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INTERNATIONALIZATION AS AN ENTREPRENEURIAL PROCESS

Volume 1

Main Study

A dissertation submitted in fulfilment of the requirement for the degree of
Doctor of Philosophy

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Australian School of Business
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December 2007

Originality Statement

‘I hereby declare that this submission is my own work and to the best of my knowledge it contains no material previously published or written by another person, or substantial proportions of material which have been accepted for the award of any other degree or diploma at UNSW or any other educational institution, except where due acknowledgement is made in the thesis. Any contribution made to the research by others, with whom I have worked at UNSW or elsewhere, is explicitly acknowledged in the thesis. I also declare that the intellectual content of this thesis is the product of my own work, except to the extent that assistance from others in the project’s design and conception or in style, presentation and linguistic expression is acknowledged’.

Yanto Chandra

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Abstract

Despite the substantial amount of work undertaken on internationalization to-date, most has placed little emphasis on the temporal processes and dynamics of internationalization in shaping firm internationalization histories. This is reflected in several problem areas in theories and research regarding internationalization including accelerated internationalization, full and partial de-internationalization and use of multiple modes of entry at a point in time. This study addressed an important question: what factors and processes affect the way a firm's pattern of internationalization changes over time?

Although mainstream theories of internationalization and recent advances that link internationalization and entrepreneurship assume the importance of 'opportunity', there is a paucity of research that places 'opportunity' as the core process in internationalization. By embracing time as a key dimension, this study reconceptualized internationalization as an entrepreneurial process: as the process of opportunity discovery, evaluation and exploitation in international markets.

The research was undertaken in two phases. Phase 1 included a literature review covering the internationalization and entrepreneurship research streams. The discovery-evaluation-exploitation framework from entrepreneurship was used to identify relevant factors and explore eight case studies. By drawing on results from the exploratory research, an initial conceptual model and a set of propositions were developed. In Phase 2, fifteen case studies were theoretically sampled from a pool of small and medium enterprises from the knowledge and non-knowledge based industries in Australia. The data collection and analysis followed a process, event-driven approach to case study research involving the mapping of key sequences of events as well as within and cross case analysis.

The results clarified the nature and pattern of opportunity discovery, evaluation and exploitation, and a number of factors that influence this process: the role of prior knowledge, network ties, serendipity, absorptive capacity, bricolage, the nature of uncertainty, feedback mechanisms and effectual versus causal reasoning. The findings also suggest the evolutionary process of firm development and internationalization and show that born globals may be a classification error. The results indicate that full and partial de-internationalization as well as the use of multiple modes of entry are influenced by the interconnectedness of opportunities across the founding, domestic and international context over time; the role of Knightian uncertainty which can push or pull the patterns in many directions and how firms rely on effectual reasoning.

The results provide a better understanding of the basic mechanisms of internationalization. The academic contributions of this thesis include the extension of Jones and Coviello's (2005) model and previous models by developing a dynamic, process model of internationalization that is capable of addressing the temporal and dynamic gaps in internationalization; the integration and reconciliation of extant theories of internationalization by understanding the role of mode of reasoning; and the establishment of 'opportunity-firm' nexus as a suitable unit of analysis in internationalization and international entrepreneurship research. Finally, the managerial contributions include guidance for firms and entrepreneurs in terms of dealing with uncertainty and complexity in international markets using the appropriate mode of reasoning (i.e. effectual, non-predictive approach vs. causal, predictive approach) in the right context and circumstances.

TABLE OF CONTENTS

Abstract	4
1. INTRODUCTION	13
1.1. Overview	13
1.2. Research question	14
1.3. Importance of the study	15
<i>1.3.1 Academic importance of the study</i>	<i>15</i>
<i>1.3.2 Managerial and policy importance of the study</i>	<i>16</i>
1.4. Research overview	16
<i>1.4.1. Definitions</i>	<i>16</i>
<i>1.4.2. Unit of analysis</i>	<i>17</i>
1.5. Methodology	17
<i>1.5.1 Phase 1 – Exploratory research</i>	<i>18</i>
<i>1.5.2 Phase 2 – Main study</i>	<i>18</i>
1.6. Contributions of this study	20
<i>1.6.1. Theoretical contributions</i>	<i>20</i>
<i>1.6.2. Managerial and policy contributions</i>	<i>21</i>
1.7. Structure of thesis	22
2. LITERATURE REVIEW	24
2.1. Overview	24
2.2. Research in internationalization	24
<i>2.2.1. Historical development of theories of internationalization</i>	<i>24</i>
<i>2.2.2. Mainstream theories of internationalization</i>	<i>29</i>
<i>2.2.2.1. Uppsala/Stages Model</i>	<i>29</i>
<i>2.2.2.2 Eclectic Paradigm</i>	<i>31</i>
<i>2.2.2.3. Network Perspective</i>	<i>35</i>
<i>2.2.3. Inconsistencies between the predictions of the mainstream theories</i>	<i>38</i>
<i>2.2.4. Gaps in the mainstream theories of internationalization</i>	<i>38</i>
<i>2.2.5. Importance of entrepreneurial behaviour and process</i>	<i>43</i>
2.3. Research in entrepreneurship	46
<i>2.3.1. Overview</i>	<i>46</i>
<i>2.3.2. Defining entrepreneurship</i>	<i>48</i>
<i>2.3.3. Defining opportunity</i>	<i>49</i>
<i>2.3.4. School of thoughts on the phenomenon of opportunities</i>	<i>50</i>
2.4. Reconceptualizing internationalization as an entrepreneurial process	52
2.5. Factors and processes influencing opportunity discovery, evaluation and exploitation in international markets	53
<i>2.5.1. Prior knowledge</i>	<i>53</i>
<i>2.5.2. Network ties</i>	<i>54</i>
<i>2.5.3. International entrepreneurial orientation (IEO)</i>	<i>56</i>
<i>2.5.4. Absorptive capacity</i>	<i>57</i>
<i>2.5.5. Firm resources</i>	<i>58</i>
<i>2.5.6. Mode of reasoning: effectuation vs. causation</i>	<i>59</i>
<i>2.5.7. Path dependency and feedback mechanisms in internationalization</i>	<i>65</i>
2.6. Summary	71
3. EXPLORATORY RESEARCH	72
3.1. Overview	72
3.2. Basic propositions	72
3.3. Methodology	74
<i>3.3.1. Research design</i>	<i>74</i>
<i>3.3.2. Analysis</i>	<i>75</i>

3.4. Results	76
3.4.1. New venture formation and early operations	76
3.4.2. International opportunity discovery	79
3.4.3. International opportunity evaluation	89
3.4.4. International opportunity exploitation	92
3.5. Conclusion	94
3.6. Summary.....	98
 4. THEORETICAL FRAMEWORK AND PROPOSITIONS	99
4.1. Overview	99
4.2. A model of internationalization as an entrepreneurial process	99
4.2.1. International opportunity discovery	100
4.2.2. International opportunity exploitation	102
4.3. Summary	106
 5. METHODOLOGY	108
5.1. Overview	108
5.2. Process approach or event-driven method	109
5.2.1 Overview	109
5.2.2. Justification for process approach	111
5.3. Case study research	112
5.3.1. Overview	112
5.3.2. Justification for the use of case study research	113
5.3.3. Designing multiple case studies	114
5.3.4. Justification for the application of process approach to case study research	117
5.4. Conducting the research	117
5.4.1. The Define and Design Phase	119
5.4.1.1. Definition of research question	119
5.4.1.2. Definition of the unit of analysis	119
5.4.1.3. Specification of ‘theory’ or proposition	120
5.4.1.4. Specified population	120
5.4.2. The Prepare, Collect and Analyze Phase	120
5.4.2.1. Theoretical, not random sampling	120
5.4.2.2. Multiple data collection methods	126
5.4.2.3. Creation of case study database	129
5.4.2.4. Data Structuring	129
5.4.3. Data Analysis Phase	135
5.4.3.1. Within-case analysis	135
5.4.3.2. Summary of the opportunity discovery and exploitation events	136
5.4.3.3. Cross-case analysis	139
5.4.3.4. Developing case descriptions	140
5.4.4. Validity and reliability issues	140
5.5. Summary	144
 6. RESULTS AND DISCUSSION	145
6.1. General themes	145
6.2. Firm Founding Process	149
6.2.1 Theme 1: Lack of orderly sequential processes or ‘stages’ of entrepreneurship	149
6.2.2. Theme 2: The role of prior knowledge and network ties in firm founding	153
6.2.3. Theme 6: The multidimensionality of absorptive capacity	159
6.2.4. Theme 7: Bricolage in the firm founding process	161
6.2.5. Theme 8: Affectual and effectual reasoning in firm founding	162
6.3. Internationalization Process	166
6.3.1. Theme 1: Lack of orderly sequential processes or ‘stages’ of entrepreneurship	166
6.3.2. Theme 2: The role of prior and new knowledge in internationalization	169
6.3.3. Theme 3: Deliberate search as active, creative process of opportunity formulation	179
6.3.4. Theme 4: The interconnectedness of opportunities over time	180

6.3.5. Theme 5: Feedback cycle between international entrepreneurial orientation & firm resources and international opportunity discovery/development	186
6.3.6. Theme 6: The multidimensionality of absorptive capacity	193
6.3.7. Theme 7: Bricolage in firm internationalization	197
6.3.8. Theme 8: Effectual and causal reasoning in internationalization	199
6.3.9. Theme 9: Timing of internationalization and born global as a classification error	211
6.4. Conclusion	215
6.5. Summary	225
 7. EXTENDED DISCUSSION, REFINED MODEL AND IMPLICATIONS	 226
7.1 Overview	226
7.2 A general discussion on model and propositions	226
7.3. A refined model of internationalization as an entrepreneurial process	246
7.4. Implications for existing theories and models	253
7.4.1. Implications for The Uppsala/Process Theory	254
7.4.2. Implications for the Network Perspective of Internationalization	256
7.4.3. Implications for the Eclectic Paradigm	257
7.4.4. Implications for the Theory of International New Ventures (Born Global)	258
7.4.5. Implications for Jones and Coviello's time-based model	259
7.5. Summary	261
 8. CONCLUSION	 262
8.1. Overview	262
8.2. Research objective	262
8.3. Summary of key findings	262
8.4. Contributions to internationalization and international entrepreneurship research	265
8.5. Contributions to entrepreneurship research	267
8.6. Methodological contribution	268
8.7. Managerial and policy implications	268
8.8. Limitations	271
8.9. Directions for future research	272
8.10. Summary	273

LIST OF TABLES

Table 2.1 – The Eclectic Paradigm of International Production	34
Table 2.2 - A Comparison of Three Mainstream Theories of Internationalization	37
Table 2.3 - A Comparison of Three Influential Theories of Entrepreneurship	47
Table 2.4 - Contrasting Causation and Effectuation	61
Table 2.5 - Construct, Definition and Operationalization	67
Table 3.1 - Basic Propositions	73
Table 3.2 – Summary of cases in the study	76
Table 3.3 – The Recognition of First International Opportunity	80
Table 4.1 – Summary of Propositions	107
Table 5.1 - Comparison of Variance and Process Approaches	110
Table 5.2 - Relevant Situations for Different Research Strategies	113
Table 5.3 - Process Approach Using Multiple Case Study Design	118
Table 5.4a - Summary of Cases in the Study – Knowledge-Based Industries	124
Table 5.4b - Summary of Cases in the Study – Non Knowledge Based Industries	125
Table 5.5 - Expert Interviews	128
Table 5.6 - Chronology of events – BVA Pty Ltd	131
Table 5.7 - Case study tactics for quality research design	143
Table 6.1 - The dynamic process of new firm founding	151
Table 6.2 - The role of prior knowledge and network ties in firm founding	155
Table 6.3 - Innovation at the firm founding phase	157
Table 6.4 – The evolution of new firm founding	158
Table 6.5 - Bricolage in the founding process	161
Table 6.6 - The Dynamic Process of Internationalization	168
Table 6.7 - The role of prior and new knowledge in the initial internationalization	171
Table 6.8 - Prior and new knowledge in major subsequent internationalization	178
Table 6.9a - The interconnectedness of founding and international opportunity	181
Table 6.9b - The interconnectedness of domestic and international opportunity	182
Table 6.9c - The interconnectedness of international and international opportunity	183
Table 6.9d - Irregular patterns of interconnectedness of opportunity	184

Table 6.10 - Risk Taking Propensity in the International Markets	188
Table 6.11 - Innovation in internationalizing firms	192
Table 6.12a - Openness to new possibilities as a dimension of absorptive capacity	194
Table 6.12b - Judgment as a dimension of absorptive capacity	195
Table 6.12c - Distributed absorptive capacity	196
Table 6.13 - The multidimensionality of absorptive capacity	197
Table 6.14a - Bricolage by limiting capital expenditure	198
Table 6.14b - Network bricolage	198
Table 6.15a - Leveraging contingencies	201
Table 6.15b - Being spontaneous and flexible	201
Table 6.15c - Affordable loss principle rather than expected return	201
Table 6.15d - Partnership and alliances rather than competitive analysis	202
Table 6.15e - The role of emotions and feelings in decision making	202
Table 6.16a - Systematic opportunity evaluation and rational planning	205
Table 6.16b - Opportunity costs and opportunity selection	205
Table 6.17 - The Dynamics of Mode of Entry Over Time	209
Table 6.18 - Dynamics of mode of reasoning in internationalization	210
Table 6.19 - Born Global as a Classification Error	213
Table 6.20 - Summary of major themes and findings	223
Table 7.1 - Summary of refined propositions	245

LIST OF FIGURES

Figure 1.1 – Thesis Structure	23
Figure 2.1 - Historical Development of Theories of Internationalization	28
Figure 2.2 - The Basic Mechanism of Internationalization – State and Change Aspect	30
Figure 2.3 – The Establishment Chain in Firm Internationalization	30
Figure 2.4 – Network Governance in the Industrial System	36
Figure 2.5 – The Theory of Effectuation	62
Figure 2.6 – Causation and Effectuation in Marketing	63
Figure 4.1 – A model of internationalization as an entrepreneurial process	100
Figure 5.1 – Case Study Method	115
Figure 5.2 – Basic Types of Designs for Case Studies	116
Figure 5.3 – Case Selection	122
Figure 5.4 – Event Mapping – BVA Pty Ltd	134
Figure 5.5 – Summary of Opportunity Discovery and Exploitation – BVA Pty Ltd	138
Figure 6.1 – The process of new venture formation	165
Figure 6.2 – The Dynamic Process of Entrepreneurship Over Time	216
Figure 6.3 – The dynamics of opportunity space	217
Figure 6.4 – Patterns of interconnectedness of opportunities over time	218
Figure 6.5 – Dynamics of mode of reasoning in internationalization	219
Figure 7.1 – A general model of internationalization as an entrepreneurial process	247

LIST OF APPENDICES

APPENDIX A: ADDITIONAL LITERATURE REVIEW	275
APPENDIX B: CASE STUDY PROTOCOL FOR EXPLORATORY RESEARCH	278
APPENDIX C: QUESTIONNAIRE FOR EXPLORATORY RESEARCH	287
APPENDIX D: CLASSIFICATION OF INDUSTRIES	289
APPENDIX E: CASE STUDY PROTOCOL FOR THE MAIN RESEARCH	291
APPENDIX F: RECRUITMENT PROCEDURE AND QUALITY CONTROL	297
APPENDIX G: LETTER TO COMPANIES	301
APPENDIX H: QUESTIONNAIRE FOR THE MAIN STUDY	303
APPENDIX I: PARTICIPANT CONSENT FORM	307

1. INTRODUCTION

1.1. Overview

The purpose of this thesis is to investigate the factors and processes that affect the way a firm's pattern of internationalization changes over time. Despite the substantial amount of work undertaken on internationalization in the past four decades, most work to-date has placed little emphasis on the temporal processes and dynamics of internationalization in shaping firm internationalization histories (Coviello and Jones, 2004; Jones and Khanna, 2006; Yang et al., 2006). This is reflected in several problem areas in mainstream theories and research regarding internationalization including but not limited to accelerated internationalization or so-called born global phenomenon (Rennie, 1993; Oviatt and McDougall, 1994; Coviello and Munro, 1997; Knight and Cavusgil, 2004), full and partial de-internationalization (Benito and Welch, 1997; Pauwels and Matthyssens, 1999, 2004; Crick, 2002, 2003, 2004) and use of multiple modes of entry at a point in time (Petersen and Welch, 2002; Benito and Welch, 1994), and more generally, the growing prevalence of small and medium enterprises in international markets (Knight, 2000; Business Week, 2004a, 2004b). These 'messy' processes of internationalization that, at times, appear to be "lacking rhyme or reason" (Ellis and Pecotich, 2001, p.119, 126) have not been well explained.

Recent developments in the field indicate two trends. First, there have been multiple efforts to explain some of these gaps using an entrepreneurship lens (Oviatt and McDougall, 2004; Jones and Coviello, 2005). This approach is logical because internationalization and entrepreneurship research share common themes including the adoption of innovation, risk taking, new market entry and their theoretical origins overlap (Jones and Coviello, 2005).

Second, there is a tendency toward using an 'holistic' approach to study internationalization, based on the recognition that internationalization is too complex, dynamic and broad to be explained by using any single theory (Coviello and McAuley, 1999; Bell and Young, 1998; Crick and Jones, 2000; Loane and Bell, 2006; Spence and Crick, 2006).

Despite the assumption of the importance of 'opportunity' in mainstream theories of internationalization and recent theoretical advances (Johanson and Vahlne, 2006; Oviatt and McDougall, 2004; Jones and Coviello, 2005; Rialp et al., 2005; Styles and Gray, 2006; Styles and Seymour, 2006; Mathews and Zander, 2007), there is a paucity of research that places 'opportunity' as the core process in internationalization.

This thesis extends the theory by studying the temporal aspects and behavioural processes (Jones and Coviello, 2005) of internationalization by using the discovery-evaluation-exploitation framework from the entrepreneurship research (Shane and Venkataraman, 2000). In doing so, a dynamic, process based model of internationalization was developed by (1) reconceptualizing internationalization as an entrepreneurial process: as the process of discovery, evaluation and exploitation of entrepreneurial opportunities in international markets and (2) applying a process approach to case study research involving the collection of data from a sample of small and medium enterprises in the knowledge and non-knowledge-based industries in Australia. The conceptualization served as an organizing framework for drawing relevant variables and theories, including social network and resource-based theories. Therefore, this study adopts an ‘holistic’ approach to investigating internationalization.

1.2. Research question

Although there have been growing calls for research that investigates time-dependent variables and behavioural processes over time in internationalization and international entrepreneurship (Coviello and Jones, 2004; Jones and Coviello, 2005; Rialp et al., 2005; Zahra, 2005) and, more generally, how ‘history matters’ in international business (Jones and Khanna, 2006), there is little empirical research that adopts this approach. Specifically, little is known about what influence(s) the dynamic processes in internationalization, including the timing and speed at which it occurs (e.g. born globals), full and partial de-internationalization and re-internationalization and use of multiple modes of entry. From a theory perspective, there are inconsistencies between the predictions of existing theories of internationalization, i.e. the Uppsala, Eclectic and Network perspectives which stems from a lack of understanding of how change unfolds in a firm’s international activities over time.

Therefore, this thesis was designed to answer an important research question:

What factors and processes affect the way a firm’s pattern of internationalization changes over time?

1.3. Importance of the study

The internationalization of small and medium sized enterprises has increased substantially in the last few decades (Jones, 1996; Coviello and McAuley, 1999; Knight, 2000; Loane, 2006; Spence and Crick, 2006; Mathews and Zander, 2007), yet guidelines for practitioners for discovering, evaluating and exploiting opportunities in international markets are in short supply. Hence, research that addresses this topic is vital to academics, managers and aspiring entrepreneurs, with the outcomes making academic, managerial and policy contributions.

