3	0	2	0	0	2	1
0	2	2	0	0	0	0	0	3	0	3	2	2
1	1	1	2	0	0	0	0	3	0	0	0	3
1	1	1	0	0	0	0	0	0	0	0	0	4
1	1	1	0	0	3	3	0	0	0	0	0	2
0	0	0	2	0	2	1	0	0	0	0	0	1
1	1	2	3	0	3	3	0	0	0	0	2	2
1	2	2	0	0	0	0	0	2	0	2	2	2
0	0	1	0	0	0	0	0	0	0	0	0	3
2	1	2	3	0	2	0	0	0	3	0	3	2
1	1	1	3	0	0	3	0	2	0	0	0	3
0	0	2	2	0	2	0	0	3	0	0	2	2
2	2	2	2	2	2	2	2	2	2	2	2	4
1	1	1	3	0	2	2	0	0	0	0	0	3
2	1	2	0	0	2	2	2	2	3	0	2	2
2	2	2	3	2	2	3	2	3	3	3	3	2
1	1	1	0	0	0	0	0	0	0	0	0	2
1	1	1	0	0	0	0	0	0	0	0	0	3
1	1	1	2	0	0	0	0	1	0	0	0	1
1	2	2	2	0	2	2	0	2	0	2	2	3
1	1	1	0	0	0	0	0	0	0	0	0	4
1	1	2	2	0	3	3	3	0	0	0	3	2
1	0	1	3	0	3	3	0	0	0	0	0	2
1	1	2	2	0	2	3	0	0	0	0	2	2
1	1	1	0	0	3	3	3	0	0	0	0	2
0	0	1	0	0	2	0	0	0	0	0	0	4
0	0	0	0	0	0	2	0	0	0	0	0	2
1	1	1	0	0	2	0	2	0	0	0	0	3
0	0	2	2	2	2	2	2	0	0	0	2	2
2	1	2	3	2	3	2	2	0	2	0	3	3
1	1	2	3	2	3	0	3	0	0	0	3	4
0	2	0	3	0	3	3	0	0	0	3	0	3
2	1	2	3	0	2	2	0	0	1	0	1	1
1	1	1	3	0	3	0	3	0	0	0	0	3
0	2	2	2	0	2	0	0	2	0	2	1	4
0	2	1	0	0	0	0	0	0	0	0	0	1
1	1	1	0	0	0	0	0	0	0	0	0	3
1	1	1	0	0	0	0	0	0	0	0	0	4
0	0	2	3	0	3	2	0	3	0	0	3	4
0	0	0	0	0	3	3	0	2	0	0	0	4

Q14_1_7	Q14_1_8	Q14_1_9	Q14_2_1	Q14_2_2	Q14_2_3	Q14_2_4	Q14_2_5	Q14_2_6	Q14_2_7	Q14_2_8	Q14_2_9	Q15_1
0	2	2	0	0	2	0	0	0	0	2	2	1
1	1	2	2	0	2	2	0	1	0	0	3	2
1	1	2	2	0	3	0	0	0	0	0	1	2
1	1	1	2	0	2	0	0	0	0	0	0	4
1	2	2	3	2	3	0	3	0	0	2	2	4
2	1	2	3	0	3	3	0	3	3	0	3	2
1	2	1	2	0	2	2	0	2	0	1	0	2
1	1	1	0	0	2	0	0	0	0	0	0	4
0	2	2	3	0	0	2	0	0	0	1	3	0
1	2	1	0	0	0	0	0	3	0	3	0	2
1	1	2	0	0	0	0	0	0	0	0	3	2
1	2	1	0	0	0	0	0	3	0	3	0	3
1	1	1	3	0	3	0	0	0	0	0	0	3
2	0	2	0	0	0	0	3	3	3	0	3	4
1	1	1	0	0	0	0	0	0	0	0	0	3
0	1	1	2	0	0	0	0	0	0	0	0	1
1	1	2	0	0	0	0	0	3	0	0	3	2
2	2	2	2	2	2	3	0	0	3	3	3	2
0	0	2	3	2	2	0	0	3	0	0	2	3
0	2	2	3	0	0	0	0	0	0	3	2	3
1	1	1	0	0	0	0	0	0	0	0	0	4
1	1	2	2	0	2	2	0	2	0	0	3	3
1	1	1	2	0	0	0	0	2	0	0	0	2
0	0	0	0	0	0	0	0	0	0	0	0	4
1	1	1	0	0	0	0	0	0	0	0	0	3
1	2	1	2	0	2	2	0	2	0	2	0	4
0	2	0	3	0	3	3	0	3	0	3	0	1
0	1	1	2	0	2	2	2	2	0	0	0	4
0	0	2	2	0	2	3	0	2	0	0	2	3
1	2	1	0	2	2	2	3	0	0	3	0	4
1	1	1	2	0	0	2	0	2	0	0	0	1
2	1	2	3	3	3	3	2	3	2	0	3	4
0	0	2	1	0	1	1	0	1	0	0	1	2
1	2	2	0	0	3	0	0	0	0	3	3	4
0	0	0	2	0	2	0	0	0	0	0	0	3
1	2	1	2	0	0	0	0	0	0	1	0	2
1	1	1	0	0	0	3	0	0	0	0	0	2
2	2	2	3	3	2	2	3	3	3	3	3	4
1	1	1	0	0	0	0	0	0	0	0	0	2
1	2	1	0	0	0	0	0	0	0	3	0	4
1	1	2	2	0	2	2	1	2	0	0	2	3
1	2	2	3	0	2	0	0	0	0	2	3	2
1	1	2	3	0	0	2	0	2	0	0	2	2
1	2	2	3	0	3	1	0	0	0	3	2	4
0	1	2	2	0	2	0	0	0	0	0	2	2

Q14_1_7	Q14_1_8	Q14_1_9	Q14_2_1	Q14_2_2	Q14_2_3	Q14_2_4	Q14_2_5	Q14_2_6	Q14_2_7	Q14_2_8	Q14_2_9	Q15_1
1	2	0	0	0	0	0	0	0	0	1	0	3
1	1	1	3	0	2	2	0	0	0	0	0	3
1	2	2	2	0	0	3	0	3	0	3	3	2
1	2	2	3	0	3	3	0	3	0	3	3	4
0	0	2	0	2	2	2	2	0	0	0	3	4
1	1	1	3	0	0	0	0	2	0	0	0	3
1	2	1	0	0	2	0	0	2	0	1	0	3
0	1	2	2	0	2	2	0	2	0	0	2	4
1	1	1	0	0	0	0	0	0	0	0	0	3
0	0	0	0	0	0	0	0	0	0	0	0	4
0	0	2	3	0	3	3	0	3	0	0	3	4
2	1	2	2	3	3	2	0	3	3	0	2	2
0	0	2	0	0	2	0	2	0	0	0	2	4
2	2	2	3	3	3	2	3	2	3	2	2	3
0	2	0	0	0	2	0	0	0	0	3	0	2
0	2	0	3	0	3	2	2	2	0	2	0	3
2	1	2	2	0	3	0	2	0	2	0	2	3
1	2	2	3	0	3	3	3	3	0	0	3	3
1	2	2	3	0	2	2	2	2	0	2	2	2
0	0	2	2	2	0	2	0	1	0	0	2	4
2	0	2	3	0	0	2	0	0	2	0	3	3
1	2	2	3	0	3	3	0	3	0	0	3	0
0	0	0	2	0	0	0	0	0	0	0	0	1
1	1	2	2	0	2	2	2	0	0	0	2	2
1	1	1	0	3	0	3	0	0	0	0	0	4
2	2	2	2	3	2	2	0	0	1	1	2	2
1	2	2	0	0	2	2	1	2	0	2	3	3
1	2	2	3	0	2	2	0	2	0	3	2	2
1	1	2	3	2	3	0	2	3	0	0	2	2
2	2	2	2	3	2	2	3	3	2	3	2	2
1	2	1	2	0	0	2	2	2	0	3	0	2
0	0	2	3	0	3	3	0	3	0	0	3	4
1	1	1	0	2	0	2	0	0	0	0	0	4
0	0	2	2	0	1	0	0	0	0	0	2	1
1	2	1	3	0	0	0	0	2	0	3	0	3
1	1	1	0	0	0	0	0	0	0	0	0	1
0	2	2	2	2	2	2	2	2	0	2	2	3
1	1	1	0	0	0	0	0	0	0	0	0	0
2	2	2	2	0	3	2	0	2	2	2	2	2
0	2	2	3	0	3	3	0	2	0	2	2	2
2	0	2	0	0	2	0	0	2	1	0	2	2
2	1	2	2	0	2	2	0	2	2	0	2	2
1	2	2	3	0	3	2	3	2	0	2	3	3
0	1	2	0	0	0	0	2	3	0	0	3	3
1	0	1	3	0	2	0	0	0	0	0	0	1

Q14_1_7	Q14_1_8	Q14_1_9	Q14_2_1	Q14_2_2	Q14_2_3	Q14_2_4	Q14_2_5	Q14_2_6	Q14_2_7	Q14_2_8	Q14_2_9	Q15_1
1	1	1	0	0	0	0	0	0	0	0	0	2
0	0	0	0	0	0	0	0	0	0	0	0	2
0	0	0	3	0	0	0	3	3	0	0	0	3
1	1	1	2	2	3	0	2	0	0	0	0	4
1	1	1	0	0	0	0	0	0	0	0	0	4
0	0	1	3	0	2	2	2	0	0	0	0	0
0	0	2	2	0	2	0	2	2	0	0	2	3
0	0	0	0	0	0	0	0	0	0	0	0	2
1	1	1	0	0	0	0	0	0	0	0	0	3
1	1	2	0	0	0	0	0	0	0	0	3	2
1	1	1	0	0	0	0	0	0	0	0	0	4
1	1	2	2	0	2	0	2	2	0	0	2	2
1	1	2	3	2	2	3	0	3	0	0	3	4
1	1	2	2	0	2	0	0	0	0	0	2	3
1	1	1	0	0	0	0	0	0	0	0	0	4
0	0	0	3	3	3	0	0	0	0	0	0	1
1	0	2	3	0	2	2	0	2	0	0	2	2
0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	2	2	0	0	0	2	2	2	0	2	3
1	1	1	0	0	0	0	0	0	0	0	0	1
1	1	2	3	0	2	2	0	0	0	0	2	2
2	2	1	0	0	2	0	0	0	2	1	0	1
0	0	2	2	0	2	2	0	2	0	0	2	1
2	2	1	0	3	2	0	3	0	3	3	0	3
1	1	1	2	0	2	0	0	0	0	0	0	4
0	0	2	3	0	2	2	0	0	0	0	3	3
0	0	0	2	0	0	0	0	3	0	0	0	2
0	2	2	2	2	2	2	0	3	0	3	3	0
1	1	2	2	0	2	2	2	2	0	0	2	2
1	1	1	0	0	0	0	0	0	0	0	0	2
1	1	1	0	0	3	0	0	0	0	0	0	4
1	1	2	0	0	2	2	0	0	0	0	2	3
0	2	0	0	0	0	0	0	1	0	3	0	2
0	0	2	3	0	3	2	0	3	0	0	2	3
0	2	0	3	0	3	0	0	2	0	2	0	4
2	0	2	2	3	3	2	0	0	3	0	2	3
0	0	0	0	0	0	0	0	0	0	0	0	0
1	1	1	0	0	0	0	0	0	0	0	0	3
1	1	2	1	0	2	2	0	2	0	0	2	4
0	0	0	0	0	0	0	0	0	0	0	0	4
2	2	2	2	2	2	2	2	2	2	2	1	4
0	2	2	2	0	2	0	0	0	0	3	2	4
2	2	2	2	3	3	0	0	3	3	1	3	3
1	1	1	0	0	0	0	0	0	0	0	0	3
1	1	1	0	0	0	0	0	0	0	0	0	4