1.3.1 Academic importance of the study

The rise of so-called born global firms has challenged the validity of extant theories of internationalization, particularly the Uppsala Model. This has led to the emergence of the theory of international new ventures (Oviatt and McDougall, 1994, 2004) and the field of international entrepreneurship. However, there are inconsistent views as to whether firms follow an evolutionary or ‘revolutionary’ trajectory as portrayed by born globals. While the majority still maintain the contemporary view, a number of scholars have provided arguments and evidence that support the evolutionary nature of firm development (Madsen and Servais, 1997; Bell et al., 2001; Jones and Khanna, 2006). This suggests that our theories and research have not sufficiently explained the underlying mechanism of internationalization and indeed Zahra (2005) suggests that little is known about how INVs grow and learn. To-date, there is only one study that addresses this gap by tracking the network dynamics of INVs (see Coviello, 2006). Therefore, more research is needed to better understand this important phenomenon.

Moreover, complete to partial de-internationalization (such as reduction of operations, switching to a mode of entry that entails a lower level of commitment or using more than one mode at any point in time, or reduction of ownership or stake in a foreign venture) can be seen as ongoing processes that are part of the general entrepreneurial behaviour and processes over time as firms seek to maintain the viability of their international operations (Benito and Welch, 1997). These ranges of behaviour are related to the emergence/disappearance/re-appearance of opportunities and how firms act upon them. But our theories and research are not designed to explain how change unfolds in firm internationalization histories.

The central question then is: how do we explain the mechanism of internationalization that can account for various temporal and dynamic processes? One possible solution is found in the entrepreneurship research stream, particularly the opportunity discovery-evaluation-exploitation framework (Shane and Venkataraman, 2000). This framework is appropriate given the assumption of ‘opportunity’ in existing theories of internationalization and recent emphasis made by Johanson and Vahlne (2006) about the role of opportunity development. Nevertheless,

to-date the opportunity-based paradigm has only largely been the domain of entrepreneurship research in a domestic context (Dimov, 2007; Ottesen and Gronhaug, 2006; Choi and Shepherd, 2004; Elfring and Hulsink, 2003; Shane, 2000; Gaglio and Katz, 2001; Hills et al, 1997). Therefore, applying the opportunity-based paradigm to internationalization is timely and will help fill the gaps and inconsistencies in the internationalization and international entrepreneurship literature.

1.3.2 Managerial and policy importance of the study

The intention of this research was to develop a better understanding of how actors and firms navigate their trajectory in international markets, with a particular emphasis on the process of discovery, evaluation and exploitation of opportunities, and what they can and cannot do to influence the process. The empirical results should therefore assist firms and entrepreneurs in managing their overall international activities, and thereby increase their international competitiveness. For instance, if the timing, speed and scope of internationalization can really be managed successfully, in what ways can these be done? What mode of reasoning should decision makers use to deal with different types of uncertainty? What can firms do in response to serendipitous encounters or unexpected discovery? How can a smaller firm internationalize with limited resources and knowledge? These are critical questions facing not only practitioners but also educators in business schools.

By understanding ‘opportunity’ as a core process in internationalization, this study is also important and timely for policy makers seeking to promote firm internationalization and the kinds of assistance that are appropriate for different firms in different contexts.

1.4. Research overview

1.4.1. Definitions

Entrepreneurship defined

Entrepreneurship has been defined in various ways. This study adopts Shane and Venkataraman’s (2000) definition of entrepreneurship as “the study of the discovery, evaluation, and exploitation of opportunities” and who does this (p.218). This definition of opportunity includes the situations which an entrepreneur *believes* will yield a profit rather than those that are *profitable* (Shane, 2003, p.18). Therefore, this study covers both real and false opportunities, i.e. both successes and failures of a firm’s entrepreneurial venturing. In the context of this thesis, a secondary definition was also used with particular reference to ‘resources’, which is the “pursuit of opportunities without regard to the resources currently controlled” (Stevenson and Jarillo, 1990, p. 23). This is to accommodate the behaviour among small and medium enterprises that often relies on the role of social networks (Birley, 1995).

Entrepreneurial opportunity defined

This study views entrepreneurial opportunity as a subset of *all* possible opportunities. Eckhardt and Shane's (2003) definition of entrepreneurial opportunity is adopted here: "situations in which new goods, services, raw materials, markets and organizing methods can be introduced through the formation of new means, ends or means–ends relationships" (p.336). They are characterized by (1) creative decisions, because the entrepreneur has to construct the means, the ends, or both (Eckhardt and Shane, 2003), and (2) an uncertain set of alternatives and consequences (Knight, 1921). Opportunities to form a new venture (Gartner, 1990; Low and MacMillan, 1988), to create or extend a new product/brand, or to enter international markets (Davidsson, 2004), regardless of the modes of entry, are considered entrepreneurial.

Internationalization defined

Drawing on Shane and Venkataraman's (2000) definition of entrepreneurship, as well as on Eckhardt and Shane's (2003) definition of entrepreneurial opportunity, this thesis reconceptualizes internationalization as 'the discovery, evaluation and exploitation of entrepreneurial opportunity in international markets'. This definition is appropriate to cover various types of dynamic processes in internationalization, as it allows flexibility to study phenomena related to increasing involvement in international markets (Welch and Luostarinen, 1988), reducing engagement in cross-border activities (Benito and Welch, 1997) and other possible variations.

1.4.2 Unit of analysis

The unit of analysis in this study was the entrepreneurial opportunity and firm nexus. This follows the definition of entrepreneurship adopted in the study. This is in contrast to existing theories and research in internationalization, which have extensively focused on firm, market/relationships, country/nation, industry and region/cluster.

1.5. Methodology

This study consists of two phases: exploratory research (Phase 1) and main study (Phase 2). Because of the infancy of empirical research in internationalization using the discovery-evaluation-exploitation framework, the exploratory research played a guiding role in developing an initial conceptual model and a set of propositions, refining the focus of the research and learning about the logistics involved for the main study. The objective of the second phase was to investigate and refine the initial model and set of propositions. This combines the process approach (Van de Ven and Poole, 2005; Van de Ven and Engleman, 2004) and case study research (Yin, 2003).

1.5.1 Phase 1 – Exploratory Research

Objective

This phase was designed to (a) explore the factors that the literature suggests affect international opportunity recognition, i.e. prior knowledge, network ties and entrepreneurial orientation, although the findings also offer insights on opportunity evaluation and exploitation; (b) explore new factors and processes which influence the discovery-evaluation-exploitation process and how these element interact, (c) develop an initial conceptual model and a set of propositions based on activity in step (a) and (b) and finally, (d) assess the challenges and feasibility in collecting many data points involving various events in the history of each firm for the main study.

Sample

Eight firms were drawn from a pool of Australian small and medium-sized firms (SMEs) from the combination of Dun & Bradstreet, The Australian Biotechnology Directory and Australia's CeBit Exhibition 2004 list. These were firms based in New South Wales in the knowledge-based industries (Austrade, 2002; OECD, 1999). A range of firms were sought, from those that had a high degree of internationalization (defined by the foreign sales to total sales ratio) to those that had not internationalized.

Data Collection

The focus was on the early stage of internationalization; a specific 'opportunity' recognized, evaluated and exploited or not by a firm. The data included: semi-structured interviews with the Founders/CEOs/Directors/Managers responsible for internationalization; (2) a short questionnaire completed by the key informant and; (3) other secondary data sources such as company documents, newspapers reports, and brochures.

Data analysis

Multiple-case studies using within and cross case analysis were employed to explore the three objectives stated above.

1.5.2 Phase 2 – Main Study

Objective

The objective of this phase was to empirically investigate and refine the initial conceptual model and a set of propositions.

Sample

Case studies were conducted of fifteen SMEs operating in knowledge-based and non-knowledge-based industries in five states in Australia. These were drawn from a pool of firms from the Kompas database, The Australian Biotechnology Directory, Australian Technology Showcase, Australian Technology Park's list, Australian Trade Commission's website, BRW Magazine and The Australian Financial Review. The cases were theoretically sampled and included 8 firms in the born global category, 2 firms in the de-internationalization and re-internationalization category, and 5 firms in the gradual internationalization category. Among these, three firms in the sample can be grouped into more than one category (i.e. a gradually internationalized firm that has been temporarily inactive in the international market, a gradually internationalized firm that made a change of direction due to a lack of opportunities in the targeted country and domain, and a born global firm that has renewed its focus on the domestic market while still maintaining activities in international market). Most firms used multiple modes of entry.

Data Collection

In contrast with the exploratory research, the main study captures significantly more internationalization events or 'cases' in the history of each firm, and in more depth. The data included: semi-structured interviews with the Founders/CEOs/Directors/Managers responsible for internationalization; (2) supplementary and expert interviews, (3) a short questionnaire completed by the key informant and; (4) other primary and secondary data sources such as archival records, photos, newspapers reports, and physical artifacts. There were 36 key informants in total, consisting of 30 from the focal firms and their connected others and 6 from expert informants. The chronology of events in each case were reconstructed and mapped to aid data analysis.

Data analysis

Within-case analysis was conducted for each case and was followed by the creation of a summary of opportunity discovery and exploitation events, depicting the nature and interlinkages of the process in pictorial form. Finally, cross case analysis was conducted and reported.

1.6. Contributions of this study

1.6.1. Theoretical contributions

This research adds richness to the internationalization and international entrepreneurship literature by placing ‘opportunity’ as the core process in the phenomena and developing a dynamic, process oriented model of internationalization. This study’s contribution to theory lies in the extension of Jones and Coviello’s (2005) model of internationalization as a time-based process of entrepreneurial behaviour, as well as extant theories of internationalization where little work has been done to understand how and why actors and firms discover, evaluate and exploit opportunities in international markets.

The key findings include: (i) the lack of orderly sequential processes or stages of recognition, evaluation and exploitation in early stages of internationalization and the increasing role of systematic evaluation at the later stages when known unknowns develop, (ii) the cyclical feedback of discovery and further refinement as well as exploitation which involves searching, developing and experimenting in order to figure out if there is real and substantial opportunity or not, (iii) the role of prior and new knowledge, knowledge of others that can be accessed and utilized, serendipity such as finding or being found by prior and new ties leading to opportunity discovery/exploitation, (iv) the role of deliberate search which can lead to discovery of things unexpected or unsought, (v) the interconnectedness of opportunities over time across the founding, domestic and international context as well as uncertainty which can push or pull the patterns of development in many directions that cannot be seen in advance, (vi) absorptive capacity, as a form of openness, judgment and connected others as extended minds, that enables opportunity discovery/exploitation, (vii) the role of entrepreneurial bricolage in dealing with Knightian uncertainty and marshalling resources under conditions of resource scarcity, (viii) the nature of decision making that is influenced by effectual and affectual reasoning and non-predictive approaches when Knightian uncertainty prevails, especially in the early stages of internationalization, and which increasingly follows causal reasoning and rational planning when a firms’ knowledge, resources and network ties develop and opportunities are more refined (i.e. known unknowns develop), and (ix) the evolutionary, not revolutionary, trajectory of firm internationalization and the importance of prior histories. These findings enrich our understanding of the underlying mechanisms of internationalization, fill in the gaps that mainstream theories have not addressed well and help integrate and resolve the discrepancies between the predictions of these theories.

From a methodology point of view, the study advances a process approach to case study research in internationalization and ‘opportunity-firm’ nexus as an alternative unit of analysis in the internationalization and international entrepreneurship research.

In addition, the study also contributes to the entrepreneurship literature by highlighting the lack of a lockstep, linear process of entrepreneurship, the role of deliberate search in the context of Austrian economics' concept of discovery, and the lack of clear distinction between different ontological views of opportunity and network/relationship as a suitable unit of analysis rather than a single firm or individual.

Finally, the study opens up a number of important directions for future theory development and testing in internationalization and international entrepreneurship based on simulation methods such as agent-based modeling and system dynamics; protocol analysis to study the mode of reasoning of expert versus novice entrepreneurs in international markets; management science approach to study the boundary limitations of effectual versus causal reasoning; and contingency models using structural equation modeling.

1.6.2. Managerial and policy contributions

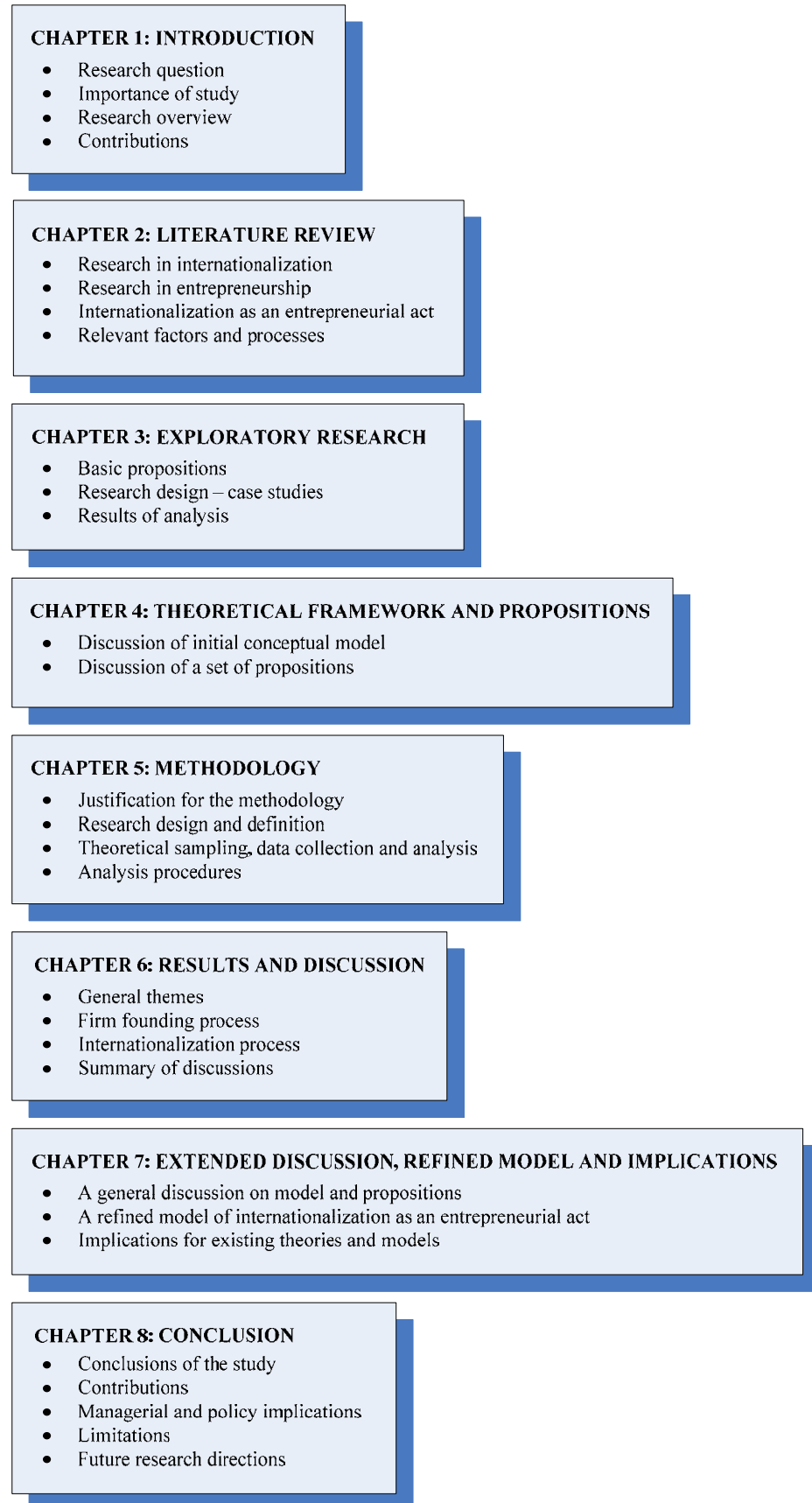
From a managerial perspective, the study's main contribution lies in the understanding of when to use what type of mode of reasoning, i.e. effectual and causal reasoning. The study shows that small and medium sized firms can benefit from effectual reasoning and a non-predictive approach in dealing with Knightian uncertainty, which prevails in the early stages of internationalization. Smaller firms can benefit more from causal reasoning, rational planning and predictive approaches when they know better about their goals, alternatives and preferences; their resources and network ties further develop and opportunities are more refined (i.e. known unknowns develop). Although this context is associated with the later stages of internationalization, it may also be relevant for firms in the early stages of internationalization when significant experience, networks, resources and opportunities already exist or are carried forward from previous firms or prior development.

The importance of effectuation also has implications for the teaching of entrepreneurship which has predominantly been influenced by the causation approach used in strategic management and marketing disciplines. Finally, the study also suggests that export promotion agencies seeking to promote firm internationalization would be best to focus their resources on programs that assist novice exporters or international entrepreneurs work through the initial opportunity recognition and exploitation process. The learning that takes place and the proliferation of opportunities that can follow will not only assist these firms make the most of their initial international opportunity, but will also help them to search, discover and develop subsequent opportunities on their own.

1.7. Structure of thesis

This thesis comprises eight chapters: an overview of the research is provided in the current chapter (Chapter 1); followed by the literature review of internationalization and entrepreneurship research streams (Chapter 2); discussion of the exploratory research (Chapter 3); discussion of the initial conceptual model development and a set of propositions (Chapter 4); followed by the focal methodology which is a process approach to case study research (Chapter 5); discussion of the results and findings from the main study (Chapter 6); followed by an extended discussion of the implications of the findings on the initial model and propositions as well as implications on existing theories and models; and finally discussion of conclusions of the study, its theoretical, managerial and policy implications, limitations and future research directions (Chapter 8). A complete outline of this thesis with key elements in each chapter is sketched in Figure 1.1.

Figure 1.1 – Thesis Structure



2. LITERATURE REVIEW

2.1. Overview

The objective of this literature review is to identify the factors and processes which prior research and theory suggest could have an impact on internationalization viewed from an entrepreneurial perspective. The first stream of literature deals with internationalization and identifies the gaps and inconsistencies between mainstream theories of internationalization, as well as recent advances in the field. The second stream covers research in entrepreneurship and the way that it can be fruitfully used to reconceptualize internationalization. By bringing entrepreneurship literature into the study of internationalization, the thesis naturally injects two important theories related to entrepreneurship: resource-based view and network theories. The final section will identify a number of factors and processes that influence the internationalization process as seen through an entrepreneurial lens. By doing so, the thesis adopts an 'holistic' approach to conceptualizing and investigating internationalization, which has gained attention among scholars in recent years.

2.2. Research in Internationalization

2.2.1. Historical development of theories of internationalization

While international business and trade has been present throughout much of history (e.g. The Silk Road), the first formal inquiry into the nature, causes and effect of international business can be traced to classical economic thought, particularly the theory of absolute advantage (Smith, 1776). According to Smith, opportunity for trade will arise if a country has an absolute advantage in the production of particular goods and services, while at the same time having an absolute disadvantage in the production of a different set of goods and services that it needs. This theory was later refined by Ricardo's (1817) theory of comparative advantage on the premise that opportunities for trade occur when countries have different relative advantage in the production of goods and services, which allows them to produce and export the goods in which they have advantage and import those for which they have a relative disadvantage. The Ricardian theory of comparative advantage was later advanced by Factor Proportion/Endowment Theory (Heckscher and Ohlin, 1933; Samuelson, 1948) which suggested that countries will tend to produce and export goods and services that harness their most abundant production factors while importing goods and services that require large amounts of production factors, which may be scarce.

While the aforementioned body of work was criticized for its restrictive assumptions, for example atomistic competition, the absence of risk and uncertainty, that technology is free and

instantaneously transferable between countries (see Dunning 1993; Calvet, 1981), economists since the 1950s have begun to incorporate market imperfections into trade theory. By drawing from the Industrial Organization Theory (Bain, 1956), Stephen Hymer (1960) developed the Theory of Foreign Direct Investment (FDI). This theory highlights the role of market imperfections and a firm's ability to transfer and exploit its assets and skills abroad (such as economies of scale, knowledge advantages, distribution networks, product diversification) in order to achieve monopolistic power or to remove competition with foreign enterprises as the rationale for the existence of multinational enterprises (MNEs) as the institution for international production. This theory was a breakthrough that separated FDI from neoclassical financial theory of portfolio flows (see Dunning and Rugman, 1985). This marked the shift from macro (country) to micro (firm) level analysis of internationalization.

Another economics-based theory that emerged in the 1960s, at the time of the rise of technology and MNEs, was the Product Life Cycle Theory. This theory is based on the premise that international trade patterns are similar to product life cycle patterns and follows a four-phase cycle: building a country's export strength, commencing foreign production, competing in foreign export markets, and competing with imports in the country's home market (Vernon, 1966; Wells, 1968). The theory advances three-fold competitive imperatives that remain vital as a key triad in international strategy: product innovation, closeness to the market place and cost-based competition (see Buckley, 1999).

Building on the Coasian theory of firms as a more efficient coordination mechanism than markets (Coase, 1937), scholars proposed Transaction Cost Economics Theory (TCE) which provides the rationale for how firms choose among alternative governance structures and foreign market entry modes based on efficiency considerations (Williamson, 1975; Anderson and Gatignon, 1986; Erramilli and Rao, 1993). This theory was further developed into Internalization Theory which predicts the growth of a multinational firm as the result of trading off internal coordination of the firm's economic activities against externalization through market forces (Buckley and Casson, 1976; Casson, 1979; Rugman 1981). Until this time it was recognized that individual partial theories of FDI were inadequate to explain all aspects of the international production including those at the microeconomic, mesoeconomic and the macroeconomic levels (see Tolentino, 2003). This provided the rationale for constructing a general framework of analysis or paradigm of international production. John Dunning (1977, 1979, 1988, 1993) brought these various strands of theories together in his Eclectic Paradigm, which predicts the likelihood, mode and pattern of international production and foreign direct investment of multinational firms.

The subsequent development skewed towards the behavioural sciences rather than an economics approach to internationalization. Based on their study of Swedish firms' internationalization behavior, Johanson and Wiedersheim-Paul (1975) proposed the concepts of psychic distance and the establishment chain in internationalization. By drawing from the Penrosian theory of the growth of the firm (Penrose, 1959), behavioural theory of the firm (Cyert and March, 1963) and empirical studies on Swedish firms, Johanson and Vahlne (1977, 1990) subsequently developed the Uppsala/Stages Model, which portrays internationalization as a unidirectional learning and commitment process. Following Rogers' (1962) Diffusion of Innovation Model and the conception of export as innovation (Simmonds and Smith, 1968), scholars later developed the Innovation-Related Internationalization Model (Bilkey and Tesar, 1977; Cavusgil, 1980; Reid, 1981; Czinkota, 1982) which resembles the Uppsala Model but with a varying number of stages in each model.

The growing recognition of the role of networks in the industrial markets led to the development of a Network Perspective, which views internationalization as a process by which a firm using its foreign network partners establishes and develops foreign market positions (Johanson and Mattsson, 1988, 1992; Axelsson and Johanson, 1992). This perspective was based on the premise that a firm's survival depends on the resources controlled by other institutions (Pfeffer and Salancik, 1978) and the role of connected others in providing knowledge in the decision making process (Cyert and March, 1963).

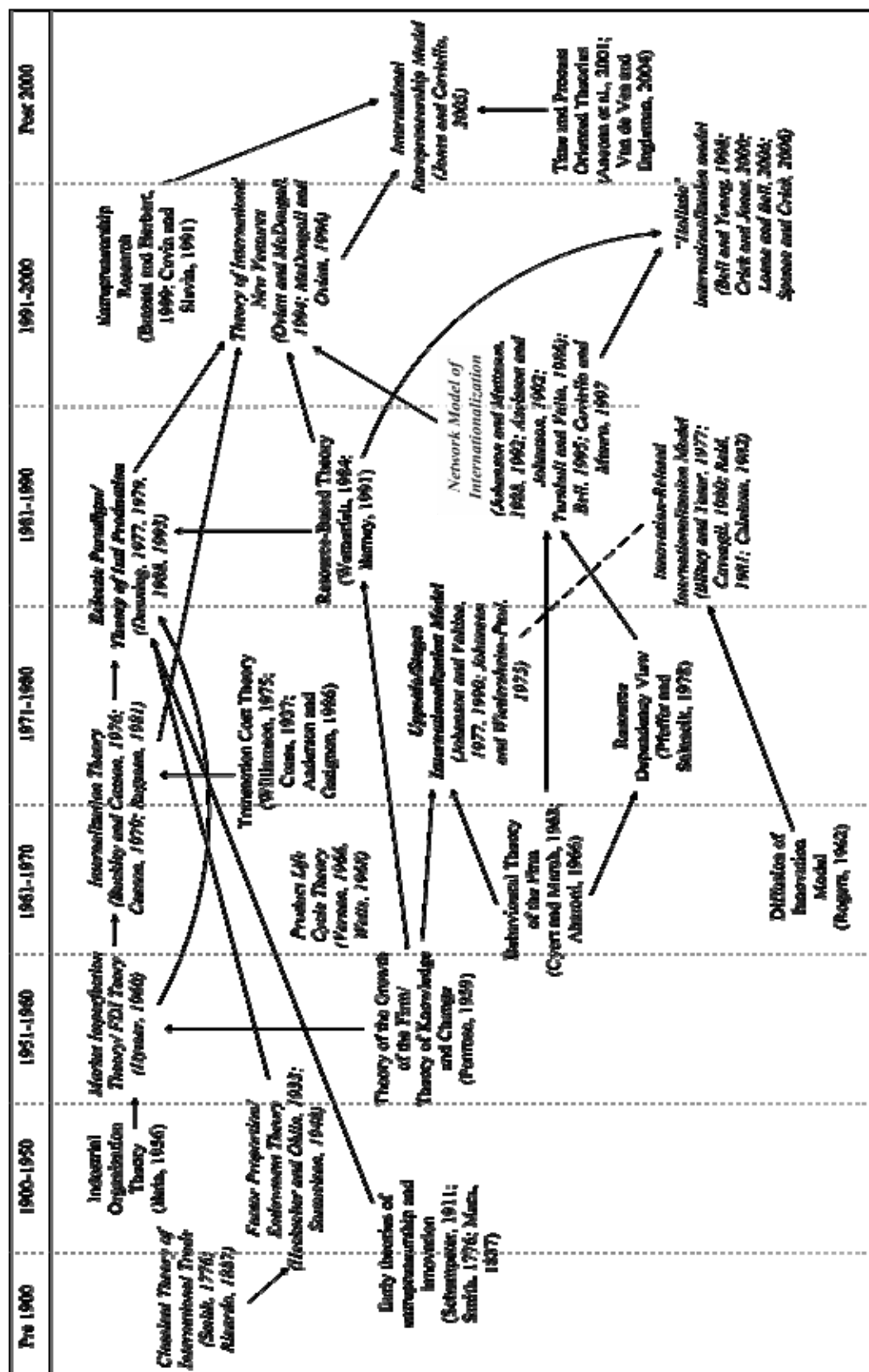
The rise of smaller firms in the mid 1990s that internationalize early, fast and in random order was well documented by Oviatt and McDougall (1994). By drawing from various strands of theories and perspectives such as the internalization logic (Buckley and Casson, 1976), foreign location advantage (Dunning, 1988), networks as alternative governance structure (Aldrich and Zimmer, 1986; Larson, 1992; Williamson, 1975) and resource-based view (Barney, 1991), Oviatt and McDougall proposed the Theory of International New Ventures, which directly challenges the Uppsala Model.

More recently, Jones and Coviello (2005) advanced a model that conceptualizes internationalization as entrepreneurial process of behaviour in time. This model combines prior research in international new ventures (Oviatt and McDougall, 1994), entrepreneurship research (Brazeal and Herbert, 1999; Covin and Slevin, 1991) and time and process oriented theories (Ancona et al., 2001; Van de Ven and Engleman, 2004).

A review of the literature shows that research in internationalization carried out during the past four decades has been devoted to and concerned primarily with (1) ‘firm’ such as Uppsala/Process Model (Johanson and Vahlne, 1977), Innovation-related Model (Bilkey and Tesar, 1977), Eclectic Paradigm (Dunning, 1977), Global Strategy Perspective (Barlett and Ghoshal, 1989), (2) ‘market or transaction’ such as Internalization Theory (Buckley and Casson, 1976), Transaction Cost Economics (Anderson and Gatignon, 1986), (3) ‘industry’ such as Porterian Model (Porter, 1980, 1990), (4) ‘region/cluster’ such as Economic Geography Model (Dunning, 1998; Scott, 1996; Saxenian, 1994) and (5) ‘relationship’ such as Network Perspective (Johanson and Mattsson, 1988). If internationalization is too dynamic and complex to be studied by any one area of research then an ‘holistic’ approach to study the phenomena (Coviello and Martin, 1999; Crick and Jones, 2000; Loane and Bell, 2006; Spence and Crick, 2006) including using new types of unit of analysis and theoretical lenses, can help advance our theories and research with greater coherence.

The historical development of theories of internationalization is summarized in Figure 2.1. Of particular interest are the three mainstream theories - the Uppsala Model, the Eclectic Paradigm and the Network Perspective, which will be discussed in more depth in the next section. This will be followed by a discussion on the inconsistencies and gaps in these mainstream theories.

Figure 2.1 - Historical Development of Theories of Internationalization



2.2.2. Mainstream theories of internationalization

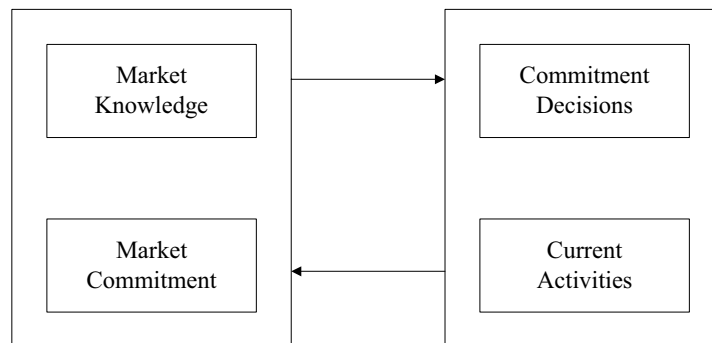
There are three separate but interconnected theoretical approaches to internationalization: the Uppsala/Stages Model, the Eclectic/Economic Paradigm, and the Network Perspective.

2.2.2.1. Uppsala/Stages Model

The Uppsala Model views internationalization as a learning process that involves an interplay between knowledge development and increasing foreign market commitment (Johanson and Vahlne, 1977, 1990). The model was developed from studies of Swedish firms' internationalization behaviour which followed the pattern (1) 'rings in the water' by engaging in physically close markets and then gradually further away to countries with greater psychic distance and the (2) 'establishment chain' which consists of five stages: no regular export activities, export through a foreign intermediary, export via a sales subsidiary, a mix of export and FDI in the form of a subsidiary with assembly activities, and a fully-fledged production subsidiary (see Johanson and Wiedersheim-Paul, 1975; Forsgren and Johanson, 1975). This behaviour is based on the logic that foreign market uncertainty can be reduced by gaining market knowledge and increasing foreign market commitment gradually. The model has its theoretical base in the behavioural theory of the firm (Cyert and March, 1963), which stresses that firms' decision making is characterized by limited knowledge, and theory of the growth of the firm (Penrose, 1959), which argues that a firm's growth is a result of its ability to use, combine and develop resources and accumulate experiential knowledge.

The Uppsala Model is summarized in Figure 2.2, which makes a distinction between state and change aspects of internationalization. The state aspects are market knowledge and market commitment; the change aspects are the foreign market commitment decisions and current business activities. Foreign market knowledge and commitment are assumed to influence decisions regarding the commitment of resources in foreign markets and how current business activities are conducted, which in turn influence the market knowledge and commitment decisions. This forms a causal cycle in the internationalization process.

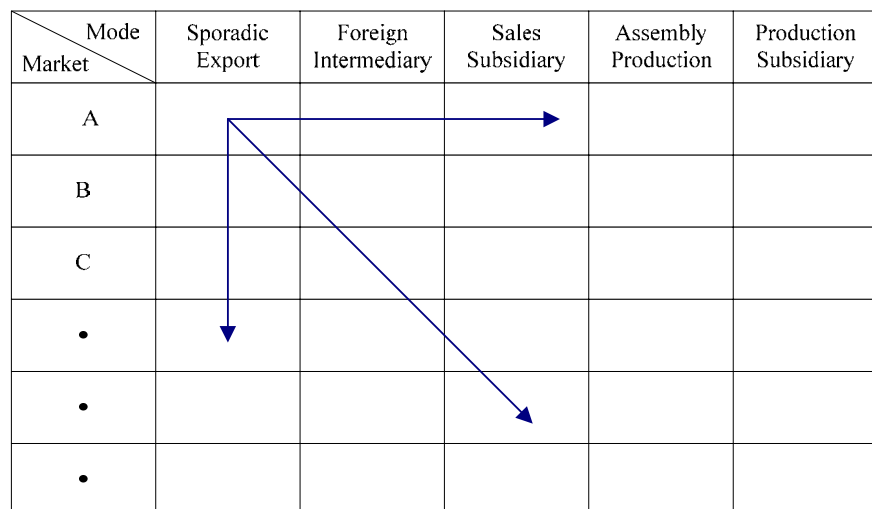
Figure 2.2 - The Basic Mechanism of Internationalization – State and Change Aspects



Source: Johanson and Vahlne (1977)

Figure 2.3 depicts the establishment chain or foreign operation modes of a firm that reflects an increasing commitment of resources and knowledge development over time.

Figure 2.3 – The Establishment Chain in Firm Internationalization



Source: Forsgren and Johanson (1975)

The evolutionary trajectory of firm growth and internationalization described by the Uppsala Model has received criticism in recent years, particularly since the emergence of born global firms or international new ventures (INVs) (Rennie, 1993; Oviatt and McDougall, 1994; Knight and Cavusgil, 1996). These firms enter international markets early in their lifecycle, skip the stages pattern and defy the psychic distance concept. The model has also been criticized for

being too deterministic (Reid, 1983; Turnbull, 1987), lacking relevance for service industries (Johanson and Vahlne, 1990; Sharma and Johanson, 1987), not including other types of mode of entry, including co-operative modes (Andersen, 1997), and for only using one main explanatory construct (i.e. experiential knowledge) (Blomstermo and Sharma, 2003).

In light of these criticisms, more recently Johanson and Vahlne (2006, 2003) clarified their original position by emphasizing that their original model is not the establishment chain but rather the building of 'learning and commitment' by focal firms with other actors/firms. This is opposed to the focus on focal firms only in the original model. Their recent model refinement incorporates a strong entrepreneurial view of internationalization, particularly on the role of relationship commitment and opportunity development (Johanson and Vahlne, 2006, p.176). This brings the refined Uppsala Model closer to the Network Perspective and more 'holistic' in terms of theoretical foundations.

2.2.2.2 Eclectic Paradigm

The Eclectic Paradigm explains and predicts why firms from one country engage in value-added activities outside their national boundaries, where they choose to produce and by what means (Dunning, 1988a, 1988b, 1993). These decisions are determined by the configuration of three Advantages: Ownership (O), Location (L), Internalization (I). The synthesis of the O, L and I factors in this paradigm drew on at least six main branches of economic theory: the macroeconomic theories of trade, international capital movement and location; theories of industrial organization and innovation, and microeconomic theories of the firm (Dunning et al., 1986; Tolentino, 2003). Table 2.1 describes important OLI advantages. The first set of advantages are the Ownership-specific advantages. These are the advantages developed by firms in the home market and are necessary for foreign production to offset the liability of foreignness. Dunning made a distinction between asset (Oa) and transaction (Ot) advantages of MNEs (Dunning, 1988). The former arise from the ownership of intangible proprietary assets such as product innovations, marketing know-how, production management, which can only occur due to structural market imperfections. The latter reflects the ability of MNEs to enjoy lower transaction costs by relying on hierarchies or common governance opportunities of the assets rather than through market mechanisms. Examples include economies of scale and scope enjoyed by branch plants of established enterprises over new firms in the host country market.

The second set of advantages are the Location-specific advantages, which refer to the attractiveness of a specific country because of factors such as costs, market size, physical and political infrastructure, education level, transportation system. These advantages may favour home and host countries. Research shows that the locational strategies of MNEs are influenced

by different motives (Dunning, 1998; Erdener and Shapiro, 2005), from searching for natural resources (resource seeking), new markets (market seeking), lower-cost factors of production (efficiency seeking) to protecting or augmenting ownership-specific advantages by the acquisition of new assets or partnering agreement with a foreign firm (strategic asset seeking).

The final set of advantages are the Internalization advantages, which refers to the ability and preference of a firm to transfer its ownerships-specific advantages across national borders within its own organization rather than exploiting the advantage by selling it. That is, firms avoid various types of costs, uncertainties, opportunism or disputes associated with the transfer of the assets across borders by transferring them internally rather than using the market mechanism to reduce transaction costs.

The paradigm hypothesizes that a firm will engage in foreign value-adding activities if and when three conditions are satisfied (Dunning, 1988). These are:

- (1) It possesses net Ownership (O) advantages vis-à-vis firms of other nationalities in serving particular markets. These O advantages largely take the form of the possession of intangible assets or of the advantages of common governance which are, at least for a period of time, exclusive or specific to the firm possessing them. (Dunning has extended the notion of O advantages to include relational assets – Dunning, 2002).
- (2) Assuming condition (1) is satisfied, it must be more beneficial to the enterprise possessing these advantages to use them (or their output) itself rather than to sell or lease them to foreign firms: this it does through an extension of its existing value added chains or the adding of new ones. These advantages are called Internalization (I) advantages.
- (3) Assuming conditions (1) and (2) are satisfied, it must be in the global interests of the enterprise to utilize these advantages in conjunction with at least some factor inputs (including natural resources) outside its home country; otherwise foreign markets would be served entirely by exports and domestic markets by domestic production. These advantages are termed the Locational (L) advantages of countries.

Subsequently, Dunning (1993) added the role of strategy as another condition for FDI:

- (4) Given the configuration of the OLI advantages facing a firm, the extent to which a firm believes that foreign production is consistent with its long term management strategy.

The predictions of the eclectic paradigm is that “the more a country’s enterprises possess O advantages (relative to those of another), the greater the incentive they have to Internalize rather than externalize their use, the more they find it in their interest to exploit them from a foreign

location, then the more they are likely to engage in outbound production” (Dunning, 1993, p.80).

The eclectic paradigm has received criticism over the years despite research that shows support for its efficacy (Brouthers et al., 1996; Tse et al., 1997; Tatoglu and Glaister, 1998). First, the paradigm predicts that firms will optimize rationally and are well informed right from the start of the internationalization process (see Johanson and Vahlne, 1990). Second, it has been criticized as a ‘shopping list of variables’. This creates possible methodological dangers of a multiple-factor analysis under the three headings of the paradigm (see Itaki, 1991). This relates to issues of ‘double counting’ of O advantages because I and L advantages are necessary and sufficient to explain the existence and growth of multinational firms (Itaki, 1991; Buckley, 1981, Rugman, 1980). Thus the three advantages provide complementary and, sometimes, overlapping explanations (Andersen, 1997). Third, O advantages in the paradigm exclude the cost of acquiring that advantage hence the net gain of possessing such advantage may in fact be negative (Itaki, 1991). Fourth, it has limited predictive power in that it overstates the overall cost of conducting international business hence internationalization is the preserve of large organizations that have enormous ownership-specific advantages (Jones, 1996). This is inconsistent with increasingly large numbers of small and medium firms conducting international business that may or may not possess these O advantages of large firms. Fifth, the paradigm is static and does not offer guidance as to the dynamics of the internationalization process of firms including the shifts in mode of entry (see Johanson and Vahlne, 1990).