Q14_1_7	Q14_1_8	Q14_1_9	Q14_2_1	Q14_2_2	Q14_2_3	Q14_2_4	Q14_2_5	Q14_2_6	Q14_2_7	Q14_2_8	Q14_2_9	Q15_1
1	1	1	0	0	0	1	0	0	0	0	0	2
1	1	1	0	0	0	0	0	0	0	0	0	4
0	0	0	3	0	2	3	0	0	0	0	0	3
1	1	1	3	0	3	0	0	0	0	0	0	2
1	1	1	0	0	0	0	0	0	0	0	0	0
0	0	0	3	0	0	2	0	2	0	0	0	4
1	1	0	3	3	3	3	3	3	0	0	0	3
0	0	0	0	0	3	3	0	0	0	0	0	2
2	1	2	3	3	3	3	2	3	3	0	3	3
0	0	0	2	0	0	2	0	0	0	0	0	3
0	0	0	3	0	3	3	0	0	0	0	0	0
1	1	2	2	2	3	3	2	2	0	0	2	2
1	2	1	2	2	2	0	0	2	0	3	0	2
0	1	2	1	0	2	2	0	1	0	0	2	3
1	1	1	2	0	2	2	0	2	0	0	0	2
1	2	2	0	0	2	0	0	0	0	3	3	3
1	1	2	2	0	0	0	0	0	0	0	2	3
1	1	2	0	2	0	0	0	0	0	0	2	1
0	0	2	2	2	3	2	0	3	0	0	3	2
2	2	2	0	0	3	0	0	2	0	0	0	2
1	2	2	2	2	2	2	0	0	0	2	2	4
1	1	1	2	0	2	2	0	2	0	0	0	1
1	1	1	0	0	0	0	0	0	0	0	0	4
1	1	2	3	3	3	3	3	0	0	0	3	2
1	1	2	3	0	3	3	2	3	0	0	3	2
2	1	2	3	0	3	0	3	0	3	0	3	3
1	1	1	2	0	3	3	0	3	0	0	0	1
1	1	1	0	0	0	0	0	0	0	0	0	4
2	1	2	3	0	3	3	3	0	3	0	3	0
2	1	1	2	0	2	0	0	0	3	0	0	2
0	1	2	2	1	1	2	0	0	0	0	3	1
0	1	1	3	0	3	2	0	3	0	0	0	2
1	0	2	2	2	3	3	0	2	0	0	3	4
1	1	1	2	0	2	0	0	0	0	0	0	0
1	1	2	2	0	2	2	0	0	0	0	3	4
1	1	2	3	0	3	3	0	3	0	0	3	2
1	1	1	2	0	2	2	0	2	0	0	0	4
1	1	1	0	0	0	3	0	3	0	0	0	3
1	2	1	2	0	2	2	0	0	0	2	0	4
2	1	2	2	0	2	0	0	2	2	0	2	2
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	2	3	0	2	2	0	2	0	0	2	4
0	0	0	0	0	2	2	2	2	0	0	0	2
1	1	2	3	0	2	3	0	0	0	0	3	2
1	1	2	3	2	2	2	2	2	0	0	2	4

Q14_1_7	Q14_1_8	Q14_1_9	Q14_2_1	Q14_2_2	Q14_2_3	Q14_2_4	Q14_2_5	Q14_2_6	Q14_2_7	Q14_2_8	Q14_2_9	Q15_1_1
2	0	2	0	0	2	2	3	3	3	0	2	4
0	0	0	0	0	0	0	0	0	0	0	0	4
0	2	2	3	0	3	3	0	3	0	3	3	4
1	1	2	3	3	2	0	2	2	0	0	2	4
0	0	0	2	0	3	3	0	2	0	0	0	3
0	0	2	0	0	2	0	0	0	0	0	2	0

Q15_2_2	Q15_2_3	Q15_2_4	Q15_2_5	Q15_2_6	Q15_2_7	Q15_2_8	Q15_2_9	Q15_2_10	Q15_2_11	Q15_2_12	Q15_2_13	Q15_2_14	Q15_2_15
3	2	3	1	1	4	4	1	1	4	1	4	2	2
2	2	1	2	1	4	4	1	1	4	1	4	2	2
2	1	2	1	1	1	2	4	4	1	2	3	4	3
1	1	3	1	3	4	2	2	3	2	2	3	3	2
4	2	4	1	1	3	3	3	3	1	2	3	4	2
2	1	4	1	1	4	3	4	4	4	2	4	4	3
2	1	4	1	1	1	3	4	3	2	2	3	4	2
1	1	0	1	1	4	4	3	3	4	1	3	3	2
2	2	2	2	1	3	3	4	3	2	1	4	3	2
2	1	4	1	2	4	4	0	2	2	2	4	3	2
0	0	4	2	1	4	0	0	0	0	1	4	2	2
3	3	4	1	1	2	4	2	2	4	1	4	4	2
0	1	4	1	3	4	1	4	0	1	0	4	3	1
2	2	3	2	2	3	2	1	2	1	2	2	3	1
3	1	1	1	1	1	1	1	3	1	1	4	3	2
1	1	4	1	3	3	3	3	4	2	2	4	3	2
1	1	4	1	1	4	4	1	1	4	1	4	3	2
0	1	4	1	0	3	3	3	2	3	1	3	2	1
3	1	0	1	2	3	3	4	3	2	1	4	2	3
1	1	4	1	1	4	4	4	3	3	1	3	3	3
2	1	4	1	0	4	4	1	2	4	1	3	3	1
2	0	4	3	1	4	4	1	3	2	2	4	3	2
4	1	4	2	2	3	3	2	1	1	2	3	2	1
2	1	0	2	2	1	3	4	4	1	2	4	3	2
1	1	4	1	1	4	4	3	3	3	1	4	4	3
4	0	0	1	1	4	4	4	4	4	1	4	3	3
4	0	1	3	4	1	1	4	4	1	3	3	3	3
1	1	4	1	1	4	4	2	2	4	1	3	2	1
0	1	0	2	1	4	3	2	3	2	1	4	2	2
4	1	3	1	3	4	2	4	4	1	2	3	1	3
2	2	4	1	2	2	2	4	4	2	2	2	3	1
1	2	1	1	4	2	1	3	3	1	4	2	3	1
3	3	3	2	3	4	2	4	4	1	4	4	2	3
1	1	4	1	2	2	3	4	4	2	2	4	3	3
4	1	4	2	2	1	1	2	2	1	1	4	1	2
4	3	2	3	3	1	1	4	4	1	3	4	3	2

Q15_2	Q15_3	Q15_4	Q15_5	Q15_6	Q15_7	Q15_8	Q15_9	Q15_10	Q15_11	Q15_12	Q15_13	Q15_14	Q15_15
4	3	1	4	4	3	1	0	2	1	3	3	2	2
2	1	4	1	1	1	4	1	1	4	1	3	2	1
4	2	0	2	4	1	3	3	3	1	4	4	3	3
4	4	0	3	4	1	1	4	3	1	4	3	2	1
2	1	3	1	1	3	4	1	3	2	2	4	3	3
1	1	4	1	1	3	4	3	3	1	1	4	3	2
3	2	2	2	2	2	2	3	3	3	2	3	4	2
2	2	2	2	2	2	2	3	4	2	2	4	2	2
3	0	4	1	1	3	3	3	2	3	1	3	3	2
4	3	3	3	1	1	1	4	4	1	1	4	4	3
3	4	3	2	1	2	1	2	3	3	1	4	2	3
3	1	4	1	1	3	3	2	3	2	1	3	2	2
3	3	1	2	3	1	1	3	2	1	2	2	2	2
3	1	4	1	1	3	3	3	3	2	1	3	3	2
4	2	4	2	2	2	3	3	3	3	3	4	2	2
3	1	1	3	3	2	2	3	3	1	2	4	3	3
2	1	4	1	1	1	3	2	2	2	1	4	3	2
3	1	3	2	3	3	3	2	3	1	3	3	3	2
1	1	4	1	2	4	2	3	2	1	2	4	2	2
1	2	0	1	3	4	3	2	2	4	2	4	1	3
3	4	1	2	2	1	1	4	3	1	2	4	3	2
2	3	4	1	1	2	3	3	3	2	1	3	2	2
3	1	4	1	1	3	4	4	3	1	1	4	2	2
4	4	2	1	4	4	2	4	3	1	3	3	3	2
1	1	3	1	1	2	4	4	3	3	1	4	3	3
4	1	4	1	1	3	2	1	1	1	1	4	2	1
4	2	2	3	1	3	3	3	3	1	1	4	3	2
1	1	0	1	1	3	3	2	2	4	1	2	2	1
3	0	4	2	2	3	2	3	1	1	2	4	1	2
4	2	3	4	2	1	1	3	3	1	2	4	3	2
2	1	4	1	1	4	4	4	4	1	2	3	3	2
2	0	0	0	2	3	3	3	0	0	1	3	2	1
3	1	3	1	2	4	4	2	3	3	1	2	2	2
1	1	4	1	1	4	3	3	4	4	1	2	3	2
4	1	4	2	3	1	3	3	3	2	1	4	2	2
3	3	3	2	4	1	1	4	3	1	3	3	3	2
3	3	2	3	1	2	2	2	1	1	3	3	2	1
1	1	4	1	2	2	2	4	4	1	1	4	3	2
4	1	2	3	2	4	2	3	3	1	2	4	2	3
1	1	4	1	1	4	4	3	4	1	1	3	4	2
0	1	0	0	2	4	0	1	0	1	1	4	2	1
4	2	3	2	1	4	4	2	4	1	1	1	4	2
2	1	1	1	2	2	2	3	3	1	2	3	2	1
1	1	4	1	1	4	4	3	4	3	1	4	3	3
3	1	0	1	1	2	2	4	4	1	1	4	2	3