In defense of the eclectic paradigm, Dunning provides counter argument to the criticisms and argues that the paradigm is well grounded in economic and organizational theory, that its purpose was to point to a methodology and a generic set of variables, not to offer a full explanation of all kinds of international production (Dunning, 2001). Nevertheless, the eclectic paradigm remains the leading explanation for the growth of multinational activity over the past two decades (see Cantwell and Narula, 2003).

In their review of some historical antecedents of the Eclectic Paradigm, Dunning and colleagues previously discussed the role of entrepreneurship and innovation as the sources of Ownership-specific advantages (Dunning et al., 1986). The early entrepreneurship theories of Schumpeter, Smith and Marx came into the historical overview. However, much of their explanations and subsequent development of the paradigm were focused on the economics sphere whereas entrepreneurship was only implicitly assumed to be important factor and processes.

Table 2.1 – The Eclectic Paradigm of International Production

[1] Ownership-specific advantages of an enterprise of one nationality over those of another.

- (a) *Property rights and/or intangible assets advantages (Oa)*; the resource (asset) structure of the firm. Product innovations, production management, organizational and marketing systems, innovatory capacity, organization of work, non-codifiable knowledge: 'bank' of human capital experience; marketing, finance, know-how, etc. Ability to reduce costs of intra and/or inter-firm transactions.
- (b) *Advantages of common governance, that is, of organizing Oa with complementary assets (Ot).*
 - (i) Those that branch plants of established enterprises may enjoy over de novo firms such as economies of scope, specialization and learning; exclusive or favoured access to inputs (e.g. labour, natural resources, finance, information). Ability of parent company to conclude productive and cooperative inter-firm relationships. Exclusive or favoured access to product markets. Access to resources of parent company at marginal cost. Synergistic economies in production, purchasing, marketing, finance etc.
 - (ii) Which specifically arise because of multinationality. Multinationality enhances operational flexibility by offering wider opportunities for arbitraging, production shifting and global sourcing of inputs. More favoured access to and/or better knowledge about international markets. Ability to take advantage of geographic differences in factor endowments, government intervention, markets etc. Ability to diversify or reduce risks. Ability to learn from societal differences in organizational and managerial processes and systems. Balancing economies of integration need to respond to differences in country-specific resources and consumer demands.

[2] Internalization incentive advantages (i.e. to circumvent or exploit market failure)

To avoid the following: search and negotiation costs, costs of moral hazard and adverse selection and to protect reputation of internalizing firm, cost of broken contracts and ensuing litigation, avoid or exploit government intervention (quota, tariffs, price controls, tax differences).

To control supplies and conditions of sale of inputs including technology, control market outlets including those which might be used by competitors

Buyer uncertainty (about nature and value of inputs), when market does not permit price discrimination, need of seller to protect quality of intermediate or final products, to capture the economies of interdependent activities, to compensate for absence of future markets, to be able to engage in practices such as cross-subsidization, predatory pricing, transfer pricing as competitive (or anti competitive) strategy.

[3] Location-specific variables (these may favour home or host countries)

Spatial distribution of natural and created resource endowments and markets; input prices, quality and productivity (e.g. labour, energy, materials, components, semifinished goods)

International transport and communication costs; investment incentives and disincentives, artificial barriers (e.g. import controls) to trade in goods and services

Societal and infrastructure provisions (commercial, legal, educational, transport and communication); cross-country ideological, language, cultural, business, political differences

Economies of centralization of R&D production and marketing; economic system and strategies of government: the institutional framework for resource allocation

Source: Dunning (1993)

2.2.2.3. Network Perspective

The network perspective views internationalization as a process of network establishment and development with foreign individuals and firms (Johanson and Mattsson, 1988). The perspective was based on empirical studies that firms in industrial markets establish, develop and maintain lasting business relationships with other business actors (Hakansson, 1982; Turnbull and Valla, 1986). The specific firms engaged in these business relationships comprises of customers, customers' customers, competitors, supplementary suppliers, suppliers, distributors, agents and consultants as well as regulatory and other public agencies (Johanson and Vahlne, 1990). In the network perspective, internationalization can be done in a number of ways (Johanson and Mattson, 1992):

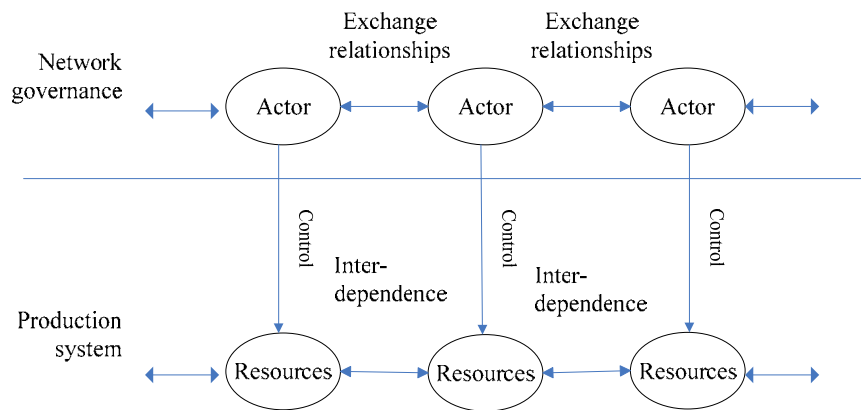
- (1) through establishment of positions in relation to counterparts in country-based networks that are new to the firm, for example by international extension or foreign market entry
- (2) by further developing positions in those country-based networks in which the firm already has a position, i.e. international penetration
- (3) by increasing coordination between positions in different country-based networks, i.e. international integration.

The underlying assumption of this perspective can be explained in terms of the structure of industrial networks, consisting of actors, activities and resources which are related to each other (Hakansson and Johanson, 1992). Figure 2.4 shows three specific attributes that characterize the network perspective (Johanson and Mattsson, 1992). First, networks are divided into a system of exchange relationships between industrial actors and the production system where resources are employed and developed in production. Resources and activities are the backbone of the production system but these require actors who combine and recombine them to add value. Second, actors are positioned in a network as a consequence of the cumulative nature of the use of resources to establish, maintain and develop exchange relationships. The position of an actor changes all the time because of the changes in its own direct relationships as well as the changes in the networks of its connected others. The changes may occur at both the exchange relationship level and the production system level. Finally, actors engage in strategic actions to influence their position in the networks. Individual actor's opportunities and constraints depend on the network and on the results of earlier strategic actions.

The network perspective offers a multilateral rather than unilateral view of internationalization (Johanson and Vahlne, 1990). This view also resembles the resource-based view of interconnected firms (Lavie, 2006). More recently, there is trend towards closer integration between the Uppsala and Network perspective of internationalization. This extended perspective

views internationalization as a process of market knowledge and commitment development of a focal firm with those of other actors in foreign markets (Johanson and Vahlne, 1990, 2003, 2006).

Figure 2.4 – Network Governance in the Industrial System



Source: Johanson and Mattsson (1992)

The network perspective has received strong support in light of the increasing numbers of small and medium enterprises in international markets. Prior research has reported various evidence of the role of networks in firm internationalization, such as client followership (Bell, 1995), inward-outward connection (Welch and Luostarinen, 1993), serendipitous encounter (Crick and Spence, 2005), prior and new international ties (Ellis and Pecotich, 2001; Simmonds and Smith, 1968) as does their influence in the timing, mode of entry and choice of international markets (Arenius, 2005; Coviello and Martin, 1999; Chetty and Agndal, 2007).

Despite the efficacy of the network perspective, gaps exist for future research. For example, in their seminal paper, Ellis and Pecotich (2001) explained that exports often appear “lacking in rhyme or reason” (p.119 and 126). This highlights a need to better understand the mode of reasoning used by entrepreneurs and firms, which is not yet incorporated into the network perspective. Calls for integration of a different theoretical lens or ‘holistic’ approach in internationalization research indicates that our research and theories need to integrate the network perspective with other models to explain the complex processes in internationalization. Lastly, research on the role of networks has explored high technology and manufacturing firms extensively (Spence and Crick, 2006; Burgel and Murray, 2000; Jones, 1999; Coviello and Munro, 1997; Coviello and Martin, 1999, Bell, 1995; Sharma and Johanson, 1987); but there is somewhat scant attention to low technology or non-manufacturing firms.

Table 2.2 shows a comparison of the three mainstream theories of internationalization.

Table 2.2 - A Comparison of Three Mainstream Theories of Internationalization

	UPPSALA MODEL	ECONOMIC VIEW	NETWORK PERSPECTIVE
Main Theme	A process of gradual international involvement, with an interplay between (1) the development of knowledge about foreign markets and operations and (2) increasing commitment of resources to foreign markets.	<ul style="list-style-type: none"> The extent, form and pattern of international production are determined by the configuration of three Advantages: Ownership (O), Location (L), Internalization (I) (Eclectic Paradigm). 	Internationalization is the exploitation of network advantage. A firm is initially engaged in a network, which is primarily domestic. Relationships of a firm can be used as “bridges” to other networks, including foreign networks.
Key rationale	Firms trade off between growth and risk/uncertainty. The lack of complete information of overseas market poses risks, which are reduced by experiential knowledge.	<ul style="list-style-type: none"> Access to perfect information right from the start of the internationalization. Firms trade off between risk and return, control and resources. Decisions are made on the basis of economic and rational calculation that gives the most optimal return for the firm. 	Industries are regarded as networks of business relationships. The network influences initial market entry and mode of entry. Businesses are tied to each other through different bonds: technical, cognitive, social, administrative, legal, and economic. Networks provide opportunities, knowledge, and experiences.
Method of internationalization	<ul style="list-style-type: none"> Psychic distance model: start with low psychic distance markets and progress to greater psychic distance market. Establishment chain model: progression from no regular exporting, exporting via independent representatives, exporting via sales subsidiary, a mix of export and FDI in the form of subsidiary with assembly activities and fully-fledged production subsidiary 	<ul style="list-style-type: none"> The more O Advantage, the higher the propensity to Internalize the O Advantage and the more attractive a foreign country as a production Location, hence the greater the propensity to internationalize. Location Advantages determine the mode of foreign market entry, i.e. export or production. 	<p>(1) The establishment of relationships in country networks that are new to the firm (international extension), (2) development of relationships in those networks (penetration), (3) connecting networks in different countries (international integration).</p> <p>A firm's position in the network defines its opportunities and restrictions for future growth.</p>
Perspective on SME Internationalization	<p>Most SME behavior has been described using this theory</p> <p>The most cited theory of internationalization</p>	Focus on large multinational firms: limited application for SMEs as SMEs rarely progress towards FDI or international production.	A multilateral approach to internationalization: a more recent view of internationalization of SMEs, especially high-tech firms.
Strengths	Emphasis on the importance of the learning process in internationalization; learning is always a relevant concept.	High explanatory value for global firms; provides strong logic for internationalization.	Focus on the dynamics and evolution of internationalization rather than just motives or patterns of internationalization.
Weaknesses	<ul style="list-style-type: none"> The less relevance of psychic distance assumption. More valid at early stages of internationalization, when market knowledge and market resources are still a constraint. Too deterministic, limiting firms' strategic choice of appropriate entry modes. Assume organic firm growth, hence ignore mergers & acquisitions, alliances, JV; and other mode of entry: (franchising, licensing etc.). Cannot explain the reversal of stages nor one-off exporters. Less relevant for service industries. 	<ul style="list-style-type: none"> Accused of being a theory with 'shopping list' of variables. Overlap and redundancy of some explanatory variables, particularly Ownership and Internalization Advantages. Tautological definitions, e.g., firms internalize because of Internalization Advantages and have Internalization Advantages because they internalize. Only describes the motives for FDI without making any emphasis on the 'time' dimension of the investing phenomena. Static: does not explain the shift from one mode of entry to another nor other choice of entry mode except for FDI. The interrelationship between choice of entry mode and international market selection is unclear. 	<ul style="list-style-type: none"> Does not provide the rationale or mode of reasoning for the choice of foreign mode of entry. Skew towards small high-tech firms or manufacturing firms that use networks to go directly to more distant markets.
Link to entrepreneurial perspective	Assumes the importance of identification of opportunities in each stage of international market involvement but does not explain the way opportunities are recognized, evaluated or exploited	Market imperfection is a source of entrepreneurial opportunities. Factor, Market or Technology seeking behavior is basically an entrepreneurial process. However, the model does not explain the way opportunities are recognized or exploited	Assumes that networks and relationships are the source of opportunities in international markets but does not explain the way opportunities are recognized, evaluated or exploited

2.2.3. Inconsistencies between the predictions of the mainstream theories

Table 2.2 also shows the inconsistencies between the predictions of the mainstream theories of internationalization. Despite their complementarity, the three models have different underlying assumptions and predictions about the key determinants of internationalization. The Eclectic/Economic paradigm rests on location/internalization advantages stemming from considerations of transaction cost theory, firm control, resource commitment and the reduction of risk and opportunism. It explains and predicts the economic rationale in internationalization among established multinationals but is less effective to explain smaller firm internationalization. In contrast, The Uppsala/Stages and Network perspectives are based on the interplay of market knowledge and commitment on the one hand, and relationship formation and development on the other, as means of overcoming limited knowledge and attenuating opportunism. Rooted in the behavioural sciences, these two models provide descriptive explanations based on empirical observations rather than prescriptive and normative as the Eclectic paradigm does (Brouthers et al., 1999). Moreover, internationalization is viewed in the Uppsala/Process and Eclectic/Economic models as a rational and purposeful planning process in which firms seek to optimize outcomes and minimize risks given limited knowledge. This contrasts with the Network Perspective that views markets as networks (Johanson and Mattsson, 1994), and where internationalization is viewed as a more emergent and unplanned process stemming from the interactions taking place among networks of interconnected firms and other organizations involved in an industry and market.

In summary, the three models differ in terms of their epistemological lens (i.e. behavioural sciences vs. economics), unit of analysis (i.e. firm vs. relationship), phenomenon of interest (i.e. established firms and lengthy firm development vs. smaller and younger firms), which in turn influence the explanation and prediction of internationalization.

2.2.4. Gaps in the mainstream theories of internationalization

The mainstream models leave some important aspects of the *process and dynamics of internationalization* poorly explained. As will be discussed below, these include, but are not limited to, born globals (accelerated internationalization), de-internationalization or other forms of change in mode of entry, and the use of multiple modes of entry at a point in time.

Acceleration process: born global or international new venture phenomenon

Born global firms initially appeared in popular business press in the late 1980s (Gupta, 1989; Brokaw, 1990; McKinsey & Co, 1993; Rennie, 1993) and shortly after appeared in the academic literature (Jolly et al., 1992; Brush, 1992; McDougall, 1989). Born globals or international new ventures (INV) are defined as “a business organization that, from inception,

seeks to derive significant competitive advantage from the use of resources and the sale of outputs in multiple countries” (Oviatt and McDougall, 2004, p.31). To-date two measures have been used to define born globals. First, the time lag between the founding of a firm and its initiation of international operations, i.e. firms that begin receiving revenues from international business activities while not more than 6 years old (McDougall et al., 2003; Zahra et al., 2000). Second, the speed of a firm’s subsequent international growth (Autio et al, 2000) or when at least 25% of sales are generated from foreign markets (Knight and Cavusgil, 1996). Another characteristic can be added to born global firms: random market entry irrespective of psychic distance.

Prior research has shown facilitating factors and triggers of the emergence of born globals. These include globalization of markets for goods and services due to reduction of trade barriers and regional economic integration (Levitt, 1983; Porter, 1986), advances in information and communication technologies (Business Week, 1994; Oviatt and McDougall, 1995; Katz et al., 2003), advances in production technology (Business Week, 1991; McKenna, 1991; Kirpalani and MacIntosh., 1992) as well as constant innovation, technical prowess, lucrative niche markets and aggressive leadership ambitions (Business Week, 2004; Knight and Cavusgil, 1996).

The emergence of born globals raises questions about the validity and efficacy of existing theory, particularly the Uppsala/Stages Model. These firms (1) do not appear to follow a long period of firm growth in the domestic market before making initial entry into international markets, (2) do not always enter foreign markets gradually according to the psychic distance concept, and (3) do not necessarily follow the stages of development in terms of mode of entry. This phenomenon also challenges the Eclectic Paradigm, which overstates the costs of doing international business hence suggesting that internationalization is only the preserve of large and mature firms that have enormous ownership-specific advantages (Jones, 1996). Evidence shows that born globals rely on both externalization advantages by relying on networks and relationships to obtain knowledge and resources and internalization advantages to a certain extent. To-date, the Network Perspective has been the most useful model to explain the emergence of born globals (Loane and Bell, 2006; Freeman et al., 2006; Sharma and Blomstermo, 2003; Coviello and Munro, 1997).

The failure of various strands of international business theories including the Uppsala Model, Internalization Theory, and the Theory of FDI to explain the born global phenomena, led to the development of the Theory of International New Ventures (Oviatt and McDougall (1994, 2004). This theory, which integrates various theories from strategic management, entrepreneurship and

international business/economics, explains four necessary and sufficient elements for the existence of INVs: (1) organizational formation through internalization of some transactions, (2) strong reliance on alternative governance structures to access resources, (3) establishment of foreign location advantages, and (4) control over unique resources. Other scholars added these with 'learning advantages of newness' as the source of INVs competitive advantage which does not exist among established firms (Autio et al., 2000).

Despite the support for the born global or INV theory (Rialp et al., 2005; Autio et al., 2000; Shrader et al., 2000; McAuley, 1999; Moen, 2002; Andersson and Wictor, 2003; Knight et al., 2004; Sharma and Blomstermo, 2003; Coviello, 2006; McNaughton, 2003; Loane and Bell, 2006), there are speculations as to whether firms really follow a 'revolutionary' rather than 'evolutionary' path of development into international markets. Madsen and Servais (1997) suggest that born globals may behave according to an evolutionary framework in that they probably have "genes" that can be traced back to the firms and networks in which their founders and top managers gained industry experience. In other words, these scholars argue that the underlying theoretical arguments of the Uppsala Model are still valid – even for born globals. Therefore, they highlight the importance of studying the pre-export behaviour of a firm including validating whether born global firms are really new firms. This argument is supported by a study conducted by Bell et al (2001) who found evidence for 'born again global' firms, i.e. firms that have been well established in the domestic markets, with apparently no great motivation to internationalize, but which have suddenly embraced rapid internationalization for various reasons such as change of ownership, acquisition and client followership. Jones and Khanna (2006) warn of the fallacy of believing that this contemporary phenomena is 'new', showing evidence of the appearance, disappearance and re-appearance of international firms, including born globals that had existed since the 19th century. The above evidence question what constitutes a 'born' global firm.

Despite various research and theoretical development on born globals to-date, there is a dearth of research that traces the development of born globals in the international market over time, including the process underlying their formation and subsequent growth.

De-internationalization or other forms of change of mode of entry

Benito and Welch (1997) define de-internationalization as "any voluntary or forced actions that reduce a company's engagement in or exposure to current cross-border activities" (p.9). These can range from complete withdrawal to partial withdrawal including (a) reduction of operations, (b) switching to mode of entry that entails a lower level of commitment, (c) reduction of ownership or stake in a foreign venture. These activities can be seen as ongoing processes that

are part of the broader range of behaviours that occur over time, space and context as firms seek to maintain the viability of their international operations (Benito and Welch, 1997). Oesterle (1997) suggests that firms may experience 'epochs' of internationalization that may be followed by periods of rapid internationalization as well as de-internationalization. Essentially, these concern issues of change in internationalization, particularly on a firm's decision making and external forces that influence the dynamics in international operations and mode of entry.