Q15_2	Q15_3	Q15_4	Q15_5	Q15_6	Q15_7	Q15_8	Q15_9	Q15_10	Q15_11	Q15_12	Q15_13	Q15_14	Q15_15
1	1	1	1	1	3	3	2	2	2	1	3	2	2
0	0	4	0	1	3	1	1	2	1	1	3	3	2
3	1	0	1	1	4	4	1	3	1	1	4	2	1
4	4	1	4	4	2	1	2	2	1	4	2	2	1
1	1	4	1	1	4	4	1	1	4	1	3	3	1
2	1	4	1	1	4	4	1	3	2	1	4	2	2
2	1	1	4	1	4	4	1	2	3	1	4	3	2
1	1	4	1	3	4	3	2	3	2	2	3	2	2
3	2	3	3	2	3	3	3	2	3	2	3	1	2
2	2	3	1	2	4	3	3	3	3	2	4	3	2
2	1	0	1	2	4	3	3	3	3	2	4	2	2
2	1	4	4	4	1	4	2	3	2	4	4	4	2
2	1	3	1	1	3	4	4	4	2	1	3	2	1
1	1	4	1	3	2	2	1	1	4	2	4	2	2
1	1	4	1	2	4	3	3	3	1	2	3	4	2
4	2	0	0	0	0	0	0	0	0	0	2	2	1
4	1	4	1	1	1	4	4	3	2	1	4	2	2
2	1	4	1	2	4	2	4	4	3	2	4	2	2
0	0	0	1	2	3	3	2	3	1	1	4	2	2
4	1	4	1	1	4	3	4	4	4	1	3	3	2
1	1	4	1	1	2	4	1	4	1	1	4	4	3
3	1	4	2	1	4	4	1	3	0	1	4	3	2
3	1	3	1	1	3	3	4	4	2	1	2	4	2
3	1	4	3	4	2	3	2	3	1	2	3	4	1
2	1	3	1	1	4	4	4	2	4	1	4	4	2
2	1	4	1	1	4	4	2	2	4	1	3	3	2
4	3	3	3	2	3	2	4	3	1	1	4	3	2
1	1	3	1	1	4	4	3	4	3	1	4	4	3
1	1	0	1	1	0	4	1	3	2	1	4	2	2
4	3	3	3	3	2	2	3	2	1	3	3	2	2
1	1	4	1	1	4	3	4	4	2	1	2	4	2
4	1	3	1	1	2	3	3	1	4	1	4	4	2
2	1	4	1	1	3	4	1	2	1	1	4	2	2
3	1	3	1	1	3	4	1	1	1	1	3	4	1
4	3	2	3	4	2	2	2	2	1	3	4	2	2
2	1	4	1	0	2	4	3	4	2	1	4	4	3
1	1	4	1	1	4	4	2	2	1	1	3	3	2
2	2	4	2	2	1	3	2	2	2	2	4	3	2
3	3	2	3	3	3	1	1	0	3	3	4	2	2
3	1	0	0	2	2	0	0	0	0	2	3	2	1
4	3	1	3	2	2	2	2	2	3	3	4	4	2
4	1	2	2	1	4	2	4	3	1	3	3	3	2
1	1	4	1	2	2	2	3	3	1	2	4	3	2
1	1	4	1	2	4	3	1	2	4	1	4	2	2
4	3	2	3	3	2	2	2	3	2	2	3	2	2

Q15_2	Q15_3	Q15_4	Q15_5	Q15_6	Q15_7	Q15_8	Q15_9	Q15_10	Q15_11	Q15_12	Q15_13	Q15_14	Q15_15
4	3	2	3	4	1	1	3	3	1	3	4	2	2
1	1	4	1	2	4	4	3	2	3	2	3	3	2
2	3	1	2	1	1	4	3	3	1	2	4	4	3
2	1	2	1	2	3	4	3	1	1	1	3	1	1
1	1	4	1	2	2	2	4	4	1	3	3	3	3
1	1	4	1	2	3	3	3	4	1	1	2	2	2
1	1	0	1	1	4	3	2	2	1	4	3	2	2
1	1	0	0	1	4	4	2	4	0	1	4	3	3
4	3	4	3	3	2	1	4	3	1	3	2	3	1
4	2	0	1	2	1	0	2	2	0	1	3	2	2
4	2	0	2	1	3	3	3	2	1	2	4	2	1
3	1	1	1	2	4	2	3	4	2	1	4	2	3
4	1	3	2	3	2	1	4	4	1	2	3	2	2
3	3	3	2	2	3	3	2	2	3	2	2	2	1
1	2	0	1	1	3	2	4	3	1	1	4	2	3
3	0	2	3	4	3	2	2	3	0	2	3	3	2
1	1	4	1	1	4	3	2	1	2	1	3	1	2
4	3	2	3	4	1	1	3	4	2	3	3	4	2
1	1	4	1	1	4	4	1	1	4	1	3	2	1
1	1	2	1	1	4	2	4	4	1	1	3	2	2
4	1	4	1	2	4	4	1	3	4	1	4	2	3
4	1	4	3	1	4	3	2	4	1	1	4	3	2
3	2	0	3	3	3	3	3	3	3	3	4	3	2
0	1	4	1	1	4	3	3	2	1	1	4	2	2
1	3	2	3	3	2	1	1	1	0	4	4	4	2
2	2	3	2	2	3	3	2	3	3	2	3	4	2
1	1	2	1	1	3	2	2	4	2	1	4	3	3
2	1	4	2	2	3	4	2	2	2	2	3	2	2
2	2	3	2	1	4	3	2	2	3	2	3	3	2
1	1	0	1	3	4	2	3	3	3	2	4	2	2
0	2	4	1	1	4	4	1	2	1	1	4	2	2
3	4	2	3	3	1	1	2	3	1	2	4	4	2
1	1	4	1	2	4	3	3	3	4	1	2	1	2
2	1	4	1	3	1	2	4	4	1	1	3	2	2
2	2	3	2	2	3	3	3	3	1	2	4	3	2
4	4	4	0	2	4	3	3	4	1	3	3	3	2
3	1	4	1	1	4	4	1	1	4	1	3	3	2
1	1	4	1	1	4	4	1	1	4	1	3	2	1
1	1	3	1	1	1	4	3	4	2	1	4	4	2
1	1	0	1	1	4	4	4	3	2	1	3	3	1
2	2	4	2	2	3	3	3	4	1	1	2	2	2
3	1	0	1	1	3	3	3	4	3	1	4	3	3
1	1	4	1	1	4	4	1	1	4	1	3	2	2
1	1	4	1	3	4	4	4	3	3	2	4	2	2
2	1	4	1	1	1	1	0	2	1	1	3	2	2

Q15_2	Q15_3	Q15_4	Q15_5	Q15_6	Q15_7	Q15_8	Q15_9	Q15_10	Q15_11	Q15_12	Q15_13	Q15_14	Q15_15
1	1	4	1	1	4	4	2	1	4	1	1	2	1
4	0	4	1	2	4	3	2	4	4	1	4	3	2
1	1	3	1	3	2	3	4	2	0	2	4	2	3
1	1	0	1	1	4	3	1	2	3	2	3	1	2
1	1	0	1	2	4	4	3	2	4	1	4	2	2
1	1	4	1	3	2	2	1	1	0	2	3	2	2
3	1	0	3	2	3	3	3	2	3	2	3	3	1
4	1	4	4	2	1	3	1	2	1	1	4	2	2
1	1	4	1	1	4	3	2	2	2	1	4	1	2
1	1	4	1	2	4	4	1	2	4	1	4	4	2
1	1	4	1	1	4	4	2	4	1	1	4	2	2
3	1	0	1	1	4	4	2	4	1	1	4	2	2
1	1	4	1	3	3	2	2	2	2	3	4	2	2
1	1	4	1	1	4	3	1	3	1	1	4	2	2
2	1	4	1	1	2	4	3	3	2	1	4	3	2
1	1	4	1	1	4	2	3	3	1	1	4	3	2
2	1	0	1	1	4	4	2	3	4	1	4	2	2
2	1	0	1	1	3	4	1	2	3	1	3	2	1
1	1	4	1	1	4	4	1	1	3	1	3	2	1
1	1	0	1	1	3	4	0	1	0	1	3	3	1
4	1	3	1	1	4	3	2	4	0	1	4	3	2
4	2	4	2	3	1	2	4	4	1	3	3	3	1
2	3	0	3	3	3	2	3	2	1	3	3	2	1
2	1	0	1	2	4	4	2	4	3	1	3	2	2
3	1	2	1	1	4	2	3	3	2	3	3	3	2
2	1	4	1	2	3	4	3	4	1	2	1	1	3
2	2	4	2	3	1	3	3	2	1	3	4	4	3
1	1	0	1	1	4	2	4	3	2	1	4	1	2
3	2	3	2	2	2	1	3	4	1	2	2	4	2
1	1	4	1	1	4	3	3	3	1	1	4	4	3
3	2	2	2	1	1	3	4	4	2	1	1	4	1
1	1	4	1	0	4	4	1	1	4	1	2	4	3
3	3	1	4	4	2	1	4	3	1	4	4	4	1
0	1	0	1	1	3	3	2	3	1	2	4	4	4
4	1	0	1	3	4	4	3	3	1	2	4	4	2
4	1	1	3	3	1	3	3	3	1	3	2	4	3
4	1	4	1	1	1	2	4	3	1	2	4	1	1
4	0	0	4	3	0	1	0	2	0	3	4	1	2
3	1	4	1	1	4	3	2	2	3	1	4	4	4
1	2	2	1	1	2	2	4	4	2	1	4	4	3
1	1	0	1	1	1	3	1	1	4	1	4	4	2
2	1	4	1	3	1	1	2	2	1	3	4	2	1
1	1	4	1	1	4	3	3	3	3	1	3	4	4
3	3	3	3	3	2	2	4	4	2	3	3	3	2
1	2	0	1	1	4	4	3	4	3	2	4	3	3

Q15_2	Q15_3	Q15_4	Q15_5	Q15_6	Q15_7	Q15_8	Q15_9	Q15_10	Q15_11	Q15_12	Q15_13	Q15_14	Q15_15
1	1	4	1	2	4	2	1	2	1	1	3	1	1
2	2	3	1	1	4	2	3	3	0	2	4	4	1
1	1	4	1	1	4	4	2	3	1	1	4	1	3
1	1	4	1	1	4	4	3	4	4	1	0	0	0
1	1	4	2	0	4	4	3	3	1	1	3	4	2
4	4	1	4	4	1	1	4	4	1	4	0	0	0
3	1	2	2	3	3	3	3	3	1	2	4	4	2
1	2	4	1	1	4	4	4	3	1	1	4	4	3
4	1	4	1	1	3	3	3	3	1	1	2	4	1
4	1	4	1	1	1	3	1	3	1	1	4	4	2
2	1	4	1	3	2	2	3	3	2	1	4	2	1
2	1	1	1	2	3	1	1	3	1	2	3	1	1
1	1	4	1	1	4	0	0	1	4	1	2	4	1
4	1	0	1	1	3	2	3	3	1	1	4	2	2
3	4	2	3	1	1	2	4	4	1	2	4	4	1
1	1	4	1	1	4	2	2	2	2	1	4	4	2
2	2	4	1	1	3	3	2	3	3	2	3	3	1
4	1	2	1	1	4	4	2	1	2	1	4	2	1
2	1	0	1	2	4	4	2	3	1	1	4	4	2
4	4	1	3	4	3	2	4	4	1	3	2	3	2
1	1	2	1	1	1	3	1	2	1	1	4	1	1
2	1	4	1	1	4	4	4	4	3	1	4	4	3
4	4	0	4	0	4	1	2	4	1	1	4	3	4
3	1	4	2	1	4	3	4	4	2	1	4	4	2
4	1	3	3	1	3	4	1	1	3	1	4	1	1
3	1	4	1	1	4	4	1	3	4	1	4	2	3
3	1	4	1	2	4	4	4	4	1	1	3	3	3
3	3	3	1	2	1	1	2	2	1	4	3	3	3
2	2	3	1	3	4	4	1	3	4	3	4	4	3
4	2	4	1	1	1	1	4	1	1	1	4	2	1
1	2	4	1	2	2	3	1	3	1	2	4	4	4
1	3	2	2	1	4	2	4	4	1	1	2	4	1
4	1	2	2	3	2	1	4	4	1	3	4	2	2
2	1	0	1	3	3	2	2	3	2	3	4	2	1
3	1	4	1	2	4	4	2	1	4	1	2	3	1
4	1	0	0	2	4	0	0	4	0	0	4	4	1
2	1	4	1	1	4	4	3	3	4	1	4	3	1
4	2	3	1	2	3	3	2	2	3	2	3	3	1
1	1	4	1	1	1	4	0	2	1	1	4	1	1
2	3	4	1	1	2	3	2	2	1	1	4	1	3
1	1	4	1	1	4	4	1	1	4	1	1	1	2
2	2	3	2	2	4	2	3	3	1	2	4	1	2
2	3	4	3	3	2	1	2	1	1	4	4	1	2
1	1	0	1	2	3	2	3	3	1	2	4	1	2
3	1	2	1	1	2	3	3	3	1	2	4	4	1

Q15_2	Q15_3	Q15_4	Q15_5	Q15_6	Q15_7	Q15_8	Q15_9	Q15_10	Q15_11	Q15_12	Q15_13	Q15_14	Q15_15
3	2	3	1	1	4	3	4	3	4	1	4	2	2
3	1	4	2	2	4	4	3	2	2	1	4	1	2
1	1	4	1	1	4	4	3	3	4	1	4	2	1
4	1	4	1	1	2	4	4	3	2	1	4	2	2
4	2	4	2	4	2	2	2	2	1	3	1	1	1
1	1	0	1	1	4	4	3	0	4	1	3	2	1
1	1	2	1	1	4	4	2	3	4	1	4	1	3
1	1	4	1	1	4	4	1	2	3	1	4	1	1
3	4	0	1	4	2	1	4	3	1	4	4	1	2
1	1	3	1	4	4	1	2	3	1	4	4	2	3
4	2	4	2	1	4	4	4	4	2	2	4	2	3
4	2	4	1	2	3	4	4	2	1	2	4	4	2
4	4	1	2	4	1	1	4	4	1	4	4	2	3
1	1	4	1	3	4	3	4	4	4	1	4	4	3
3	0	0	2	1	3	2	4	3	1	2	4	4	3
2	1	4	1	1	4	3	3	2	2	1	4	3	2
3	1	3	1	3	4	2	2	3	3	1	4	2	3
2	1	4	1	1	3	3	3	4	4	1	4	4	2
4	1	2	4	1	1	2	3	2	1	2	2	3	4
2	1	4	1	2	3	4	3	4	1	1	4	4	2
0	0	0	1	1	3	2	1	2	0	1	4	0	1
2	1	4	1	1	2	4	1	3	1	1	3	4	2
1	1	4	1	1	4	4	2	2	4	1	4	2	3
2	2	4	1	1	3	3	2	3	3	1	2	3	3
3	2	4	1	1	3	3	3	3	3	3	3	3	3
2	1	4	1	1	4	4	3	4	2	1	4	1	3
2	2	3	1	1	1	2	2	3	1	1	4	0	3
1	4	1	1	1	1	1	4	1	1	2	3	0	2
4	1	1	2	3	1	1	4	3	3	2	4	0	4
1	2	2	1	1	3	3	3	3	1	2	4	0	3
4	1	4	1	1	3	4	1	4	2	1	4	2	3
1	1	4	1	1	4	4	1	1	4	1	3	4	3
3	1	4	1	1	2	4	3	3	1	2	4	4	1
1	1	4	1	1	3	4	0	4	1	1	4	1	4
2	1	4	2	4	4	3	3	3	3	2	3	3	3
2	0	4	1	2	3	3	2	2	3	2	4	0	2
4	1	0	0	0	0	0	0	0	0	0	3	3	0
4	1	4	1	2	2	3	2	3	2	2	4	1	2
3	4	2	4	4	2	1	4	3	1	4	0	0	0
1	1	4	1	1	4	4	3	3	1	1	4	2	1
4	2	2	1	1	1	3	2	4	1	2	4	4	2
4	0	1	4	1	1	1	0	3	1	2	4	3	2
4	1	2	3	3	2	2	3	3	2	2	4	1	2
1	1	4	1	2	1	4	4	4	2	2	4	4	2
2	1	3	1	3	2	2	4	4	1	2	4	4	3

Q15_2	Q15_3	Q15_4	Q15_5	Q15_6	Q15_7	Q15_8	Q15_9	Q15_10	Q15_11	Q15_12	Q15_13	Q15_14	Q15_15
1	2	1	1	2	2	1	4	4	1	3	3	4	3
3	1	4	2	2	4	4	4	3	1	2	2	4	1
3	1	4	1	1	4	3	1	4	1	1	4	4	2
3	1	4	1	2	4	2	4	4	1	1	4	1	2
4	2	0	4	4	1	1	3	0	1	4	4	1	1
1	1	4	1	2	2	2	3	3	2	1	4	2	3
1	1	4	1	1	4	4	4	4	1	1	4	4	4
3	2	4	4	4	2	2	4	4	1	3	4	4	2
4	2	4	1	1	4	3	4	4	1	2	4	4	2
4	3	1	2	4	3	1	4	4	2	3	4	4	2
2	1	4	2	2	2	2	4	4	1	1	4	4	4
3	1	2	2	3	0	2	4	3	1	2	0	0	0
1	4	0	1	2	1	1	2	3	3	3	3	3	3
1	1	4	1	1	4	4	4	4	4	1	3	0	0
4	2	2	2	4	3	3	3	4	2	4	3	4	1
4	4	0	4	1	1	1	3	4	2	1	4	4	4
2	1	4	1	1	3	3	2	2	3	1	4	4	0
4	4	1	4	3	2	2	3	3	2	3	4	4	2
2	1	3	2	4	4	3	2	4	2	3	3	4	2
1	1	4	1	1	4	4	4	0	0	1	1	3	2
2	1	4	1	3	2	1	4	3	1	2	4	4	2
4	1	4	2	2	3	2	2	4	1	1	4	4	4
4	0	4	1	1	3	2	4	4	1	1	2	4	1
1	3	3	1	0	3	2	4	4	1	1	4	3	2
2	3	2	2	4	2	1	4	3	1	3	4	2	2
3	1	4	1	1	4	2	2	2	3	1	0	0	0
4	2	2	1	3	1	1	1	1	1	3	4	4	2
1	1	4	1	1	1	4	3	3	1	1	4	1	1
2	1	4	1	2	3	3	1	2	3	1	1	3	3
2	1	0	1	1	4	2	3	2	1	2	4	0	1
2	1	0	1	1	3	3	4	4	2	1	4	1	3
1	1	4	1	1	1	4	1	3	4	1	3	3	2
3	3	1	2	2	3	2	3	2	2	3	3	4	3
3	1	3	1	2	4	2	2	2	2	2	4	1	4
3	3	1	4	3	1	1	2	3	1	4	4	4	2
1	1	4	1	3	4	4	3	3	1	2	0	0	0
2	3	4	1	1	4	4	1	1	4	1	4	1	1
1	1	4	1	2	4	4	1	3	1	1	4	4	3
3	2	2	3	3	3	2	4	3	1	4	4	3	2
4	1	0	1	4	4	4	1	3	4	1	4	1	4
3	1	3	2	1	4	3	4	3	2	1	4	2	4
1	1	4	1	0	4	3	0	0	3	1	4	4	2
2	1	2	1	1	4	2	4	2	2	1	0	3	0
3	0	0	0	3	3	3	3	2	3	2	4	3	3
0	0	0	0	0	0	0	0	0	0	0	0	0	0

Q15_2	Q15_3	Q15_4	Q15_5	Q15_6	Q15_7	Q15_8	Q15_9	Q15_10	Q15_11	Q15_12	Q15_13	Q15_14	Q15_15
2	2	4	1	2	1	1	1	1	3	2	2	4	1
1	1	4	1	1	4	1	1	1	4	1	4	4	3
3	3	4	2	4	3	1	3	3	1	2	4	2	2
4	4	2	4	2	1	1	3	2	1	3	4	2	4
2	1	4	1	3	2	1	2	2	1	4	4	4	3
1	1	4	1	2	4	3	2	3	1	2	4	3	4
3	1	2	3	2	2	3	2	3	3	1	4	1	4
2	1	3	2	2	4	3	2	0	1	2	4	2	1
4	1	0	2	4	4	2	3	3	2	3	4	0	1
3	1	2	2	2	3	3	3	3	1	2	4	2	1
3	0	3	1	3	4	2	3	3	2	2	3	1	3
3	1	4	2	2	3	2	4	3	2	3	3	2	2
3	1	4	1	1	4	4	1	1	0	1	4	1	2
0	1	4	1	2	4	2	2	3	3	2	1	4	1
0	1	0	1	2	2	2	1	0	4	2	4	0	1
1	1	4	1	2	4	1	4	4	1	2	4	4	2
1	1	4	1	1	4	4	1	3	4	1	4	4	3
4	3	3	1	3	1	2	3	4	1	2	2	3	3
4	3	0	3	0	3	2	3	3	3	3	3	3	0
1	1	0	1	2	2	3	4	3	3	1	4	3	4
1	1	4	1	2	4	3	1	2	4	2	4	0	3
4	1	0	3	0	4	4	4	3	0	1	4	2	1
1	1	4	1	1	4	2	1	4	2	1	4	3	2
4	1	0	1	2	4	4	2	3	1	2	4	0	1
3	1	3	3	2	2	4	3	4	2	3	4	2	2
3	1	3	1	2	3	2	1	2	2	2	2	3	2
4	1	0	1	2	3	3	1	3	1	1	4	1	2
0	0	4	1	3	1	1	2	2	1	4	2	4	2
1	1	4	1	1	4	4	1	1	1	3	4	3	2
3	3	3	1	1	4	4	3	3	1	1	3	3	2
1	3	1	2	2	1	1	4	2	1	2	4	4	2
0	0	0	0	4	0	0	0	1	0	1	4	4	1
2	1	0	1	2	4	3	2	3	3	1	4	2	2
2	1	4	1	1	1	3	4	2	4	1	4	4	2
1	1	4	1	2	4	4	2	1	2	1	3	4	0
2	1	4	1	3	4	3	3	3	2	1	4	3	1
2	2	0	1	1	2	0	2	2	1	2	4	1	1
1	1	0	1	0	2	4	0	4	0	1	3	3	0
4	1	4	1	2	4	2	3	3	2	2	0	4	1
1	2	2	1	3	2	1	4	3	1	2	3	4	1
4	1	0	3	2	2	1	4	3	1	2	4	3	3
1	1	3	1	3	3	2	3	3	1	2	4	4	2
4	1	4	2	3	2	2	2	2	1	3	2	4	3
2	2	2	1	3	3	3	2	2	3	1	2	4	1
4	1	2	2	0	3	1	0	3	3	1	4	4	2