The Uppsala/Stages Model has been widely criticized for its inability to account for the de-internationalization phenomenon due to its rigidity and narrow operationalization of its 'stages' model (Pauwels and Matthyssens, 1999, 2004; Crick, 2004). The logic that firms, over a long period of time, may not only gradually enter into but also retreat from international markets is not well explained in this model. The Eclectic/Economic model identifies a range of economic and market factors that shape the advantages of different forms of internationalization but is essentially a comparatively static model that does not explain the development and evolution of a firm's internationalization in particular contexts. The effects of history, the sequence and timing of factors affecting a firm's international behaviour and commitments and the way these factors interact is not considered. These problems are not peculiar to this paradigm but are a general limitation of static, variance based models (see Aldrich 1999; Van de Ven and Engleman, 2004). While the impact of other actors and relations are important the network perspective does not well explain the way that change occurs in firms' international operations. In particular, this is due to the network perspective's lack of focus on firms' decision making processes in internationalization.

Although the mainstream theories have not well explained the process of mode change, to-date there are only few studies that examine how change unfolds in a firm's international development. Nevertheless, a number of dedicated researchers in the area of de-internationalization have found the role of strategic flexibility as the underlying factor of export withdrawal (Pauwels and Matthyssens, 1999, 2003; Matthyssens and Pauwels, 2000). Crick (2004, 2003, 2002) found that discontinuation of exporting can be seen as short term and long term strategy as firms are influenced by critical incidents that may change the internationalization trajectory. Crick (2004, 2003) calls for more research that focuses on partial withdrawal and re-commencing of exporting (i.e. re-internationalization) through case study research. This stream of research has exclusively been dedicated to 'export' withdrawal phenomena and gaps exist on the process of change involving high-technology industries or other types of mode of entry.

Use of multiple modes of entry at a point in time

Research shows that as a company becomes more internationalized they will tend to use a wider array of entry modes and therefore developing a condition to operate with multiple modes (Welch and Luostarinen, 1988). The use of multiple modes of entry at a point in time, including its additions and deletions, is a form of change in internationalization behaviour that has received scant attention in prior research (Petersen and Welch, 2002). The decision making in utilizing a particular mode of entry is not necessarily a stand-alone decision when a firm already has pre-existing international operations. However, both economics and process perspective has so far focused on “the choice of individual modes rather than the prospect of using a combination of modes in a foreign market at a point in time” (Benito and Welch, 1994, p.16) and that “each entry decision is made in isolation” (Kim and Hwang, 1992, p.29).

The Uppsala/Stages Model provides no theoretical justification as to how and why firms may use multiple modes at a point in time and this contradicts with the ‘rings in the water’ and establishment chain logic. Nor does the Eclectic/Economic Paradigm explain how and why firms could utilize internalization and externalization advantages at the same time when both are feasible. While firms may not make decisions in the rational manner suggested by the classic decision making models (see Calof, 1993), the issue of rationality in decision making in mode change/addition/deletion is relatively unexplored. The Network Perspective also does not provide a rationale for this phenomenon because it does not focus on decision making logic in the mode choice.

Petersen and Welch (2002) provide one of the most comprehensive reviews of the use of multiple modes of entry to-date and suggest that the use of multiple modes can take the form of: (a) unrelated modes (no connection between modes used within a foreign market), (b) segmented modes (use of multiple modes to serve different segments), (c) complementary modes (mutual combination of modes to achieve the firm’s objectives), and (d) competing modes (e.g. direct selling to end users and use of distributorship at the same time). They highlight that the way that foreign operation mode change has been depicted has been “relatively crude and bear little resemblance to the sophisticated explanation of the internationalization process that scholars have been developing” (Petersen and Welch, 2002, p.161).

2.2.5. Importance of entrepreneurial behaviour and process

Assumption of opportunity recognition and exploitation process

The three mainstream theories assume the importance of business opportunities in international markets, however none of these perspectives directly addresses the process of opportunity recognition, evaluation and exploitation (see Table 2.2 above). Market imperfections, a core concept in the Eclectic Paradigm, can be seen as important sources of opportunities. The motives for factor, market or technology seeking behavior are basically based on the assumption of opportunity located in a different geographical context. The Network Perspective assumes new international market opportunities and initiatives may arise anywhere in the network that in turn can lead others to recognize and exploit similar or linked opportunities that they might otherwise have remained blind to. The growth of market knowledge (i.e. the input) leading to gradual international market progression (i.e. the output) in the Uppsala Model assumes the importance of opportunity (i.e. the process). Johanson and Vahlne (1977, 1990) repeatedly used the word ‘opportunity’ in their discussion of internationalization but did not provide an explanation of the opportunity process. Some 25 years later they recognized this when they note that, “the opportunity side of the internationalization process is not very well developed in our earlier papers” (Johanson and Vahlne 2006, p.167), and went on to emphasize the importance of opportunity in the Uppsala/Process model.

Despite this importance, very few studies focus on the international opportunity process. Likewise, the related body of literature that focuses on the theory of international new ventures (Oviatt and McDougall, 1994) also gives little attention to the process of opportunity recognition and exploitation. Studies of opportunity process have largely been the domain of entrepreneurship research in a domestic context (Dimov, 2007; Ottesen and Gronhaug, 2006; Choi and Shepherd, 2004; Elfring and Hulsink, 2003; Shane, 2000; Gaglio and Katz, 2001; Hills et al, 1997). However, this is where the strength of an entrepreneurship lens lies, as it places ‘opportunity’ as the core process in explaining the phenomena. A more in-depth understanding of the opportunity process underlying the mechanism of internationalization would help address the gaps in the literature as described in the preceding section, as well as resolve the inconsistencies between the predictions of the existing theories, helping to advance our theories and research beyond the relatively simplistic ‘proactive vs. reactive’ and ‘planned vs. unplanned’ classifications of firm internationalization.

Integration of internationalization and entrepreneurship research streams

There are growing calls for research that integrates the internationalization and entrepreneurship research streams (Jones and Coviello, 2005; Rialp et al., 2005; Styles and Gray, 2006). The integration between the two research streams is a logical one as their theoretical origins overlap, particularly on three main theories: resource-based theory (Barney, 1991; Alvarez and Busenitz, 2001; Peng, 2001), transaction cost economics and internalization logic (Coase, 1937; Williamson, 1975, 1979; Anderson and Gatignon, 1986), social network theory (Birley, 1985; Aldrich and Zimmer, 1986; Johanson and Mattson, 1988; Ellis and Pecotich, 2001). The two streams also share common themes including the adoption of innovation (e.g. Schumpeter, 1934; Simmonds and Smith, 1968; Lee and Brasch, 1978; Ibeh and Young, 2001), risk taking (e.g. Knight and Cavusgil, 2004; Morgan and Katsikeas, 1997; Leonidou, 1995), and new market entry (e.g. Lumpkin and Dess, 1996; Schumpeter, 1934). Jones and Coviello (2005) identified that the two research streams are unified by two fundamental elements: (1) *behavioural process* associated with the creation of value by assembling dispersed information, resources and people to exploit an opportunity (Johanson and Vahlne, 2003; Von Hayek, 1945) and (2) *time*, through which and at which behavioural processes take place (Covin and Slevin, 1991; Stevenson and Harmeling, 1990).

Recent developments in the internationalization literature reflect an integration of multiple theoretical lenses in a manner that is pluralistic and holistic (Jones and Coviello, 2005), particularly the internationalization and entrepreneurship research streams (see Loane and Bell, 2006; Spence and Crick, 2006; Yiu, Lau and Bruton, 2007; Mathews and Zander, 2007). Despite the progress made to-date, there are methodological issues that challenge further development in the discipline, as discussed in the next section.

Methodological issues in internationalization and entrepreneurship research streams

In a review of the ‘state of the art’ of international entrepreneurship methodologies, Coviello and Jones (2004) found that research that integrates internationalization and entrepreneurship was characterized by static, cross-sectional studies that do not incorporate time as fundamental to isolating key development in studies of internationalization, and a lack of comparative research within and across sectors. They highlighted the need to better capture entrepreneurial behaviour and processes over time. In the words of Coviello and Jones (2004): “important yet harder to obtain data are generally lacking (e.g. research on complex entrepreneurial internationalization behaviour over time)...complex process are not captured, unless at a very narrow level” (p.486). This was based on a meta-analysis of all relevant articles that integrate internationalization and entrepreneurship between 1988 and 2002.

To better understand the ‘state of the art’ of the literature, the researcher conducted an additional review of literature involving all relevant articles between 2003 and 2007 using the same methodology used by Coviello and Jones (2004). This resulted in analysis of 20 articles. Appendix A presents an exhaustive review of empirical studies that integrates internationalization and entrepreneurship alongside Coviello and Jones’ (2004) original review of the literature. Non-empirical papers were excluded in the review. Results of the review suggest that 14 out of the 20 studies were conducted using cross-sectional design and statistical analysis and the remaining 6 used case study method. This shows an incremental growth in studies that incorporate processes over time within the last five years of studies in the area, as compared to only 5 studies within the 1988-2002 periods in the Coviello and Jones’ (2004) review. Nevertheless, only 1 out of the 6 studies really traces the development of firms’ international entrepreneurial activities over time, i.e. tracking the network dynamics of international new ventures (Coviello, 2006). Furthermore, none of the studies reviewed focuses on opportunity recognition, evaluation and exploitation despite that a call to better understand international entrepreneurial phenomena from this lens (see Dimitratos and Jones, 2005). A recent review of research methodology of 1296 empirical papers in international business by Yang et al (2006) shows converging results, that survey methods dominate the field of international business. Jones and Khanna (2006) call for future research that brings (back) history into international business and that explores *how* history matters.

The overall literature synthesis indicates that more research that focuses on the behavioural process and time dimension are needed to advance knowledge in the field of internationalization and entrepreneurship. This approach will provide fruitful avenues to answer the gaps in and inconsistencies among theories of internationalization.

2.3. Research in Entrepreneurship

This section will first discuss important definitional issues and assumptions in entrepreneurship. A discussion of these issues is critical as the field is characterized by a plethora of theoretical contributions from diverse disciplines and hence lacks a unifying conceptual framework (Shane and Venkataraman, 2000; Ucbasaran et al., 2001; Gartner, 1990). Having clarified these issues and the approach to entrepreneurship adopted in this study, the next section provides a reconceptualization of internationalization as an entrepreneurial process. The remaining part of the section will identify factors and processes relevant to the conceptualization of internationalization developed in this study.

2.3.1. Overview

Academic thought on entrepreneurship can be traced back to early economic literature that defined the entrepreneur as an arbitrageur (Cantillon, 1734). As the literature advanced, entrepreneurs began to be described in various ways as coordinators of production and distribution, as well as modern leaders and managers (Say, 1803, 1971), coordinators and arbitrageurs (Walras, 1834–1910), uncertainty-bearers (Knight, 1921), innovators and creative destructors (Schumpeter 1934) and alert discoverers of profit opportunities (Kirzner 1973, 1979).

The most influential theories of entrepreneurship stem from the work of three contrasting thinkers in economics: Israel Kirzner, Joseph Schumpeter and Frank Knight. Table 2.3 summarizes their core ideas and contrasts the three different approaches that view entrepreneurship as: 1) a discovery process, 2) an innovation process, and 3) an uncertainty bearing process.

Table 2.3 - A Comparison of Three Influential Theories of Entrepreneurship

Main Theme	KIRZNERIAN	SCHUMPETERIAN	KNIGHTIAN
	Entrepreneurship as <i>discovery</i> process	Entrepreneurship as <i>innovation</i> process	Entrepreneurship as <i>uncertainty</i> bearing process
Key rationale	<ul style="list-style-type: none"> Knowledge is distributed in the society (Hayek, 1945) and possession of idiosyncratic knowledge allows people/firms to recognize opportunity by discovery Entrepreneurial alertness as a critical element in the discovery process (Kirzner, 1973, 1997) 	<ul style="list-style-type: none"> The carrying out of new combinations creates the circular flow in the economy The pursuit of new combinations is influenced by the dream and will to found a private kingdom; the will to conquer; the joy of creation 	<ul style="list-style-type: none"> The entrepreneurial task is rewarded with the residual income (profit), the reward for bearing uncertainty Risk is calculable but Uncertainty is not.
Relevant concepts or research to this theory	<ul style="list-style-type: none"> Opportunity discovery-evaluation-exploitation (Shane and Venkataraman, 2000) Discovery of technological opportunities (Shane, 2000) 	<ul style="list-style-type: none"> Creation of new means-ends framework/relationships (Eckhardt and Shane, 2003) Entrepreneurship as new entry (Lumpkin and Dess, 1996) 	<ul style="list-style-type: none"> Market as creative process in the face of non-existent, hard-to-predict future (Buchanan and Vanberg, 1991) Preference of uncertainty/risk taking (Khilstrom and Laffont, 1979; Brockhaus and Horowitz, 1986)

Kirzner views entrepreneurship as the enabler and discoverer of the market process, the means by which market equilibria are reached from states of disequilibria through the profit opportunities recognized by entrepreneurs. In this view markets are characterized as being in a state of constant disequilibrium due to imperfect and limited information and resulting inefficiencies (Hayek, 1945). Entrepreneurs see opportunities to make extra profit by exploiting market disequilibria and in so doing drive the economy towards equilibrium conditions in which there are no longer such opportunities. The exploitation of profit opportunities by entrepreneurs alerts others to the opportunities and draws in imitators until eventually competition reduces profit levels to normal levels and equilibrium is restored (Shane and Venkataraman, 2000). The significant contributions of Kirzner have been to focus attention on ‘alertness’ in entrepreneurial discovery and on the role of learning and knowledge development and diffusion in market processes.

Schumpeter, views entrepreneurship in a different but complementary way as a dis-equilibrating process, a way of driving market change and innovation, or what may be called disruptive entrepreneurship. He identified five types of innovation as (Schumpeter, 1934), (1) introduction of new products, (2) introduction of new methods of production, (3) opening of new markets, (4) introduction of new materials or sources of supply, and (5) developing new organizational structures. Innovators (entrepreneurs) enjoy ‘temporary monopoly power’ (Baumol, 1993, p.6) and, when imitators see above-normal gains can be made, they enter and erode the entrepreneur’s profit and return the market to equilibrium.

Unlike the Kirznerian and Schumpeterian view, the Knightian view treats entrepreneurship as an uncertainty bearing process. Knight (1921) differentiated between the notion of risk, which is calculable, and uncertainty, which is not. The entrepreneurial task is rewarded with the residual income (profit), which is the reward for bearing uncertainty. The difference between risk and certainty is well described by Sarasvathy (2001) using the metaphor of the urn containing different coloured balls. Risk is akin to drawing a red ball in an urn containing five green balls and five red balls – whose probability can be precisely calculated because we know the underlying distribution of balls inside the urn. Uncertainty is similar to drawing a red ball, except we do not know how many balls are in the urn, what colours they are, or even if there are any red balls at all in the distribution. The former consists of known distribution and unknown draws, while the latter consists of non-existent distribution and unknowable probabilities, referred to as Knightian uncertainty (Knight, 1921).

As such, the Kirznerian, Schumpeterian and Knightian views can be said to essentially describe three aspects of the same market and entrepreneurial process.

2.3.2. Defining Entrepreneurship

A number of definitions of entrepreneurship have been suggested: Kirzner (1973) views the discovery of opportunities as the core of entrepreneurship; Low and MacMillan (1988) define it as the creation of new enterprises; Stevenson and Jarillo (1990) as the study of why, how and what happens when entrepreneurs act and “*pursuit of opportunities without regard to the resources currently controlled*” (p.23); Lumpkin and Dess (1996) as new entry, i.e., entering new or established markets with new or existing goods or services by launching a new venture, either by start up or through an existing firm or via internal corporate venturing; and Shane and Venkataraman (2000) define it as *the study of the discovery, evaluation, and exploitation of opportunities and who does this*. This thesis adopts the definition put forward by Shane and Venkataraman (2000) and Stevenson and Jarillo (1990), particularly in relation to the ownership of resources involved.

The study of the discovery, evaluation and exploitation of opportunities

There has been a shift in research emphasis in recent times, away from a focus on the characteristics of people and firms who act in entrepreneurial ways to one that focuses on the processes of entrepreneurship itself – on opportunity recognition and exploitation. It has moved also from an economic rationalist approach, that assumes perfect information, rational expectations and optimization as the determinants of entrepreneurship (Khilstrom and Laffont, 1979; Begley and Boyd, 1987; Brockhaus and Horowitz, 1986; McClelland, 1961), to a disequilibrium and behavioral approach, which focuses on the understanding of how opportunities are discovered (Eckhardt and Shane, 2003; Shane, 2000; Hills et al., 1997) and acted upon by people and firms (Shane and Venkataraman, 2000; Lumpkin and Dess, 1996). This thesis takes a processual approach to viewing and investigating opportunity recognition as suggested by Shane and colleagues.

Despite there being no agreed definition of entrepreneurship (Gartner, 1990; Ucbasaran et al., 2001), some common themes have emerged around the concept of *opportunity* as a central element in the process (Eckhardt and Shane, 2003; Shane and Venkataraman, 2000; Hills et al., 1997; Venkataraman, 1997; Kirzner, 1979). Opportunities are recognized by entrepreneurs in various ways that are not yet well understood and are acted on, or exploited, by the entrepreneur or by others to whom the opportunity is sold or transferred.

2.3.3. Defining Opportunity

According to Webster's dictionary (1988, p.828), opportunity is defined as "a favourable junction of circumstances, or a good chance for advancement or progress". Opportunities, in the eyes of Austrian economics, are arbitrage opportunities, that is, a market situation in which prices are not properly matched among buyers and sellers and there is an opportunity to buy at a low price and sell at a higher one and earn supernormal profits (Shane and Venkataraman, 2000). Other scholars define opportunity as a desirable future state that is different from the current state and which is deemed feasible to achieve (Stevenson and Jarillo, 1990; Stevenson and Gumpert, 1985; Stevenson and Jarillo-Mossi, 1986). Christensen (1989, 45) defines it as "a possibility to create a new business unit or strengthening the position of an existing one making it more profitable". Casson (1982) defines it as situations to bring into existence new goods, services, raw materials and organizing methods that allow outputs to be sold at more than their cost of production. Essentially, opportunities are different ways to innovate to make profits or improve the state of affairs of a person or firm and different types of opportunities may be traced back to the four types identified by Schumpeter described above.

Based on prior work, we conceptualize *entrepreneurial* opportunities as a subset of *all* possible opportunities. Entrepreneurial opportunities require the creation or identification of new means–ends frameworks or relationships (Kirzner 1997). They are characterized by (1) creative decisions, because the entrepreneur has to construct the means, the ends, or both (Eckhardt and Shane, 2003), and (2) an uncertain set of alternatives and consequences (Knight, 1921). Following this perspective, Eckhardt and Shane’s (2003, 336) definition of entrepreneurial opportunity is adopted here: “*situations in which new goods, services, raw materials, markets and organizing methods can be introduced through the formation of new means, ends or means–ends relationships*”. Non-entrepreneurial opportunity involves incremental change or refinement of an existing product, process or market position, it involves manipulating within previously established means–ends frameworks (Kirzner 1997). Purchasing a large supply of raw materials that suddenly become available at very low price, or reorganizing by outsourcing production capability to reduce costs, are examples of non entrepreneurial opportunities (see Lumpkin and Dess, 1996). Also, buying a lottery ticket or speculating in stock markets does not fall within the definition of entrepreneurial opportunity because they do not lead to new means–ends relations. But the opportunities to form a new venture (Gartner, 1990; Low and MacMillan, 1988), to create or extend a new product/brand, or to enter the international markets (Davidsson, 2004), regardless of the modes of entry, are considered entrepreneurial.