Q15_2	Q15_3	Q15_4	Q15_5	Q15_6	Q15_7	Q15_8	Q15_9	Q15_10	Q15_11	Q15_12	Q15_13	Q15_14	Q15_15
2	1	4	1	2	4	3	4	4	3	1	4	2	3
1	1	0	1	0	2	3	2	2	3	1	3	3	2
4	1	4	2	3	4	4	1	3	4	1	4	4	2
1	1	0	1	0	4	3	3	3	2	2	4	3	2
1	1	4	1	1	4	4	4	3	3	1	2	1	2
4	4	2	4	4	1	2	2	4	1	3	3	4	1
1	1	4	1	1	4	4	3	4	1	1	3	3	2
2	1	3	1	2	4	3	2	3	3	1	4	4	3
4	3	1	1	2	1	1	4	3	1	1	1	4	0
1	1	0	1	1	4	4	2	0	3	1	4	0	0
4	1	1	4	1	2	2	1	0	3	2	4	4	3
2	3	4	0	3	2	3	0	3	1	4	4	3	0
1	1	0	1	1	4	1	4	4	1	1	0	0	0
3	2	4	3	2	2	1	3	3	1	2	0	0	0
3	1	0	1	1	4	3	3	3	1	1	4	4	0
2	2	4	1	2	3	0	1	0	0	2	4	4	1
4	2	0	4	1	3	4	1	1	4	1	4	4	1
3	2	4	1	3	4	2	3	3	2	2	4	2	3
2	1	3	1	1	4	4	1	2	4	1	4	2	2
1	1	4	1	2	4	3	1	3	2	1	1	3	1
1	2	3	1	2	4	3	4	3	3	2	4	3	2
3	3	2	1	4	2	1	3	3	1	3	3	0	3
3	0	0	3	0	2	0	0	0	2	3	1	1	1
2	2	0	2	3	4	2	1	0	1	3	4	0	0
3	2	4	1	1	3	3	3	4	2	1	3	4	4
4	1	0	2	3	4	2	4	3	2	3	4	4	2
1	1	4	1	0	4	4	1	2	4	1	3	3	3
4	1	4	1	1	3	4	1	4	1	1	3	4	1
4	1	0	3	1	4	4	0	0	1	1	4	0	0
1	1	4	1	1	4	4	2	2	3	1	4	1	1
0	1	4	1	2	3	4	2	3	1	2	2	3	3
4	1	2	2	4	4	0	0	2	1	3	4	1	1
0	0	0	0	0	0	0	0	0	0	0	4	0	0

Appendix I:

SUBSIDIARY CONFIGURATION SURVEY RESULTS - RAW DATA

Company Number	Overarching Classification	Age	Size	Industry	MNE Management Structure	Rep Loc	Q1_1	Q1_2	Q1_3	Q1_4	Q1_5
263	2	4	1	3	5		5	5	4	3	3
236	2	2	1	3	1	Australia	6	4	6	4	6
214	1	1	1	3	2	Australia	6	5	5	6	5
201	3	4	3	3	5		6	0	5	3	6
237	2	3	2	2	2	South Korea	5	2	2	2	2
239	3	4	3	3	5		6	4	2	3	6
199	3	4	3	3	5		6	4	4	4	4
80	3	3	3	2	2	New Zealand	4	2	3	3	2
3	3	4	2	2	5		4	4	3	3	2
25	3	4	3	2	5		3	6	2	2	2
290	1	3	1	3	2	Australia	6	3	5	6	6
213	2	2	3	2	2	Australia	6	4	6	4	6
249	1	4	2	2	2	Sweden	6	4	4	4	0
324	1	2	1	2	2	Australia	7	4	4	5	6
259	1	4	1	3	1	Australia	4	4	3	5	5
29	2	4	3	3	1	USA	4	0	0	0	0
212	2	3	3	3	5		6	1	3	3	1
183	2	4	4	3	5		6	3	3	2	6
355	2	3	1	2	5		5	0	6	6	6
211	2	4	2	3	2	Australia	6	5	4	4	7
340	2	1	1	3	3	Australia	5	5	5	4	5
56	1	4	1	3	2	Australia	6	4	5	6	5
43	3	2	2	2	5		7	6	4	4	5
303	2	4	1	3	3	Australia	3	2	4	4	4
231	3	3	2	3	2	Singapore	6	5	4	5	4
244	1	4	1	3	2	Australia	6	2	3	3	3
66	2	3	1	2	2	Australia	6	4	3	3	5
264	2	3	1	3	1	Australia	3	4	4	4	5
91	3	4	3	3	5		6	5	6	6	3
2	2	4	3	3	5		3	3	6	3	6
293	3	3	1	3	2	New Zealand	1	1	1	1	1
283	2	4	2	3	2	Australia	4	2	4	4	4
270	1	4	2	3	2	Australia	6	4	6	6	6
288	2	4	1	2	5		6	2	4	4	4
223	1	4	3	2	2	Australia	7	3	3	3	5
295	2	3	2	3	5		7	4	7	5	6
298	2	4	1	3	2	New Zealand	4	2	2	5	3
207	2	4	1	2	1	Japan	6	4	4	4	4
203	3	2	1	3	2	USA	1	1	1	1	1
297	2	4	2	3	2	Australia	5	4	4	3	4
272	2	4	1	2	2	Australia	6	5	4	4	5
330	2	4	2	3	5		7	4	3	2	2
338	3	4	2	2	2	Australia	3	3	2	3	3
245	2	4	5	3	4		6	5	4	3	6
316	2	3	2	3	2	Australia	3	4	4	6	5
302	3	3	4	2	5		4	3	2	2	2
313	3	3	1	2	5		5	2	2	2	4
55	2	3	3	2	2	Australia	6	3	3	3	2
282	3	4	1	3	5		1	1	4	4	4
205	2	4	2	3	2	Australia	5	5	4	3	3
238	2	4	4	3	5		2	4	3	3	1
128	3	2	1	2	2	Singapore	5	6	2	2	5
292	2	4	2	2	2	Singapore	5	4	4	4	4
387	3	3	2	3	2	Taiwan	7	4	1	1	1
208	2	4	1	3	3	Australia	5	4	3	2	2

Company Number	Overarching Classification	Age	Size	Industry	MNE Management Structure	Rep Loc	Q1_1	Q1_2	Q1_3	Q1_4	Q1_5
157	2	4	1	2	2	Australia	6	5	6	6	4
252	1	3	1	3	2	Australia	6	2	3	3	2
350	1	4	2	2	2	Australia	3	3	5	5	5
206	1	1	1	3	3	Australia	4	6	5	5	5
219	3	4	2	2	5		6	1	2	2	5
59	2	4	1	3	2	Australia	5	2	4	4	3
308	3	2	2	3	5		7	2	2	2	2
76	1	3	3	1	2	Australia	1	2	3	4	3
279	2	4	1	2	2	New Zealand	5	2	2	2	2
1	2	3	1	2	2	Australia	7	5	5	5	5
215	1	3	3	3	2	Australia	3	4	4	4	5
423	3	4	1	2	2	New Zealand	5	2	2	2	1
390	3	3	1	2	5		5	5	2	2	2
417	2	2	1	3	1	Australia	6	2	2	3	4
277	3	4	5	3	5		4	5	4	4	5
226	1	4	2	2	2	Australia	7	4	5	4	4
240	3	4	2	1	5		7	4	4	5	5
276	1	3	1	3	2	Australia	7	5	4	1	5
92	2	4	3	3	2	Australia	7	5	5	3	5
321	3	4	2	2	1	Germany	6	6	3	3	4

Q1_6	Q1_7	Q1_8	Q2_1	Q2_2	Q2_3	Q2_4	Q3_1	Q3_2	Q3_3	Q3_4	Q3_5	Q3_6	Q3_7	Q4_1	Q4_2
5	6	4	7	7	5	6	0	5	5	6	6	4	6	1	4
6	4	6	7	7	2	7	6	6	6	4	6	4	4	1	1
4	5	5	5	7	5	6	6	6	2	5	7	6	2	2	4
6	6	6	7	7	7	7	5	7	6	7	6	6	7	5	4
1	2	3	6	2	4	2	2	6	5	6	4	2	5	4	4
7	7	7	2	2	4	6	1	6	6	2	6	5	6	5	6
4	5	5	6	5	5	5	4	6	4	6	3	3	4	3	5
2	2	3	3	4	2	2	2	2	2	2	2	2	3	2	2
3	3	2	6	7	7	7	6	6	7	7	7	6	7	5	6
5	3	3	6	6	4	4	6	7	5	7	7	2	4	5	4
4	4	5	4	4	5	4	0	4	4	0	4	3	4	1	4
2	6	5	3	3	4	4	5	5	4	5	3	3	4	2	2
3	3	5	6	6	5	6	2	5	6	6	6	5	7	2	5
3	6	6	4	3	4	4	3	4	2	4	4	3	4	1	2
2	5	4	3	4	3	3	4	4	3	4	4	5	5	4	4
0	0	0	6	6	6	6	3	6	6	6	3	4	6	2	2
1	1	2	0	1	6	1	0	7	4	6	6	0	0	2	6
3	3	5	2	1	6	1	4	3	5	5	4	4	6	3	4
6	2	5	2	2	5	6	6	7	2	6	6	3	5	3	5
5	5	5	6	6	5	6	4	6	5	5	5	4	4	4	4
5	5	5	5	6	7	4	2	6	4	4	5	6	4	4	5
6	3	6	3	2	2	3	5	6	4	6	2	4	5	2	3
4	5	5	2	2	7	3	5	6	5	6	6	5	5	4	4
3	3	3	3	3	4	4	3	4	4	4	4	5	6	2	2
4	5	5	3	1	3	3	6	5	6	5	5	4	5	6	4
1	2	3	4	6	6	4	1	7	2	3	2	2	3	2	2
2	3	5	4	4	6	4	0	6	5	0	6	5	6	2	5
6	4	4	3	3	4	4	4	5	4	0	3	5	5	4	5
2	5	5	5	6	5	5	5	6	5	5	6	6	6	3	5
2	3	3	4	2	5	2	1	6	7	4	5	6	7	1	5
1	1	1	5	5	5	5	5	5	5	5	5	5	5	5	5

Q1_6	Q1_7	Q1_8	Q2_1	Q2_2	Q2_3	Q2_4	Q3_1	Q3_2	Q3_3	Q3_4	Q3_5	Q3_6	Q3_7	Q4_1	Q4_2
2	3	4	0	5	5	6	6	6	4	6	6	4	6	5	5
2	2	5	4	4	4	4	6	6	6	6	6	5	5	2	5
2	2	3	7	5	6	5	0	6	4	0	6	5	5	1	4
3	3	5	7	7	6	7	2	6	5	5	2	5	6	1	3
6	7	6	6	6	4	5	0	3	5	5	4	6	6	3	6
4	4	4	6	5	6	5	2	2	4	6	4	2	6	1	1
2	2	5	4	5	3	5	2	3	3	4	5	2	3	2	3
1	1	1	7	6	6	6	5	7	7	7	6	6	6	5	6
4	4	4	5	6	6	6	5	6	6	6	5	3	4	4	4
5	5	5	3	2	3	2	0	6	5	0	6	5	5	1	6
1	4	5	4	5	6	5	5	6	4	6	4	6	3	3	3
2	2	2	7	7	5	6	3	5	2	7	6	7	7	2	2
7	7	6	6	6	6	6	2	6	4	4	2	6	6	2	1
3	5	3	6	6	5	6	3	5	5	4	3	6	5	2	3
2	2	3	3	2	5	3	4	4	4	4	4	4	4	4	4
2	5	4	0	0	0	0	7	4	5	5	6	0	0	7	5
6	6	5	6	4	3	4	2	6	4	5	3	2	4	2	2
3	2	3	3	3	4	5	0	5	4	5	5	4	4	4	4
3	5	4	5	5	5	5	6	4	4	6	6	6	6	4	4
2	3	3	7	6	6	6	6	6	6	0	6	7	7	7	5
4	4	5	6	5	5	7	5	7	3	5	5	7	4	6	5
4	4	4	6	6	6	6	5	6	6	5	5	4	7	4	4
2	2	2	6	6	4	4	5	3	3	6	7	6	5	4	6
2	3	3	7	1	3	2	2	6	6	6	6	5	2	1	4
3	3	6	5	6	6	5	3	6	5	6	5	6	6	2	4
2	5	5	2	2	5	2	6	6	6	6	6	3	5	7	6
5	3	5	3	3	3	4	5	5	5	5	5	5	5	5	5
6	5	5	2	3	4	3	2	5	5	5	4	4	4	2	4
1	2	2	4	4	4	4	4	4	4	3	4	5	2	4	4
2	2	4	2	2	3	5	2	5	3	6	4	2	4	1	2
4	3	4	2	2	5	4	0	0	0	0	0	0	0	6	5
3	2	3	6	5	4	4	6	5	6	5	6	4	4	5	5
3	3	2	3	3	3	3	5	6	3	5	6	5	6	2	3
4	4	5	6	6	6	4	1	6	5	7	4	6	7	1	1
0	6	5	2	0	5	2	5	0	6	5	6	6	6	5	4
1	4	3	6	6	6	7	4	4	5	6	6	6	6	3	5
1	1	3	5	6	5	6	5	5	4	5	4	6	6	5	3
3	6	5	4	5	3	7	3	7	5	6	5	3	3	2	4
5	5	4	7	7	5	7	1	7	5	1	4	7	7	4	1
5	4	5	6	6	4	7	2	5	3	3	5	4	5	3	3
5	5	6	2	3	2	4	5	4	6	6	7	4	4	2	5
5	7	6	4	5	5	5	2	4	3	4	3	5	4	2	2
3	3	4	5	7	2	2	3	6	5	6	4	4	3	3	3
4	4	4	7	7	7	7	7	6	5	7	7	5	5	5	7

Q4_3	Q4_4	Q4_5	Q4_6	Q4_7	Q4_8	Q4_9	Q5_1	Q5_2	Q5_3	Q6_1_1	Q6_1_2	Q6_1_3	Q6_1_4	Q6_2_1	Q6_2_2
3	5	4	4	4	6	6	2	2	2	2	1	5	1	3	3
4	4	4	4	4	1	1	2	4	6	1	3	4	3	3	3
1	5	1	1	4	3	6	6	5	5	2	2	4	5	1	1
4	5	5	7	7	6	5	1	2	2	2	3	3	3	2	2
1	5	4	4	4	4	1	4	4	5	2	3	4	3	2	2
0	6	0	6	7	2	6	5	2	7	1	1	1	1	5	1
5	4	5	5	5	3	2	2	2	3	3	3	2	2	2	2
2	2	2	2	2	2	2	3	2	3	2	2	2	3	3	3

Q4 _3	Q4 _4	Q4 _5	Q4 _6	Q4 _7	Q4 _8	Q4 _9	Q5 _1	Q5 _2	Q5 _3	Q6_1 _1	Q6_1 _2	Q6_1 _3	Q6_1 _4	Q6_2 _1	Q6_2 _2
5	5	5	6	6	6	6	6	6	6	4	3	2	1	3	3
6	6	6	6	6	2	6	2	2	2	4	4	4	4	2	2
1	5	2	1	1	1	1	5	4	5	3	2	4	4	1	2
4	4	4	5	5	5	2	4	4	4	2	2	3	3	2	2
4	5	6	5	6	6	4	2	2	2	2	2	4	1	2	3
2	3	4	2	1	1	3	4	4	4	3	3	2	2	3	3
4	3	4	3	4	4	3	4	3	4	3	3	3	3	2	3
2	4	4	5	5	4	0	5	5	5	1	2	5	2	1	1
7	4	4	5	4	5	7	1	1	1	3	3	3	3	2	2
4	4	4	5	4	6	4	4	7	6	3	3	3	3	3	3
5	4	5	2	4	5	5	6	5	6	4	1	4	1	3	1
3	4	5	5	5	5	4	2	2	3	1	2	1	2	2	2
4	5	5	4	5	5	5	3	4	4	2	2	5	2	3	3
5	3	5	2	2	0	5	2	3	3	3	3	2	2	1	1
4	5	5	5	5	5	5	2	2	2	3	3	3	3	3	3
3	4	4	3	2	2	1	3	4	4	3	3	2	2	3	3
5	6	4	5	6	5	6	4	3	4	4	4	2	1	2	3
1	5	3	1	3	3	4	3	4	2	1	1	4	1	2	2
3	6	4	6	4	4	2	3	2	5	2	3	4	3	2	2
4	4	4	4	4	3	4	3	4	4	3	3	4	4	4	3
2	6	5	5	6	5	2	2	2	5	4	2	4	3	4	3
1	6	5	5	2	4	1	1	1	1	2	1	4	1	2	2
5	5	5	5	5	5	5	4	4	4	5	5	5	5	5	5
5	5	4	5	5	5	4	2	2	2	2	2	3	1	2	2
2	5	4	4	5	4	2	5	5	5	2	2	4	2	2	3
1	7	3	5	7	2	5	2	5	4	3	1	4	1	3	1
6	5	5	3	3	3	1	6	7	6	1	2	5	4	1	2
4	5	4	4	4	3	5	7	2	4	3	1	4	1	1	1
1	4	5	5	6	6	1	5	6	4	1	1	3	1	1	1
2	3	3	3	5	4	4	5	4	5	1	1	5	1	1	1
6	6	6	6	6	6	7	1	1	1	2	3	5	3	4	4
4	4	4	4	4	5	4	4	4	4	2	1	2	3	1	1
1	5	2	5	5	2	1	2	2	3	1	2	2	3	2	3
5	4	5	5	5	5	5	6	4	6	3	3	3	3	3	3
6	6	6	7	6	7	7	4	4	4	3	4	3	3	5	3
4	2	4	4	3	3	1	4	6	6	2	3	4	3	2	3
3	6	5	4	5	3	3	2	4	6	2	2	4	2	2	2
4	4	4	4	4	0	4	3	2	2	3	3	3	3	3	3
5	4	4	4	4	6	4	1	1	1	5	5	1	1	1	1
3	2	4	4	4	4	2	4	4	4	1	1	2	2	1	1
4	4	4	4	4	4	4	2	2	2	3	3	3	3	3	3
4	4	4	5	4	4	4	4	4	4	3	3	3	3	3	3
7	6	7	6	5	6	4	1	1	1	1	1	1	1	1	1
3	3	3	6	5	6	5	4	4	4	5	1	2	1	3	1
5	5	5	5	5	5	4	2	2	2	1	2	5	4	1	1
5	5	4	3	6	6	5	1	1	3	3	4	5	4	4	4
2	5	4	3	5	2	4	1	1	3	2	2	4	4	3	2
4	4	4	3	5	3	3	2	2	4	3	1	5	1	2	1
7	6	6	6	5	6	6	6	3	5	2	1	1	1	1	1
5	5	5	5	5	3	3	3	2	3	3	3	3	3	3	3
2	4	2	2	2	2	4	4	4	4	2	3	3	3	1	3
4	4	4	4	4	4	4	2	2	2	4	4	4	4	4	4
2	4	4	4	5	3	4	3	3	3	1	1	1	3	1	1
6	4	4	4	5	2	5	4	3	4	3	3	3	3	2	2
3	2	4	6	4	3	6	2	2	2	5	4	3	3	1	1
2	5	3	4	5	4	5	1	1	2	3	3	1	2	4	4
6	6	4	5	5	3	3	2	2	2	5	5	5	1	5	5

Q4 _3	Q4 _4	Q4 _5	Q4 _6	Q4 _7	Q4 _8	Q4 _9	Q5 _1	Q5 _2	Q5 _3	Q6_1 _1	Q6_1 _2	Q6_1 _3	Q6_1 _4	Q6_2 _1	Q6_2 _2
4	0	3	3	4	2	3	4	5	5	3	3	4	3	3	3
2	6	6	6	7	5	6	1	2	2	3	4	5	3	4	2
5	4	5	4	5	5	5	4	4	5	3	1	4	2	2	2
1	5	3	4	5	6	6	0	5	6	2	4	4	4	2	4
1	6	1	5	7	5	4	1	2	2	1	1	3	1	1	1
2	3	4	3	5	5	5	3	3	3	3	1	1	3	3	3
5	6	6	6	4	4	6	6	3	3	3	3	1	1	4	3
1	2	4	2	4	4	3	5	5	5	2	3	4	3	1	1
2	6	2	3	6	3	2	5	5	5	3	1	1	1	1	1
6	4	4	4	6	6	2	1	3	5	1	2	2	2	1	1