2.3.4. School of thoughts on the phenomenon of opportunities

Two main schools of thought have emerged concerning the way opportunities are found – search vs. discovery. Those in the *school of search* believe that opportunities are identified through a purposeful, rational and systematic search process (Drucker, 1998; Caplan, 1999; Herron and Sapienza, 1992), similar to a formal strategic planning process. A search for opportunities may be in response to a particular problem, such as when a firm is facing declining sales, market share, profit, or tough competition. This type of search for opportunities requires the searcher to know what they are searching for, what they do not know. The search is undertaken for a piece of missing information that the searcher is aware of (Kirzner, 1997).

On the other hand, the *school of discovery* (Kirzner 1997; Kaish and Gilad, 1991) suggests that opportunities are unknown until discovered and one cannot search for something that one does not know exists. Hence, there is an element of surprise that follows each discovery. This school emphasizes the existence of conditions conducive to opportunity discovery. The conditions include the possession of relevant skills, prior knowledge and abilities and alertness to notice hitherto overlooked opportunities (Kirzner, 1973, 1979, 1985). Prior knowledge is thought to play a crucial role as existing knowledge provides the basis for understanding, accepting and combining new knowledge and creates ‘knowledge corridors’ that allows recognition of some

opportunities but not others (Venkataraman, 1997). Access to sources of new knowledge in the form of networks of contacts and relations in which a person or firm is embedded also play a role. Active search can be relevant too. This is not because we know what we are looking for but because the act of searching makes people and firms likely to find other things that did not know about in the first place, including new types of opportunities.

Cognitive attributes are relevant as opportunity recognition is an active cognitive process of combining and recombining knowledge and ideas in new ways, the ability to visualize new means–ends relationships using existing concepts and information (Shane and Venkataraman, 2000). Lastly the motivation of the person or firm is relevant as this galvanizes the whole process, whether this be for profit (Van Praag, 1999) or the pleasure of discovery itself.

Opportunity discovery should be distinguished from pure luck, although from the point of view of the participants in the process it may appear to be luck. It is not pure luck in the sense that various conditions influence who can and cannot discover different types of opportunities and the kinds of opportunities that are potentially discoverable. As in science, ideas and knowledge may lay dormant for many years waiting for the right conditions (including other relevant ideas) for their further development and use. Pure chance or luck is “where the finder has done *nothing* to generate the outcome....unrelated to his efforts, actions, thoughts and purposes” (Kirzner, 1997, 121). The cases of accidental exporters (Styles and Harcourt, 2001) and ‘unplanned’ internationalization (Crick and Spence; McAuley, 1999; Bell, 1995), are examples of what may at first seem to be luck. But they are not, they are examples of the role played by a social network and internal competencies in the discovery of overseas market opportunities. As Kirzner (1997) describes the process “without knowing what to look for, without deploying any deliberate search technique, the entrepreneur is at all times scanning the horizon, as it were, ready to make discoveries” (p 72). Empirical studies have shown a mix of search and discovery processes in opportunity recognition (Zietsma, 1999; Hills and Shrader, 1998).

In recent years, researchers have entered into philosophical debates concerning the ontological views of opportunity. A few additional views emerge: that opportunity is *enacted* (Gartner et al., 2003; Weick, 1979, Gartner, 1985, Gartner et al., 1992), *created* (Alvarez, 2005) or *developed* (Hadjikhani et al., 2005; Johanson and Vahlne, 2006). While the school of discovery and search can be described as exhibiting the positivist or realist position that there is an objective reality waiting to be found, the enactment, creative and development perspectives exhibit the interpretive or social constructionist view of reality (see Dutta and Crossan, 2005; Gartner et al., 2003, Alvarez, 2005). This ontological debate may reflect what Gartner (1990) calls ‘the six blind men and an elephant’ story in entrepreneurship, which impedes progress in the field. Each

of the schools of thought may describe different elements of the same entrepreneurial process. For example, discovery is closely related to the information-processing aspect in the process while search, enactment, creativity or development are closely related to the entrepreneurial action aspect or the ‘exploitation’ process in Shane and Venkataraman’s (2000) definition of entrepreneurship. By acknowledging this debate, this study takes it as an opportunity to examine the extent to which these philosophical debates matter.

2.4. Reconceptualizing internationalization as an entrepreneurial process

Drawing on Shane and Venkataraman’s (2000) definition of entrepreneurship, as well as on Eckhardt and Shane’s (2003) definition of entrepreneurial opportunity, this thesis reconceptualizes internationalization as ‘the discovery, evaluation and exploitation of entrepreneurial opportunity in international markets’.

Discovery, evaluation and exploitation of entrepreneurial opportunities in international markets

Through this conceptualization, the thesis uses the discovery-evaluation-exploitation as an organizing framework and attention is focused upon identifying antecedents and processes underlying (i) opportunity discovery, (ii) evaluation and (ii) exploitation. This conceptualization diverges from previous conceptualization of internationalization [(i.e. the process of increasing involvement in international operations – Welch and Luostarinen, (1988)] and is suitable to achieve the objective of this study, i.e. understanding how and why change unfolds which may include a combination of increasing and decreasing involvement in international markets. Given the importance of social networks and resources to entrepreneurship, the thesis naturally injects social network theories and a resource-based view in the conceptualization of internationalization. Therefore, this study follows an ‘holistic’ approach to conceptualization and investigation of internationalization (Bell et al., 2004; Crick and Jones, 2000; Crick and Spence, 2005; Loane and Bell, 2006; Jones and Coviello, 2005).

2.5. Factors and processes influencing opportunity discovery, evaluation and exploitation in international markets

A review of the literature leads to the identification of various factors and processes underlying opportunity discovery, evaluation and exploitation in international markets. Due to the two-phase research design adopted in this study (Yin, 2003), i.e. exploratory pilot cases followed by main case study design, reviews of the literature were undertaken according to the two phases. The first stage of literature review leads to the identification of three types of factors affecting opportunity recognition, i.e. prior knowledge, network ties and entrepreneurial orientation. The remaining factors and processes discussed here were derived from the results of the exploratory research (Chapter 3), subsequent literature review and results from the main case study research (Chapter 6), which include absorptive capacity, mode of reasoning (effectuation vs. causation) and path dependence.

2.5.1. Prior Knowledge

Prior studies have given scant attention to the process of opportunity recognition in international markets. Austrian economics argues that opportunities exist through market errors because knowledge is not equally distributed among actors in markets (Kirzner, 1997), i.e. information asymmetry (Hayek, 1945). People are able to recognize opportunities because they have relevant prior knowledge that makes this possible, while others do not (Venkataraman, 1997; Shane and Venkataraman, 2000). According to Venkataraman (1997), each person's idiosyncratic prior knowledge creates a knowledge corridor that allows opportunities to be recognized or not. In a study of technological innovations at Massachusetts Institute of Technology, Shane (2000) showed that differences in prior knowledge (i.e., of markets, ways to serve markets and customer problems) influenced who discovered entrepreneurial opportunities and that different entrepreneurs see different opportunities. Other scholars have suggested that profound market or technical knowledge is a prerequisite for new venture ideas (Christensen and Peterson, 1990).

Prior knowledge can be derived from various sources, including objective and experiential "[O]bjective knowledge is acquired through standardized methods of collecting and transmitting information, i.e. market research etc; experiential knowledge is country-specific and cannot be transferred between firms or business units" (Eriksson et al., 1997, p. 340). Ericksson et al (1997) distinguish three types of experiential knowledge in an international business context: "experiential knowledge of clients, the market, and competitors" (foreign business knowledge), "experiential knowledge of government, institutional framework, rules, norms, and values" (foreign institutional knowledge), "experiential knowledge of the firm's capability and resources to engage in international operations" (internationalization knowledge). Internationalization knowledge would seem more important in explaining subsequent

internationalization processes rather than initial international market entry, but the prior internationalization experience of people in a firm due to their working in other firms, is relevant.

Foreign institutional and business knowledge can be acquired through foreign language proficiency, overseas travel, living and work experience, education abroad, and prior employment/business experience abroad. This produces what may be described as a person's international orientation (Dichtl et al., 1990) or foreign orientation (Holzmüller and Kasper, 1990). International orientation and experience are forms of tacit, experiential knowledge (Penrose, 1959) of the type the Uppsala Model focuses attention on, that reduce the perceived risk and uncertainty associated with entering foreign markets (Blomstermo and Sharma, 2003; Johanson and Vahlne, 1990, 1977; Czinkota, 1982; Cavusgil, 1980; Bilkey and Tesar, 1977). The relevance of such prior experience and learning in speeding up overseas market entry by smaller firms has been well accepted by the born global theorists (Madsen and Servais, 1997; Oviatt and McDougall, 1997).

Another type of prior knowledge is the adaptation of prior technical knowledge for new uses, i.e. exaptation (Dew, Sarasvathy and Venkataraman, 2004). While exaptation plays a critical role in the history of technological invention, adaptation of prior technical knowledge can play an important role in international opportunity recognition.

Prior knowledge influences the way entrepreneurs comprehend, extrapolate, interpret and apply new information in ways that those lacking it cannot duplicate (Roberts, 1991). It helps entrepreneurs appreciate the value of new information. It influences individuals' willingness and ability to make new connections among pre-existing ideas, as well as with new ideas, hence allowing them to recognize opportunities. As will be discussed in the next section, prior knowledge not only resides in the focal actors but also in the connected others and new actors when they are connected to the focal actors.

2.5.2. Network Ties

Entrepreneurship is both an economic and social activity and social contacts often drive entrepreneurial activity (Ambler and Styles, 2000). Society and business is characterized by information heterogeneity due to the specialization of people and firms in different types of activities, industries and locales (Hayek, 1945; North, 2005). Social and business networks extend the eyes and ears of a person or firm, providing a means of access to new and different types of information and ideas than would otherwise be encountered (Wilkinson and Young, 2005). They are also a means of accessing and co-producing resources required to further

develop and exploit entrepreneurial opportunities and a means of spreading and managing the risks and uncertainties involved (ibid).

The important role played by networks and social ties is well established in entrepreneurship research (Elfring and Hulsink, 2003; Christensen and Peterson, 1990; Aldrich and Zimmer, 1986; Birley, 1985; Gillingham and Loucks, 1982). Research shows that (1) they are sources of information or ideas that trigger entrepreneurial opportunity recognition, (2) they reduce a firm's perceived risks of entering a new market through more trusted information sources, and (3) they are a gateway to resources. Thus, it is not surprising that entrepreneur's social networks are often considered the most significant resource of the firm (Johanson and Mattsson, 1988). The role of networks in foreign market selection and entry indicates that international entrepreneurial opportunity development is a discovery process rather than one solely determined by strategic decisions, rational processes, or systematic information gathering (Styles and Ambler, 1994; Coviello and Munro, 1995; Root, 1994).

An individual's or firm's social and business network comprises both strong and weak ties. According to Granovetter (1973, 1361), "strength of a tie depends on the combination of the amount of time, emotional intensity, intimacy and the reciprocal services". Ties between diverse sets of people with infrequent, irregular, loose and non-affective contacts (Elfring and Hulsink, 2003), such as friends, friends of friends, casual business contacts, scientific community contacts and association memberships, are examples of weak ties. According to Granovetter (1973) weak ties are more likely to be a source of new types of information. Most people have more weak than strong ties and weak ties can act as bridges linking networks with different types of information and ideas. Burt (1992), further developed Granovetter's theory by pointing out that it is not the strength of the tie that matters so much as whether they link different networks that are otherwise not connected or, in his terms, they bridge 'structural holes.'

The role of weak ties as sources of international entrepreneurial opportunity recognition has some empirical support. The many studies that have been done over the years on why firms go into international markets has shown that unsolicited orders are an important trigger (e.g. Simmonds and Smith, 1968; Ellis and Pecotich, 2001; Crick and Spence, 2005; Barrett and Wilkinson 1985, Cavusgil and Naor, 1987). In a recent study, Styles and Ambler (1997) found that among 434 Australian and British exporters, 22% of exporters made contact with their overseas distributors through friends or other acquaintances, while 21% knew the overseas distributor from a previous job or business. These accidental exporters were 'discoverers' of, not searchers for, international entrepreneurial opportunities (Styles and Harcourt, 2001). Similarly, Ellis and Pecotich (2001) show that weak ties formed as the result of

cosmopolitanism of the decision makers, provide the necessary information for the discovery of international entrepreneurial opportunities and export initiation. Bell (1995) provided evidence for 'client followership' in the internationalization of high technology firms. In addition, networks were also found to play a role in influencing the location of internationalization (Johanson and Mattson, 1988; Coviello and Martin, 1999; Crick and Jones, 2000; Harris and Wheeler, 2005).

Hills et al. (1997), in a study on solo entrepreneurs versus network entrepreneurs, found that network entrepreneurs discovered significantly more opportunities. Lastly, in a study of the effect of the number of weak ties, Singh et al. (2000) found that size of a social network is significantly and positively related to the number of new venture ideas identified and the number of new venture opportunities recognized/discovered.

2.5.3. International Entrepreneurial Orientation (IEO)

Lumpkin and Dess (1996), based on Covin and Slevin's (1989) original conceptualization, identify five dimensions of entrepreneurial orientation (EO): autonomy, innovativeness, risk taking, proactiveness, and competitive aggressiveness, beliefs, emphasis, past behavior, and preferences at the top management and firm level. Knight and Cavusgil (2004) added an international context to this construct into international entrepreneurial orientation (i.e. IEO) and a new item 'whether the top management tends to see the world as the firm's market place'. Kreiser et al (2002) show how the five dimensions of EO are linked to different aspects of a firm's activity and performance.

Similarly, this study views that the dimensions of EO impact opportunity recognition in different ways. It proposes that three of the five dimensions of EO, innovativeness, autonomy, and proactiveness, drive opportunity recognition. *Innovativeness* is a firm's tendency to engage in and support new ideas, novelty, experimentation, and creative processes that may result in new products, services, or technological processes. It is a critical factor, and in some ways it is an aspect of entrepreneurship rather than an antecedent, that enables a firm to visualize, think and extrapolate new means-ends relationships in international markets. *Autonomy* is the independence and freedom in bringing forth an idea or vision and carrying it through to completion. It is the precondition for creative decision making required to see new means-ends frameworks in international markets. *Proactiveness* is a forward-looking perspective that accompanies innovative or new venturing activity (Lumpkin and Dess, 1996) and enables a firm to think and see new means-ends frameworks ahead of others (i.e., recognition of international entrepreneurial opportunity).

The other two dimensions of EO affect the willingness and ability of people and firms to exploit (rather than recognize) new opportunities that have been developed. *Risk Taking* is the proclivity to engage in risky business activity and the preference for bold versus cautious acts to achieve firm objectives. It is a prerequisite for entry into unfamiliar foreign markets with untried and untested new approaches, where resources are at risk and expected returns are uncertain. *Competitive Aggressiveness* is the firm's propensity to directly and intensely challenge its competitors to achieve entry, to improve its market position, or to outperform rivals in the marketplace. It drives the firm to enter new foreign markets.

Prior research shows that IEO is an important predictor of born global firms (see Knight and Cavusgil 2004). However, there is a lack of further empirical studies that examine the role of IEO in the internationalization of firms in general, and among born globals in particular.

2.5.4. Absorptive Capacity

Opportunity recognition as noted is a creative process. It requires recombining ideas, information and resources in new ways with added-value. Having relevant knowledge is a prerequisite for opportunity discovery, being able to mine it effectively for opportunities is another matter. Although a person or firm could have the necessary prior knowledge and access to relevant new information, they will not necessarily be able to absorb, process and transform it in appropriate ways and to communicate the outputs to relevant decision makers within an organization. As a result potentially valuable opportunities go unrecognized or acted on. The ability of firms to effectively absorb, process and respond to new information and ideas is referred to as their absorptive capacity (Cohen and Levinthal, 1990), which comprises four elements - knowledge acquisition, assimilation, transformation and exploitation (Zahra and George, 2002). Cohen and Levinthal (1990) measure absorptive capacity in terms of R&D intensity (i.e. R&D spending divided by sales). Absorptive capacity is a form of creative intelligence and flexibility of response that makes a firm more likely to recognize and discover the potential opportunities waiting to be found in new types of information, ideas and knowledge assortments and to act on them.

Various types of cognitive biases, well established in the psychological literature, play a role here including selective perception, the constructive nature of memory and self serving biases (Bradley, 1976) and fundamental attribution errors (Ross, 1977). People and firms are more likely to pay attention to, interpret and remember information that is consistent with existing ways of thinking and acting, that is self serving and which underemphasizes the role of contextual factors. This is due to people's desire for cognitive consistency and to avoid or reduce cognitive dissonance (Festinger, 1957). These processes bias people and firms'

information processing and sensitivity to new types of information and ideas in ways that affect the kinds of opportunities and problems that they are able to see. It leads people and firms to limit their field of vision, to seek and interpret information in ways consonant with existing mental and business models and theories in use (see Alba and Hutchinson, 2000; Nesbitt, 2002). Its effects are manifest in Levitt's (1986) concept of marketing myopia and Christensen's (2000) accounts of the inability of firms committed to earlier technologies and systems to see the threats and opportunities posed by new ideas and information. It is also evident in the progress of science as researchers committed to particular theories and paradigms misinterpret and resist ideas that may undermine their ways of thinking.

For all these reasons, recognizing and acting on new types of international market opportunities is not easy, especially if they may threaten existing patterns of thinking and acting and established power structures within a firm. As Pasteur observed, chance favours the prepared mind - firms with the necessary prior knowledge are primed, ready to see new types of opportunities when the right type of new information comes along. But they also have to be brave and prepared to rethink and adapt old ways.

2.5.5. Firm Resources

Resource-based theory is one of the most important theories that inform the theoretical development and empirical research in entrepreneurship (Alvarez and Busenitz, 2001) and international business (Peng, 2001). Barney (1991, p. 101) defines resources as "all assets, capabilities, organizational processes, firm, attributes, information, knowledge *controlled by the firm* that enable the firm to conceive of and implement strategies that improve its efficiency and effectiveness". While Wernerfelt (1987) defines resources as "those assets that are tied semi permanently to the firm" (p.173), resources may play two roles in entrepreneurship. First, they can act as a trigger to opportunity discovery in that they allow a firm to see a match between the resources it owns or are currently controlled by others which can be deployed to add value and create a market demand through which economic rents can be made. Second, resources drive a firm to exploit an opportunity.

A firm may need to look beyond core strengths and capabilities that lead to domestic success, as these do not always guarantee the ability to make a successful foreign market entry. Dealing with foreignness in international markets often requires additional resources that are unique, proprietary, or inimitable to provide a sustainable competitive advantage (Barney, 1991; Wernerfelt, 1984). The advantages could come from a firm's ability to compete on price and costs, quality, service, innovation, R&D, differentiation, and management excellence. They may also present in the form of intellectual property such as patents, copyrights; intangible assets

such as brand names, reputation; or tangibles such as superior products or services, technology, financial capital and human talent. Previous studies have lent support to the role of these strengths in firm internationalization and performance (see Bloodgood et al., 1996; Piercy et al., 1998). The more unique and inimitable the strengths are, the easier it will be for a firm to exploit an entrepreneurial opportunity and to exploit it faster.

Recent developments in the study of creativity and improvisational competencies of firms show that the concept of '*bricolage*' (Levi Strauss, 1967) – making do with what is at hand – explains many of the behaviours in smaller firms that were able to create something from nothing by exploiting physical, social and institutional inputs that other firms rejected or ignored (Baker and Nelson, 2005; Baker et al., 2003). Entrepreneurs often act as '*bricoleurs*', making new combinations of scattered resources to deal with resource constraints and this can influence opportunity recognition and exploitation (Baker and Nelson, 2005).

While Resource Based View has treated firms as independent entities, scholars have posited networks as strategic resources (Gulati 1999; Gulati et al., 2000) or the resource-based view of interconnected firms (Lavie, 2006). This also fits with the position taken in this thesis that views entrepreneurship as the process of pursuing opportunities "*without regard to the resources currently controlled*" (Stevenson and Jarillo, 1990, p.23), which may involve both a firm's internal (Barney, 1991) and external resources (Wernerfelt, 1987). Although much of the focus of RBV research has been on larger firms (see Barney et al., 2001), a large body of research on international entrepreneurship has looked at RBV in smaller firms and demonstrated that they can get by through the use of network governance structures (see Oviatt & McDougall, 1994; Coviello and Munro, 1995; Coviello and Martin, 1999; Andersson and Wictor, 2003).

2.5.6. Mode of reasoning: effectuation vs. causation

The fundamental modes of reasoning in economic affairs consist of two types: (1) those that are based on causal rationality that emphasizes maximizing expected return, avoiding surprises through accurate prediction and relying on planning and extensive analysis as in the natural sciences and (2) those that are based on effectual rationality that emphasizes control rather than prediction, leveraging (rather than avoiding) contingencies and relying on affordable loss (rather than expected return) as evaluation criteria (Sarasvathy, 2001; Wiltbank, Dew, Read and Sarasvathy, 2006). The former, causal reasoning, involves decision making that is characterized by: (a) a given goal to be achieved or a decision to be made (usually well structured and specific), (b) a set of alternative means or causes (that can be generated through the decision process), (c) constraints on possible means (usually imposed by the environment) and (d) criteria for selecting between the means (usually maximization of expected return in terms of

the predetermined goals). The latter, effectual reasoning, involves decision making that is characterized by: (i) a given set of means (that usually consists of relatively unalterable characteristics/circumstances of the decision maker), (ii) a set of effects or possible operationalizations of generalized aspirations (mostly generated through the decision process), (iii) constraints on (and opportunities for) possible effects (usually imposed by the limited means as well as by the environment and its contingencies) and (iv) criteria for selecting between the effects (usually a predetermined level of affordable loss or acceptable risk related to the given mean) (Sarasvathy, 2001).

The distinction between the two types of reasoning is in the set of choices: choosing between means to create a particular effect or many-to-one mappings (i.e. causation) versus choosing between many possible effects using a particular set of means or one-to-many mappings (i.e. effectuation) (Sarasvathy, 2001). Prediction is central issue in economics, strategic management and marketing owing to the presumption that what can be predicted can be controlled. On the contrary, effectuation rests on four principles (Sarasvathy, 2001): (1) affordable loss rather than expected return, (2) strategic alliances rather than competitive analysis, (3) exploitation of contingencies rather than exploitation of pre-existing knowledge, and (4) controlling an unpredictable future rather than predicting an uncertain one, i.e. non-predictive approach (Wiltbank et al., 2006). Causal models are based on the assumption that, to the extent we can predict the future, we can control it; while with the effectual models it is to the extent we can control the future, we do not need to predict it (Sarasvathy, 2003). Table 2.4 depicts the distinction between causal and effectual reasoning.

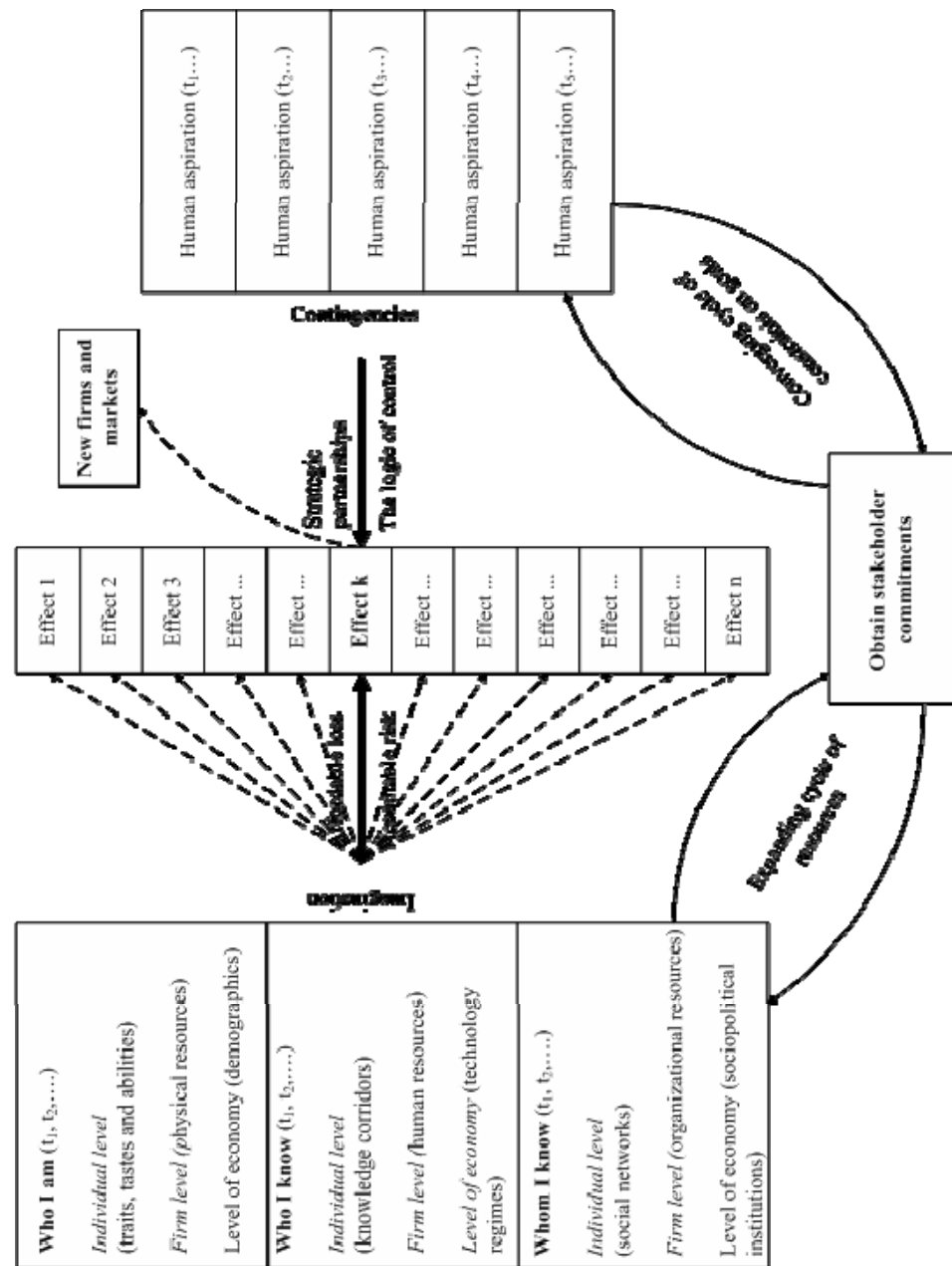
Table 2.4 - Contrasting Causation and Effectuation

Categories of differentiation	Causation processes	Effectuation processes
Givens	Effect is given	Only some means or tools are given
Decision-making selection criteria	Help choose between means to achieve the given effect Selection criteria based on expected return Effect dependent: choice of means is driven by characteristics of the effect the decision maker wants to create and his or her knowledge of possible means	Help choose between possible effects that can be created with given means Selection criteria based on affordable loss or acceptable risk Actor dependent: given specific means, choice of effect is driven by characteristics of the actor and his or her ability to discover and use contingencies
Competencies employed	Excellent at exploiting knowledge	Excellent at exploiting contingencies
Context of relevance	More ubiquitous in nature More useful in static, linear, and independent environment	More ubiquitous in human action Explicit assumption of dynamic, nonlinear, and ecological environments
Nature of unknowns	Focus on predictable aspects of an uncertain future	Focus on controllable aspects of an unpredictable future
Underlying logic	To the extent we can predict the future, we can control it	To the extent we can control future, we do not need to predict it
Outcomes	Market share in existent markets through competitive strategies	New markets created through alliances and other cooperative strategies

Source: Sarasvathy (2001)

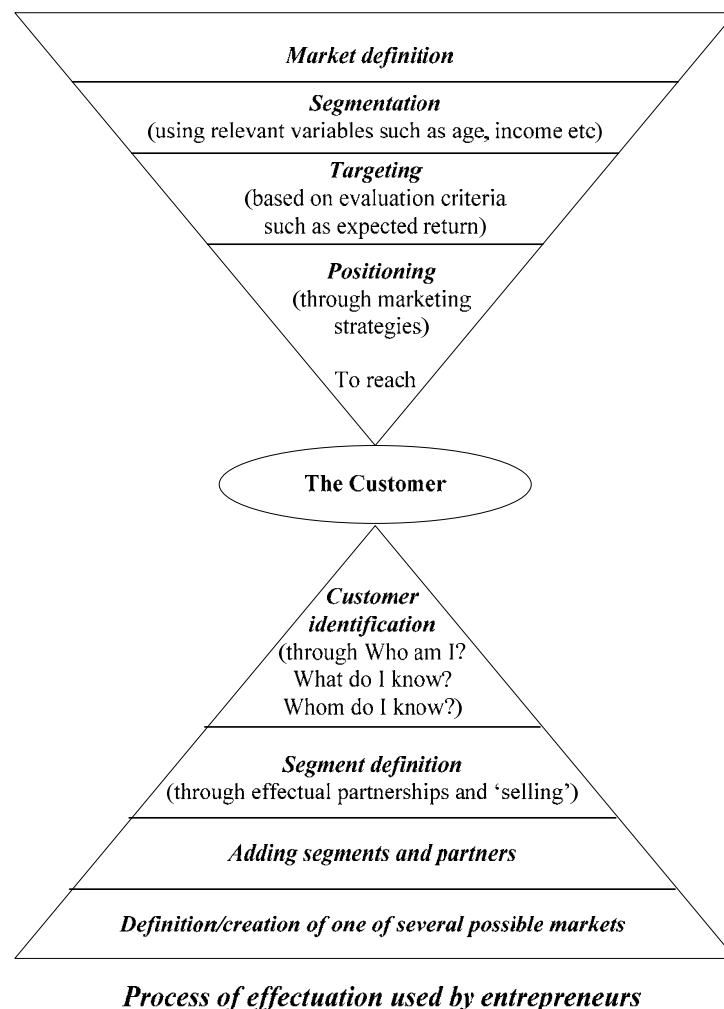
In the theory of effectuation (Sarasvathy, 2001), decision making begins with a given set of means (who I am, what I know and whom I know) and contingent human aspiration to select from a set of possible effects imagined by the effectuator. The theory assumes that both means and aspirations change over time. By interacting with people the effectuator knows or meets, he or she obtains stakeholder commitments. Depending on who comes on board as stakeholders, they would set in two cycles: an expanding cycle of resources or a converging cycle of constraints on goals. The end product in effectuation is fundamentally unpredictable at the beginning of the process. Both market and opportunity are contingent on who comes on board and the actions and goals they enable and constrain (Sarasvathy, 2005b). This is summarized in Figure 2.5 below. In other words, effectuation is similar to the concept ‘strategy absence’ in the strategy literature (Inkpen and Choudhury, 1995).

Figure 2.5 – The Theory of Effectuation
(Sarasvathy, 2001, 2003)



Sarasvathy (2003) provided a good example of the difference between causal versus effectual reasoning from the lens of the marketing discipline. In the effectual process, entrepreneurs begin with three categories of means: they know who they are, what they know and whom they know. They should find a customer or partner, then generalize the customer or partner into a segment, add segments over time in a contingent manner, and eventually define the market for the product/firm. This is an inverse of the STP – rigorous segmentation and targeting and positioning analysis followed by implementation of marketing strategies. Figure 2.6 shows how the two modes of reasoning differ in their approach to marketing.

Figure 2.6 – Causation and Effectuation in Marketing



Source: Sarasvathy (2003)

The theory of effectuation is also related to and extends the work of Herbert Simon on the satisficing principle. The relevance of the satisficing principle, or effectuation in decision making in general, can be found in the following quote by Simon: “the point of departure is the observation that human thinking powers are very modest when compared with the complexities of the environments in which human beings live. If computational powers were unlimited, a person would simply consult his or her preferences (utility functions) and choose the course of action that would yield maximum utility under the given circumstances. That is, of course, just what a ‘rational’ man of classical economic theory does. But real human beings, of bounded rationality, cannot follow this procedure. Faced with complexity and uncertainty, lacking the wits to optimize, they must be content to satisfice – to find ‘good enough’ solutions to their problems and ‘good enough’ courses of action” (Simon 1979, p.3)

Prior research has shown the distinction in the decision making behaviour of entrepreneurs and non-entrepreneurs, which depicts the reliance of effectual versus causal reasoning. In a comparative study of the decision making behaviour of entrepreneurs from smaller firms and 13 CEOs from large organizations, Smith et al (1988) found that entrepreneurs are less comprehensive in their decision behaviour than professional managers, with comprehensiveness defined as the degree to which an individual follows a formal rational process. In another study that compared 124 entrepreneurs and 95 managers in large organizations, Busenitz and Barney (1997) found that two variables - overconfidence and representativeness – correctly categorized entrepreneurs and managers more than 70% of the time. They suggested that without the use of these biases and heuristics, many entrepreneurial decisions would never be made, as the window of opportunity would be gone by the time all the necessary information became available for more rational decision making. In a quasi-experiment involving entrepreneurs and bankers, Sarasvathy et al (1998) found that entrepreneurs accept risk as given and focus on controlling the outcomes at any given level of risk and frame the problem spaces with personal values, assuming greater personal responsibility for the outcomes; while bankers focus on target outcomes – attempting to control risk within structured problem spaces and avoiding situations where they risk higher levels of personal responsibility.

Research shows that effectuation plays an effective role in entrepreneurs’ ability to seize opportunity but is also susceptible to problems. For example, effectuation has been found to lead to lower levels of performance (Smith et al., 1988) and over-trust which may cause entrepreneurs to fail more often as over-trusting is part of the risks that entrepreneurs take (Goel and Karri, 2006). However, effectuation remains an important mode of reasoning among entrepreneurs and is ubiquitous in human action even when the heuristics generate erroneous responses (see Kahneman and Tversky, 1979; Kahneman, 2002).

2.5.7. Path Dependency and Feedback Mechanisms in Internationalization

Path dependency refers to a pattern of behaviour in which the ultimate end states or equilibrium depends on the initial conditions and random shocks as the system evolves (Sternan, 2000). It arises in systems whose dynamics are dominated by positive feedback processes, hence even small initial differences can be magnified by the feedback process until they reach macroscopic significance (Sternan, 2000). While 'conventional economics' largely avoids increasing returns or path dependence, the new 'positive feedback economics', embraces them (Arthur, 1990, p.99). Unlike the former, the latter school of thought acknowledges that history matters and focuses on the evolutionary process leading to certain end states rather than the (general) equilibrium itself, as is common in neoclassical economics (Arrow and Hahn, 1971; Arrow and Debreu, 1954).

Path dependence is common in economy because the growth of business enterprises is driven by a host of positive feedbacks involving learning, network effects, scale economies and other processes (Sternan, 2000). The concept of path dependence is relevant to international business and entrepreneurship. The internationalization trajectory of a firm that emerges take place in particular contexts with specific starting conditions in terms of the mix of prior knowledge, skills and abilities of firms (Shane, 2000; Hayek, 1945) and their networks of relations (Granovetter, 1973; Burt, 1992; Johanson and Mattsson, 1992). Recent empirical findings show that the process cannot be easily predicted or neatly summarized in terms of a simple sequence of stages, or an incremental process of ever increasing internationalization to more distant markets. This can be explained in terms of the positive feedback mechanism which can magnify the consequences of a small change. Osterle (1997) describes how firms may experience 'epochs' or critical incidents that can change their entire trajectory. False starts and retreats (Benito and Welch, 1994a) are to be expected as well as successful ventures leading to a firm and network's increasing commitment to foreign markets and activities. Sudden leaps in the amount and type of internationalization can take place as new contacts and networks open up unexpected pathways and bridges to markets and opportunities.

The act of internationalization enhances and changes a firm's prior knowledge (Zahra et al., 2000; Barkema and Vermeulen, 1998). The experience and knowledge absorbed from international markets can affect a firm's attitudes to risk and uncertainty in international markets, making it more cautious after initial failures and unexpected problems or galvanizing and motivating it to be bolder, to behave more innovatively, to take greater risks on the basis of more informed judgment, and to be more proactive towards the international markets - boosting the firm's international entrepreneurial orientation. The experience and outcomes of new market entries is also a potential source of new resources. Firms form relationship with new market

actors that give them access to different types of skills and resources and new potential partners with which to exploit still other international market opportunities, eventually increasing the firm's unique resources. Both positive and negative referrals and reputation effects spread across international and domestic networks leading to other opportunities to explore and exploit. Therefore, entrepreneurial actions are the source of future entrepreneurial activities (Holcombe, 2003). History matters in international business (Jones and Khanna, 2006) and understanding how a firm's behaviour changes over time is critical toward a better understanding of the international entrepreneurial phenomena (Jones and Coviello, 2005).

The factors and processes described above are summarized in Table 2.5 below. The summary contains each of the construct's definition and operationalization.

Table 2.5 - Construct, Definition and Operationalization

Construct	Definition	Operationalization
Born global firms or international new ventures	A business organization that, from inception, seeks to derive significant competitive advantage from the use of resources and the sale of outputs in multiple countries (Oviatt and McDougall, 2004)	<ul style="list-style-type: none"> Firms that begin receiving revenues from international business activities while not more than 6 years old (McDougall et al., 2003; Zahra et al., 2000), and Firms that generate at least 25% of sales from foreign markets (Knight and Cavusgil, 1996).
De-internationalization or other forms of change of mode of entry	Any voluntary or forced actions that reduce a company's engagement in or exposure to current cross-border activities" (Benito and Welch, 1997).	<ul style="list-style-type: none"> Complete withdrawal from international markets (Benito and Welch, 1997). Partial withdrawal including (a) reduction of operations, (b) switching to mode of entry that entails lower level of commitment, (c) reduction of ownership or stake in a foreign venture. (Benito and Welch, 1997).
Multiple modes of entry	The concerted use of several modes of entry in an integrated and complementary way (Petersen and Welch, 2002)	Multiple modes consist of (a) unrelated modes (no connection between modes used within a foreign market), (b) segmented modes (use of multiple modes to serve different segments), (c) complementary modes (mutual combination of modes to achieve firm's objectives), and (d) competing modes (e.g. direct selling to end users and use of distributorship at the same time) (Petersen and Welch, 2002)
Entrepreneurship	<ul style="list-style-type: none"> The study of the discovery, evaluation, and exploitation of opportunities and who does this (Shane and Venkataraman, 2000) Pursuit of opportunities without regard to the resources currently controlled (Stevenson and Jerillo, 1990) 	n/a
Entrepreneurial opportunity	Situations in which new goods, services, raw materials, markets and organizing methods can be introduced through the formation of new means, ends or means-ends relationships (Eckhardt and Shane, 2003)	<ul style="list-style-type: none"> Creative decisions, because the entrepreneur has to construct the means, the ends, or both (Eckhardt and Shane, 2003; Kirzner, 1997), and An uncertain set of alternatives and consequences (Knight, 1921).