Q6_2 _3	Q6_2 _4	Q6_3 _1	Q6_3 _2	Q6_3 _3	Q6_3 _4	Q6_4 _1	Q6_4 _2	Q6_4 _3	Q6_4 _4	Q7a_1_1_1_T EXT	Q7a_2_1_1_T EXT
4	3	1	1	5	2	3	4	4	2	94	0
4	3	3	3	4	3	1	3	4	3	90	0
4	4	2	3	3	4	1	1	1	1	0	0
2	2	2	2	2	2	2	2	2	2	0	95
3	4	1	1	2	5	1	2	5	4	10	0
1	1	1	1	1	1	5	4	3	1	0	0
2	2	1	1	1	1	3	4	3	3	5	85
3	3	3	3	3	3	2	2	2	3	70	0
2	1	3	3	2	1	3	3	2	1	10	10
2	2	2	2	2	2	5	5	5	5	25	0
5	5	2	2	4	4	2	2	4	4	75	5
3	3	2	2	2	2	2	2	4	3	0	0
3	1	1	3	4	1	1	2	4	2	30	0
2	1	3	3	4	1	1	1	4	1	3	97
2	4	4	3	3	3	2	3	3	3	80	0
2	1	1	1	2	1	2	2	5	1	0	0
5	2	3	3	3	3	3	3	4	3	20	0
3	3	4	4	3	3	4	4	4	4	0	100
2	1	3	1	2	1	3	1	3	1	25	0
2	2	1	1	1	1	1	2	1	2	0	0
4	4	3	3	3	3	3	3	4	3	100	0
1	1	4	3	3	3	1	1	3	1	70	30
3	3	3	3	3	3	3	3	3	3	0	0
2	2	3	3	2	2	3	3	2	2	40	0
4	1	3	3	3	1	3	3	4	1	0	90
4	1	4	3	2	2	2	1	3	1	70	5
3	2	2	2	4	3	3	4	4	3	60	0
4	3	3	3	3	3	4	3	3	2	70	0
2	3	2	4	2	3	3	4	2	3	75	0
5	4	1	1	2	1	3	2	2	2	70	0
5	5	5	5	5	5	5	5	5	5	25	50
2	3	2	2	3	4	2	2	3	4	30	0
4	2	2	2	4	2	2	2	4	2	10	0
3	1	3	1	1	1	3	1	3	1	28	0
5	4	2	2	4	2	1	1	5	4	30	20
4	1	3	3	3	3	1	1	4	1	5	95
2	1	1	1	4	1	1	1	3	1	80	0
5	2	2	2	4	2	3	4	5	2	100	0
3	3	3	3	3	1	3	5	5	1	0	0
1	1	1	1	1	1	1	1	2	2	0	0
2	3	1	1	1	2	2	2	1	2	60	0
3	3	3	3	3	3	1	1	4	2	0	30

Q6_2_3	Q6_2_4	Q6_3_1	Q6_3_2	Q6_3_3	Q6_3_4	Q6_4_1	Q6_4_2	Q6_4_3	Q6_4_4	Q7a_1_1_1_T EXT	Q7a_2_1_1_T EXT
3	3	3	3	3	3	2	4	3	3	0	0
4	3	3	3	3	3	2	3	4	3	5	85
3	2	3	2	2	1	1	1	4	3	80	0
3	3	3	3	3	3	3	3	3	3	0	0
3	1	1	1	1	1	1	1	2	1	0	0
1	1	1	1	1	1	1	1	4	3	0	0
3	3	3	3	3	3	3	3	3	3	0	0
3	3	3	3	3	3	3	3	3	3	0	100
1	1	1	1	1	1	4	1	2	1	0	0
3	1	3	1	5	1	2	1	2	1	5	0
4	1	2	2	2	2	1	3	4	1	75	0
4	4	2	3	4	3	3	3	5	4	40	0
4	4	3	1	4	4	3	3	4	4	0	0
3	1	2	1	5	3	3	2	5	3	0	0
1	1	1	1	2	1	1	1	4	1	70	0
3	3	2	3	2	3	3	3	4	3	10	0
3	3	2	3	4	3	2	3	4	3	70	30
4	4	4	4	4	4	4	4	4	4	80	0
1	3	1	1	1	1	1	1	3	4	0	0
3	2	3	2	4	2	2	2	4	2	50	0
1	1	1	1	1	1	2	3	5	3	5	10
2	2	5	5	2	2	3	3	4	4	10	0
3	1	5	5	1	1	5	5	4	1	40	0
3	3	3	3	3	3	3	3	5	3	0	0
3	1	4	2	5	2	3	2	3	1	60	0
2	2	3	2	2	2	2	1	2	1	60	10
4	4	3	3	4	4	1	1	5	5	5	0
4	1	1	1	3	1	1	1	5	1	50	0
2	3	4	1	5	2	1	1	5	2	0	95
1	1	3	3	1	1	3	3	3	1	5	0
3	1	1	1	5	3	1	1	4	2	95	0
1	1	3	1	3	3	4	1	4	4	0	0
1	1	1	1	1	1	1	1	4	1	0	100

Q7a_3_1_1_TEXT	Q7a_4_1_1_TEXT	Q7a_5_1_1_TEXT	Q7b_1_1_1_TEXT	Q7b_2_1_1_TEXT	Q7b_3_1_1_TEXT
2	3	1	0	0	1
0	0	10	70	30	0
0	0	0	0	0	0
0	5	0	0	0	0
73	15	2	0	0	0
0	100	0	0	0	0
5	5	0	5	95	0
0	7	23	0	7	0
10	30	70	0	0	0
25	40	10	40	0	40
10	5	5	75	5	10
10	40	50	0	0	10
20	0	50	0	0	0
0	0	0	0	0	0
10	5	5	0	0	0
0	0	0	0	0	0
0	10	0	0	10	0
0	0	0	0	100	0

Q7a_3_1_1_TEXT	Q7a_4_1_1_TEXT	Q7a_5_1_1_TEXT	Q7b_1_1_1_TEXT	Q7b_2_1_1_TEXT	Q7b_3_1_1_TEXT
0	20	25	0	0	0
5	5	80	0	0	0
0	0	0	80	20	0
2	1	0	0	99	1
0	80	20	0	0	0
20	15	25	0	0	13
0	0	10	25	55	20
15	5	5	45	0	0
35	0	5	0	0	1
0	10	90	10	0	0
0	10	15	0	0	0
25	0	5	0	0	0
25	0	0	25	50	25
30	0	40	5	0	5
0	10	0	10	0	0
70	2	0	0	8	92
30	10	10	0	10	10
0	0	0	1	20	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	100	0	0	0	0
15	20	5	0	0	10
30	30	10	10	0	20
30	40	30	0	0	30
0	10	0	5	85	0
0	20	0	0	0	0
30	60	10	0	0	90
0	90	90	0	0	0
0	35	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	25	0	0
10	0	0	0	0	0
30	0	0	0	0	5
10	25	25	0	20	80
0	0	0	0	0	0
0	0	0	0	0	0
10	90	0	0	0	0
2	30	20	10	0	1
0	0	0	0	70	0
10	8	2	89	0	5
30	10	40	0	0	10
30	5	10	50	0	25
5	70	10	0	0	0
50	0	40	0	0	0
10	30	20	0	0	10
0	0	0	0	0	0
0	0	40	0	0	0
5	20	5	5	5	10
5	20	70	10	0	10
0	50	0	0	70	0
5	0	0	0	0	30
0	30	20	0	0	0
2	1	2	0	0	0
0	88	12	0	0	0
0	0	0	15	0	45

Q7b_4_1_1_TEXT	Q7b_5_1_1_TEXT	Q8_1	Q8_2	Q8_3	Q9_1	Q9_2	Q9_3	Q9_4	Q9_5	Q9_6	Q9_7
99	0	3	6	7	2	5	2	7	1	1	2
0	0	2	2	6	3	3	2	2	1	1	1
0	0	2	3	2	7	6	6	6	6	6	1
95	5	2	4	5	6	6	6	2	2	2	2
0	0	6	6	6	5	5	5	3	5	1	1
100	0	1	5	6	2	2	7	1	1	1	1
0	0	1	1	3	2	2	2	1	1	1	1
70	3	6	7	2	4	2	2	4	2	4	7
100	0	4	3	3	2	2	2	1	1	1	1
7	3	7	7	7	3	6	6	2	1	6	6
5	5	2	5	5	6	6	6	6	6	6	6
80	10	5	6	6	2	2	2	2	2	2	4
97	3	2	4	5	6	6	6	1	1	1	6
100	0	6	6	6	2	1	4	2	6	1	1
95	5	2	2	2	5	5	5	5	6	7	1
0	0	3	3	5	7	4	5	6	1	1	1
0	0	1	1	5	2	2	1	3	1	1	1
0	0	6	6	6	6	7	4	2	1	1	1
0	0	2	2	6	7	7	7	6	5	6	1
95	5	2	2	4	1	5	6	2	7	1	1
0	0	4	5	6	6	6	6	4	5	0	4
1	0	1	5	3	7	7	7	7	7	1	1
25	75	6	5	7	6	3	5	6	2	2	2
68	19	4	4	6	4	6	4	6	2	2	2
0	0	6	4	5	2	6	6	2	2	4	5
50	5	1	2	2	7	7	7	5	7	1	1
95	4	3	2	5	6	6	6	3	4	0	0
95	5	2	2	6	1	1	3	1	1	4	1
95	5	5	5	6	2	2	5	3	2	2	2
100	0	5	5	6	5	3	2	1	1	1	5
0	0	6	7	6	6	6	6	6	6	6	6
85	5	4	4	4	4	6	7	6	0	0	0
0	0	2	2	5	3	6	6	6	6	6	2
0	0	4	4	6	6	6	5	5	6	6	2
80	0	2	2	5	6	7	6	3	6	3	2
79	0	1	2	4	5	6	5	1	1	1	1
0	0	1	1	3	1	2	3	3	1	1	1
0	0	6	6	6	4	2	7	7	1	6	1
0	0	7	7	7	6	6	6	1	1	1	5
100	0	3	2	4	4	4	6	3	3	3	2
90	0	1	1	2	6	3	3	3	4	1	1
60	10	3	5	6	5	6	6	4	2	1	1
40	30	1	1	5	1	1	7	1	1	1	1
10	0	5	3	6	6	7	7	6	4	0	5
100	0	4	5	6	7	7	7	3	3	6	5
10	0	2	2	2	4	6	5	2	2	2	2
60	40	1	1	4	1	1	1	1	1	1	1
85	15	1	1	3	3	3	6	2	1	2	1
0	0	0	0	0	0	1	1	1	1	1	1
100	0	4	4	4	2	3	3	3	4	1	1
0	0	7	7	7	1	6	6	5	0	0	0
0	0	2	3	6	2	2	2	5	1	5	2
85	10	5	5	6	2	3	6	1	1	1	3
0	0	7	6	7	7	6	7	3	6	7	2
0	0	6	6	6	7	7	7	1	6	5	5
0	0	6	2	6	2	2	6	2	6	2	2

Q7b_4_1_1_TEXT	Q7b_5_1_1_TEXT	Q8_1	Q8_2	Q8_3	Q9_1	Q9_2	Q9_3	Q9_4	Q9_5	Q9_6	Q9_7
90	0	0	2	3	1	6	3	5	0	0	0
10	5	2	3	5	6	6	6	5	5	4	3
30	0	1	1	1	4	5	4	5	1	1	1
5	1	5	5	6	6	7	6	3	5	1	1
90	0	2	1	5	5	5	6	2	6	1	1
5	0	5	4	7	6	6	6	5	0	0	0
0	0	6	6	6	7	6	6	2	3	4	5
100	0	4	5	6	6	6	6	6	5	6	1
85	5	1	1	5	4	3	3	4	3	3	3
0	0	6	6	7	6	4	6	6	5	6	7
70	30	6	6	7	5	6	7	7	1	1	1
70	10	4	3	3	4	4	4	3	3	4	5
60	20	5	5	5	7	6	7	1	1	1	2
70	0	7	7	7	7	7	7	7	1	6	6
10	60	6	6	7	7	7	7	7	1	1	1
50	50	2	2	5	1	1	1	1	1	1	1
100	0	0	0	0	5	5	5	5	0	5	0
100	0	2	2	5	6	5	4	6	0	1	1
30	10	3	6	6	5	5	4	5	1	4	1

Q10_1_1	Q10_1_2	Q10_1_3	Q10_1_4	Q10_1_5	Q10_2_1	Q10_2_2	Q10_2_3	Q10_2_4	Q10_2_5	Q10_3_1
1	0	0	0	0	1	0	0	0	0	1
1	0	0	0	0	1	0	0	0	0	1
0	0	1	0	0	0	0	0	0	1	0
0	0	0	0	1	1	0	1	0	0	1
1	0	0	0	0	1	0	0	0	0	0
0	0	0	0	1	1	1	0	0	0	0
0	0	0	0	1	1	0	0	0	0	1
0	0	0	0	1	1	0	0	0	0	1
0	0	0	0	1	0	0	0	0	0	1
1	1	0	0	0	1	1	1	1	0	1
1	0	0	0	0	0	0	0	0	1	0
1	1	0	0	0	1	1	0	0	0	1
1	1	0	0	0	0	0	0	0	1	0
1	1	0	0	0	0	0	0	0	0	0
1	1	1	0	0	1	1	0	0	0	0
1	1	0	0	0	1	0	0	0	0	1
0	0	1	0	0	1	0	0	0	0	1
1	0	0	0	0	1	0	0	0	0	1
0	0	0	0	1	1	1	1	0	0	1
1	0	0	0	0	1	1	0	0	0	1
1	1	1	0	0	1	1	1	0	0	1
1	1	1	0	0	1	0	0	0	0	0
1	1	0	1	0	1	1	0	0	0	1
1	0	0	0	0	1	0	0	0	0	1
1	0	0	0	0	0	0	0	0	1	1
1	0	0	0	0	0	0	0	0	1	1
1	1	1	0	0	1	1	1	0	0	1
1	0	0	0	0	1	0	1	0	0	1
1	0	0	0	0	0	0	0	0	1	1
1	1	1	0	0	1	1	1	0	0	1
1	0	0	0	0	1	0	1	0	0	1
1	0	0	0	0	0	0	0	0	1	1
1	0	0	0	0	1	0	1	0	0	1
1	0	0	0	0	1	0	1	0	0	1

Q10_3_2	Q10_3_3	Q10_3_4	Q10_3_5	Q10_4_1	Q10_4_2	Q10_4_3	Q10_4_4	Q10_4_5	Q11_1	Q11_2
0	0	0	0	0	0	0	0	1	1	2
1	0	0	0	1	1	0	0	0	6	7
1	1	1	0	1	1	1	1	0	7	7
0	0	0	1	0	0	0	0	1	6	0
1	0	0	0	1	1	0	0	0	5	4
0	0	0	1	1	1	0	0	0	7	7
0	0	0	1	0	0	0	0	1	2	1
0	0	0	1	0	0	0	0	1	2	6
0	0	0	0	0	0	0	0	1	5	7
0	0	0	1	0	0	0	0	1	6	6
0	0	0	0	0	0	0	0	1	7	6
1	0	0	0	1	1	0	0	0	7	5
0	0	0	0	0	0	0	0	1	6	7
0	0	0	0	1	0	0	0	0	4	6
1	0	0	0	0	0	1	0	0	4	4
1	1	0	0	1	1	1	0	0	6	4
0	0	0	0	0	0	0	0	1	6	5
1	0	0	0	1	1	1	0	0	5	3
0	0	0	1	0	0	0	0	1	0	6
0	0	0	0	1	0	0	0	0	6	6
0	0	0	0	1	0	0	0	0	7	6
0	0	0	0	1	0	0	0	0	5	6
0	0	0	0	0	0	0	0	1	7	7
1	1	0	0	1	1	1	0	0	6	6
0	1	0	0	1	0	1	0	0	4	7
0	0	0	0	0	0	0	0	1	6	6
0	0	0	1	0	0	0	0	1	7	6
0	0	0	0	1	0	0	0	0	6	6
0	0	0	0	1	0	0	0	0	6	6
0	0	0	1	0	0	0	0	1	3	3
0	0	0	1	0	0	0	0	1	7	7
1	1	1	0	1	1	1	0	0	7	7
0	0	0	0	0	0	0	0	1	7	6
0	0	0	0	0	0	0	0	1	2	5
1	1	0	0	1	1	1	0	0	7	7
1	1	0	0	0	0	0	0	0	4	6
0	0	0	1	1	0	0	0	0	6	6
0	0	0	0	0	0	0	0	1	5	7
0	0	0	1	0	1	0	0	0	7	7
1	1	1	0	1	1	1	1	0	6	6
0	0	0	1	1	0	0	0	0	7	5
0	0	0	1	0	0	0	0	1	0	7
0	0	0	0	1	0	0	0	0	5	5
1	0	0	0	1	1	0	0	0	7	7
0	1	0	0	0	0	1	0	0	7	5
0	0	0	0	1	0	0	0	0	6	6
0	0	0	0	1	1	0	0	0	7	6
0	0	0	0	0	0	0	0	1	7	7
1	0	0	0	0	0	0	0	0	5	7
0	0	0	0	0	0	0	0	1	7	2
1	0	0	0	1	1	0	0	0	5	4
0	0	0	0	0	0	0	0	1	5	4
1	0	0	0	1	1	0	0	0	7	7
0	1	0	0	1	0	0	0	0	7	6
1	1	0	0	1	1	1	0	0	7	5
0	1	0	0	0	0	1	0	0	6	6
0	0	0	0	1	0	0	0	0	7	5

Q10_3_2	Q10_3_3	Q10_3_4	Q10_3_5	Q10_4_1	Q10_4_2	Q10_4_3	Q10_4_4	Q10_4_5	Q11_1	Q11_2
0	0	0	1	0	0	0	0	1	7	7
0	0	0	0	1	1	0	0	0	7	7
0	0	0	1	0	0	0	0	1	7	7
0	0	0	1	1	1	0	0	0	4	3
1	0	0	0	1	1	0	0	0	6	6
0	0	0	0	1	0	0	0	0	7	6
0	0	0	1	1	1	0	0	0	6	6
1	1	0	0	1	1	0	0	0	6	5
0	0	0	1	1	0	0	0	0	7	7
1	0	0	0	1	0	0	0	0	7	5
1	1	1	0	1	1	1	1	0	4	7

Q11_3	Q11_4	Q11_5	Q11_6	Q11_7	Q11_8	Q11_9	Q11_10	Q11_11
6	2	3	3	3	3	5	5	1
7	7	7	5	1	1	4	4	5
7	7	6	6	1	7	5	6	6
7	7	5	6	2	2	5	0	4
4	7	4	5	5	5	5	5	3
7	6	6	0	0	0	6	1	0
6	6	4	4	2	2	6	6	3
1	2	1	6	4	6	4	2	7
7	6	5	3	2	2	6	6	3
7	7	7	6	2	1	6	6	7
4	4	2	4	6	7	4	3	4
4	3	5	2	2	2	6	6	2
7	7	6	2	3	7	2	6	1
5	4	6	4	4	2	1	1	7
6	6	6	6	5	4	4	3	3
5	2	2	4	3	6	6	6	2
1	0	1	1	0	6	1	0	0
6	6	6	5	2	3	6	6	5
4	6	6	6	2	3	5	4	3
7	6	6	5	2	2	4	4	4
4	7	6	5	4	6	6	6	2
4	3	2	4	6	0	7	7	7
3	4	4	4	2	2	5	5	4
4	6	4	5	5	4	4	3	6
4	5	4	2	1	3	5	5	5
6	6	4	4	6	6	5	2	6
4	6	3	4	3	3	5	4	7
5	0	5	6	4	4	5	5	5
6	6	6	5	2	5	5	5	3
5	6	2	6	6	1	5	0	2
6	6	6	6	6	0	0	0	0
5	6	4	7	7	2	7	7	7
6	5	5	5	4	2	2	2	6
6	6	3	3	5	5	5	5	2
7	7	6	6	5	5	4	3	5
4	0	5	5	6	6	7	6	2
2	5	4	2	4	3	1	3	0
5	4	2	2	3	3	2	2	0
7	7	7	7	5	7	7	7	1

Q11_3	Q11_4	Q11_5	Q11_6	Q11_7	Q11_8	Q11_9	Q11_10	Q11_11
6	5	5	4	2	2	6	6	7
3	2	1	4	1	5	4	3	5
7	7	5	6	4	7	6	6	3
7	7	7	4	4	6	6	6	6
7	6	5	6	2	5	3	3	2
7	5	6	5	2	4	5	3	6
4	4	3	5	3	3	6	6	2
6	6	6	4	5	2	5	5	3
4	4	5	2	1	2	1	1	2
5	0	5	1	0	0	6	6	0
6	6	6	4	4	4	4	5	4
7	5	7	4	0	0	4	7	2
7	7	7	7	3	3	3	4	7
6	6	7	4	2	5	5	6	1
7	5	7	7	5	0	6	7	3
5	6	4	2	2	5	5	4	3
4	6	5	7	1	1	6	6	6
2	2	0	7	7	2	7	7	2
4	4	4	5	3	3	4	4	3
4	4	5	4	4	4	5	5	6
6	6	6	6	5	6	0	0	7
6	6	5	6	6	4	6	5	7
7	5	7	6	3	3	6	6	7
5	6	6	2	0	0	6	6	0
5	5	5	2	5	5	2	5	6
5	4	5	6	6	7	5	7	7
6	5	6	0	6	6	6	7	3
7	7	7	2	4	2	4	7	2
3	4	5	5	4	4	3	3	4
6	6	5	7	3	5	3	3	6
7	7	7	6	2	2	4	4	4
6	6	6	4	2	7	5	5	6
4	5	6	4	0	2	4	5	5
7	7	7	7	7	7	7	7	7
5	6	6	7	0	2	6	5	2
7	6	6	6	3	3	6	7	7