Table 2.5 - Construct, Definition and Operationalization (continued 1)

Construct	Definition	Operationalization
Internationalization	The discovery, evaluation and exploitation of entrepreneurial opportunity in international markets (Shane and Venkataraman, 2000; Eckhardt and Shane, 2003).	<p><i>Opportunity discovery</i></p> <ul style="list-style-type: none"> • Could you take me through the "story" of how you recognized your first international business opportunity? • Did you purposefully search the opportunities? • Were there any other international opportunities that you recognized, i.e. subsequent international opportunities? <p><i>Opportunity evaluation</i></p> <ul style="list-style-type: none"> • What happened once you recognized the opportunities? • What were your considerations before you entered the overseas market? <p><i>Opportunity exploitation</i></p> <ul style="list-style-type: none"> • Were there any obstacles along the way before you entered the overseas market? • What was the time frame from your recognition to the exploitation of the opportunities? • Choice of mode of entry and why
Prior knowledge	<ul style="list-style-type: none"> • Prior knowledge of markets, of how to serve markets and of customer problems (Shane, 2000), and • Prior knowledge of foreign business, institutional, internationalization (Eriksson et al., 1997; Dichtl et al., 1990) 	<ul style="list-style-type: none"> • Knowledge of how the market operates such as information about suppliers, customers, sales techniques, capital requirements, culture, or ways of doing business in the market (Shane, 2000; Eriksson et al., 1997) • Knowledge of government, institutional framework, rules, norms and values (Eriksson et al., 1997) • Knowledge of how to serve markets, such as new technology that might change production process, new method of distribution, new materials to be used, and new sources of supply or new ways of organizing (Shane, 2000); • Knowledge of specific customer problems such as from your work experience, education or other means (Shane, 2000); • Experiential knowledge of the firm's capability and resources to engage international operations (Eriksson et al., 1997) • Foreign language proficiency, overseas travel, living and work experience, education abroad and prior employment/business experience abroad (Dichtl et al., 1990)

Table 2.5 - Construct, Definition and Operationalization (continued 2)

Construct	Definition	Operationalization
Network ties	Strong ties and weak ties in international markets (Ellis & Pecotich, 2001; Granovetter, 1973)	<ul style="list-style-type: none"> Do you have links or connections with key firms or individuals in the industry? (e.g. venture capitalists, financiers, entrepreneurs, corporate executives, headhunters, or consultants?) Do you have friends, friends of friends, or business acquaintances in particular foreign markets?
International entrepreneurial orientation (IEO)	<ul style="list-style-type: none"> Processes, practices, and decision making activities that lead to new entry (Lumpkin and Dess, 1996). The firm's innovativeness and proactiveness in pursuit of international markets (Knight and Cavusgil, 2004). 	<ul style="list-style-type: none"> The top management tends to see the world, instead of just Australia, as our firm's marketplace Does your company typically initiate actions to which competitors then respond? Is your company very often the first business to introduce new products or services, administrative techniques, operating technologies? Do you put a strong emphasis on R&D, technological leadership and innovation? Do you have very many new lines of products or services marketed during the past 3 years? Have changes in product or service in your company usually been quite dramatic? Do you have strong tolerance for high risk projects with chances of high returns? Do you believe that, owing to the nature of the environment; bold, wide-ranging acts are necessary to achieve the firm's objective? When confronted with decision-making situations involving uncertainty, does your firm typically adopt a bold, aggressive posture in order to maximize the profitability of exploiting potential opportunities? In dealing with competitors, does your firm typically adopt a very competitive, "undo-the-competitors" posture? Is your firm very aggressive and intensely competitive? Does your firm grant autonomy to individuals or teams to bring forth an idea or vision and carry it through to completion? Does your firm allow the independent spirit of individuals or teams to exercise their creativity and champion promising ideas? Does your firm favour actions by individuals or teams that bend the rules and bypass procedures and budgets in pursuing opportunities?

Table 2.5 - Construct, Definition and Operationalization (continued 3)

Construct	Definition	Operationalization
Absorptive capacity	The ability of a firm to recognize the value of new, external information, assimilate it and apply it to commercial ends (Cohen and Levinthal, 1990)	How would you rate your firm's ability to (i) absorb knowledge, (ii) process knowledge, and (iii) transform knowledge into new ideas, technologies or products?
Firm resources	All assets, capabilities, organizational processes, firm attributes, information, knowledge controlled by the firm that enable the firm to conceive of and implement strategies that improve its efficiency and effectiveness (Barney, 1991; Piercy et al 1998)	<ul style="list-style-type: none"> • What assets do you have that others do not? • What capabilities or things you can do that others cannot? • What sets your company apart from others? (e.g. capital, management, time, experience and information resources etc)
Effectual reasoning	Effectuation processes take a set of means as given and focus on selecting between possible effects that can be created with that set of means (Sarasvathy, 2001)	Affordable loss rather than expected return, strategic alliances rather than competitive analysis, exploitation of contingencies rather than exploitation of pre-existing knowledge, controlling an unpredictable future rather than predicting an uncertain one
Path dependency	A pattern of behaviour in which the ultimate end states or equilibrium depends on the initial conditions and random shocks as the system evolves (Sterman, 2000)	n/a

2.6. Summary

A review of the literature in internationalization has demonstrated that it is lacking a comprehensive framework for understanding the process and dynamics of firms' internationalization over time. This research gap was attributed to the limited understanding of how opportunities and firms evolve and the methods applied in previous internationalization and entrepreneurship research. A review of the latest development in the field suggests two trends: that the study of internationalization is progressing towards a unifying framework that integrates multiple or holistic approaches and the growing recognition of entrepreneurship as an important theoretical lens to investigate the phenomena. A review of the entrepreneurship literature suggested that it can contribute to theoretical development in internationalization in three respects. First, by developing a reconceptualization of internationalization as an entrepreneurial process, defined as the discovery, evaluation and exploitation of entrepreneurial opportunities in international markets. Second, through the identification of underlying factors and processes which influence the discovery-evaluation-exploitation process. Third, by focusing and tracing the development of opportunity and firms over time. Therefore, this research introduces entrepreneurship and related theories (i.e. social network and resources-based theories) to develop a process model of internationalization.

The next chapter (Chapter 3) will explore three propositions based on the literature review in this chapter.

3. EXPLORATORY RESEARCH

3.1. Overview

The literature review (Chapter 2) identified the factors that prior research and theory suggest could have impact on the internationalization viewed from an entrepreneurial perspective. Exploratory pilot case studies were conducted to gather preliminary data about the dynamics and processes relating to international entrepreneurial processes and to identify any other factors that may need to be considered. This section begins with the basic propositions that informed the study, and is followed by the research design. It then discusses the findings and concludes with a summary and implications for the initial model building in Chapter 4.

3.2. Basic Propositions

Chapter 2 identified the importance of three main factors affecting international opportunity discovery, i.e.: (a) prior knowledge, (b) business and social networks as sources of new knowledge, and (c) the active cognitive process of recombining prior and new knowledge in ways that lead to the identification of new potential opportunity, which in turn depend on the ability and willingness of a person or firm to do so, what may be called their entrepreneurial orientation. These factors and the basic propositions associated with each of them are summarized in Table 3.1.

Table 3.1 - Basic Propositions

CONSTRUCT	THEORETICAL BASE / PRIOR EMPIRICAL FINDINGS	LOGIC	PROPOSITION
Prior Knowledge	<ul style="list-style-type: none"> Each person's idiosyncratic prior knowledge creates a <i>knowledge corridor</i> that allows him/her to recognize certain opportunities, but not others (Venkatarman, 1997) Differences in prior knowledge (i.e., of market, of ways to serve markets, of customer problems) influences who discovers entrepreneurial opportunities and that different entrepreneurs see different opportunities (Shane, 2000) Prior knowledge can be classified into foreign business, institutional, internationalization (Eriksson, 1997), and technical knowledge. Lack of internationalization knowledge influences the perceived cost of internationalization (Eriksson, 1997) 	Prior knowledge contains tacit, experiential understanding of how the world works. It triggers individuals to appreciate the value of new ideas/information and enhances their ability to make new connections with existing ideas as well as the new ideas.	1) The greater the prior international experience and knowledge of members of a firm, the more likely the firm is to recognize entrepreneurial opportunities in international markets.
International Network Structure	<ul style="list-style-type: none"> <i>Weak ties</i> are more likely to provide unique information and act as bridges to information sources not necessarily contained within an individual's immediate (strong tie) network (Granovetter, 1973) Weak ties, as the result of cosmopolitanism of the decision makers, provide the necessary information for the perception of entrepreneurial opportunities abroad and export initiation (Ellis and Pecotich, 2001) The size of social network is significantly and positively related to the number of new venture ideas identified and the number of new venture opportunities recognized/discovered (Singh et al., 2000) 	The significance of a <i>network</i> lies in its ability to provide exposure to new ideas, information, and knowledge that often contain seeds of opportunities or at times, ready-to-exploit opportunities	2) The more international weak ties a firm has, the more likely the firm is to recognize entrepreneurial opportunities in international markets.
Entrepreneurial Orientation (EO)	<ul style="list-style-type: none"> Entrepreneurial Orientation (proactiveness, innovativeness, risk taking, competitive aggressiveness, and autonomy) refers to processes, practices, and decision making activities that lead to new entry. The strength of its relationship with organizational performance depends on the characteristics of external environment as well as internal organization (Lumpkin and Dess, 1996) Each dimension of EO has different effects on a firm's activity and performance (Kreiser et al., 2002) 	Autonomy, Innovativeness, and Proactiveness provide the independence, freedom, forward-looking perspective and the tendency to see new means-ends frameworks; while risk taking and competitive aggressiveness help to exploit them	3) The greater a firm's entrepreneurial orientation, in terms of innovativeness, autonomy, and proactiveness, the more likely the firm is to recognize entrepreneurial opportunities in international markets

3.3. Methodology

3.3.1. Research Design

Exploratory case studies were conducted for a sample of high technology firms drawn from knowledge-based industries, i.e. “those industries which are relatively intensive in their inputs of technology and human capital” (Austrade, 2002; OECD, 1999). The focus was on the early stage of internationalization; a specific ‘opportunity’ discovered, evaluated and exploited or not by a firm. The unit of analysis is the ‘opportunity-firm’ nexus. Dun & Bradstreet, The Australian Biotechnology Directory and a list from Australia’s CeBit Exhibition 2004 were used to identify a set of firms suitable for study. Only Australian owned firms with less than 200 employees were included, to ensure that the key decisions and processes took place in Australia. The population was defined as SMEs in Australia within the knowledge-based industries. In addition, firms relatively new to international activities but who still employed key executives instrumental in the internationalization decision were targeted. This was done to reduce informants’ memory recall bias. Finally, two types of firms were sought, those that had gone international and those that had not.

Twelve New South Wales based firms were contacted to obtain the eight studied, following a two-staged screening process (Yin, 2003). First, a professional recruiter assisted in the recruitment process and was briefed in following pre-specified screening procedures. For candidates who qualified and agreed to participate, the researcher conducted a second screening by phone and spoke to the person to be interviewed. The resulting 8 firms were drawn from four sectors, i.e. emerging industries (IT, and Health, Biotechnology and Science), high-tech manufacturing, medium-high-tech manufacturing, and knowledge-based services.

Interviews were conducted with the founders of each firm and/or key decision makers who were involved in the internationalization process. Depending on the availability of other key informants, other functional directors and managers also participated in the interviews. The research relied on three data sources: (1) semi-structured interviews with the Founders/CEOs/Directors/Managers; (2) a short questionnaire completed by the interviewee and; (3) other secondary data sources such as company documents, newspapers reports, and brochures. A case study protocol for the exploratory research was developed and reviewed by two other researchers (see Appendix B).

The interviews covered key issues such as prior knowledge, the nature of local and international networks, and entrepreneurial orientation while allowing for flexible exploration of the subject matter, e.g. new factors or themes were allowed and expected to emerge. Interviews began by asking informants to briefly describe the nature of their business and how their company was

formed. Next, the informants were asked whether they were engaged in international business activities and, if so, with which countries. After this the investigator selected the first few internationalization events to study in more depth, including how the firm recognized, evaluated, and exploited or not the first few opportunities in international markets, and whether and how prior knowledge, international and local networks, and entrepreneurial orientation played a role. They were also asked about their firms' resources, growth objectives, and their external environment. For firms that did not internationalize, the investigator focused the discussion on their domestic history and reasons that precluded them from going international.

Where agreed, each interview was taped. Detailed interview notes and impressions were recorded and completed within one day of the interview, regardless of their apparent importance at the time of the interview. A number of days after each interview, a case summary was sent to each respondent to confirm what was said. This helped clarify ambiguities. All the respondents returned and approved case summaries with only minor changes having been made. At the end of each interview, informants were asked to complete a questionnaire (see Appendix C) designed to measure the firm's entrepreneurial orientation (EO), including the degree of innovativeness, proactiveness, risk taking, competitive aggressiveness and autonomy. The mean scores of each EO dimension were used to assist interpretation and analysis of the interviews. An attempt was made to obtain additional relevant information including (1) archival records such as maps and charts; (2) documentation such as firm history and news from internet sources, corporate fact sheets and brochures; (3) informal observation of the activity of the firm, their laboratory or manufacturing facilities; and (4) physical artifacts such as tools and devices. The amount of such additional data varied by firm.

3.3.2. Analysis

Interpretation began by reflecting on the processes and factors involved in opportunity recognition in each case and the role played by the three factors identified in Chapter 2. Any additional factors or issues were noted. After this, cross-case comparisons were made to identify differences in the nature and role of different factors. Analysis followed a pattern matching logic (Yin, 2003). The logic compares the information collected with the expected opportunity recognition, evaluation and exploitation process identified in Chapter 2. Two other investigators independently reviewed the case narratives and case analysis and ambiguities were resolved through discussions. For the most part the focus on the analysis is not interpretive in the sense that we did not seek to understand the way the respondents interpreted events and outcomes, so much as develop a history of the key sequences of events leading up to the firm's first international venture. The method of analysis may be characterized as a form of narrative event

sequence analysis (Buttriss and Wilkinson, 2006; Van de Ven and Pole, 2005). Table 3.2 summarizes the profile of the cases.

Table 3.2 – Summary of cases in the study

Firm	Year est. Year int'l*	Industry/Business	No of Employees	Ownership status	Internationalizati on
Case #1	1997 1998*	Telecommunication (remote monitoring systems)	8	Private, wholly-owned Australian company	Internationalized, but low intensity
Case #2	1992 1995*	Telecommunications (antenna)	150	Private, wholly-owned Australian company	Highly internationalized
Case #3	2000 -	IT consulting & Mobile computing (Location Based Services)	6	Private, wholly-owned Australian company	Domestic
Case #4	1997 2000*	IT consulting (Logistic solutions using SAP)	180	Private, wholly-owned Australian company	Internationalized, but low intensity
Case #5	1999 2000*	Biotechnology (genome sequencing liquid and software)	10	Private, wholly-owned Australian company	Highly internationalized (born global)
Case #6	2003	Biotechnology (air monitoring systems)	3	Private, wholly-owned Australian company	Domestic
Case #7	2000 2000*	E-commerce (global trading and payment services)	4	Private, wholly-owned Australian company	Internationalized (born global)
Case #8	1980 1996*	Electronics (nursing call systems)	23	Private, wholly-owned Australian company	Internationalized, but low intensity

3.4. Results

3.4.1. New venture formation and early operations

The cases reveal that new venture formation was preceded by a discovery process rather than by a deliberate search. People used knowledge in their possession to recognize opportunity. This supports Shane's (2000) findings. The discovery was the consequence of the founders' prior technical knowledge and their alertness to the possibility suggested by new information they came upon and their willingness to act on it (i.e. absorptive capacity). None of them pursued an opportunity outside the domain of their existing knowledge base. Each of the quotes in this section illuminates this fact. There were no differences between internationalized and non-internationalized firms in this regard. The same pattern of *discovery* occurred in all eight cases. Sources of the additional information triggering the recognition of opportunities came mainly via interaction with other individuals and firms intentionally and unintentionally. These characteristics and patterns are well illustrated in Case #2.

"The background of the company came from the high technology radar ...the actual founders of this company worked for a company called Interscan (owned by the Australian Wireless Association)...whose background was in the military and civil aviation type of radar....there was a couple of key members in that firm saw the opportunity to apply the technology in a more commercial environment i.e. mobile and cellular communication.....AWA or Interscan were not interested in going down that route...they wanted to stick to their core business....so three or four people came out of there and formed Argus Technologies".

The founder in Case #4 discovered the opportunity to provide consulting services in the supply chain area through his prior knowledge as a consultant in SAP, prior education as a PhD in Applied Mathematics, and his encounter with the owner of a New Zealand-based (NZ) supply chain consulting firm in Australia. The discovery led to his acquisition of the NZ firm and the establishment of a new firm called Supply Chain Consulting Pty Ltd. The founder explains:

“I was working at SAP Australia at the time when I was in contact with the owner of the business...they did some business here in Australia for us...I got interested in their product and services they offered...I decided at that stage that I wanted to get out of SAP and do something different...I like supply chain...and I liked their company so much that I bought them and moved all of the operations to Australia”.

The son of the founder in Case #8 (Questek Pty Ltd) explained how his father, Bob Williams, and two other founding partners discovered the opportunity in designing and manufacturing nursing call systems for use in the health care industry. One element of the discovery can be seen from the ‘surprise’ that occurred when the founders made the ‘mental leap’. He explains:

“The three founders knew each other socially...but also through work related activities....they were all electronics engineers....they used to work for the public service teaching and lecturing sector in electronics....but they found that their side projects were more lucrative than working for the government.... so they started the company”

The founders in Case #5 (Nucleics Pty Ltd) discovered the opportunity to commercialize a novel genome sequencing system through their prior knowledge and alertness in biotechnology and knowledge of each other at the University of New South Wales. The founder in Case #6 (E-Nose Pty Ltd) discovered the opportunity in air monitoring technology from his extensive experience in the research of sense and smell, from consulting experience and from the knowledge, expertise and resources of his three professorial colleagues. The founders in Case #1 (Call Direct Cellular Solutions Pty Ltd) discovered their opportunity in specialized data and telemetry wireless solutions due to their involvement in their parent company’s remote monitoring technology project for a large Australian electricity company. The founders in Case #3’s (SmartBlue Pty Ltd) discovery of an opportunity in web application development and e-commerce came through their experience as IT consultants. The founder in Case #7 (Paymate Pty Ltd) discovered an online trading and payment platform opportunity through his prior experience as a consultant in the IT and banking industries.

The cases suggest that the discovery process also encompasses creativity, imagination, willingness and alertness as new opportunities are formulated from the information and knowledge they have. This pattern is well illustrated in Case #7. Through his experience in the

IT industry and as a consultant to major Australian banks, the founder in Case #7 (Paymate Pty Ltd) discovered an opportunity to bridge cross-border transactions. He encountered a problem or need and could see a way of meeting it. He engaged in creative formulation of supply but the problem came pre-given. The following three quotes explain the creative process:

“We created a different model, we could insert an identifier into a payment transaction which would appear on an individual’s bank statement and on our database....the traditional system is prone to friction....so maybe there’s an opportunity for us to do something different....we reengineered that process...that was the thing that led to the creation of Paymate...we defined the business....then we identify partners with whom we could solve the problems first”.

“The work we are doing, hasn’t been done in Australia....we couldn’t go to any Australian companies and tell them what we do....we have to invent it, make it up...so that’s obviously part of the IP...the process....on top of that we have a huge client base as our assets”

“It’s a high risk, nobody would bet a dollar on this. We talked to the VC and they said we were not there yet, there won’t be a market for that yet....so in December 2002, we applied for a grant from NOIE (National Office for the Information Economy)....we won that funding.....I have personally invested two years of my time in this project....we invested our money, with the opportunity cost we could have done other things.....we’re going to launch the myexport.com.au service in July with Austrade this year...and the whole thing is a complete risk because there’s nothing like it....so nobody can be sure if SMEs would take it up”.

Search behaviour plays the same role in the discovery phase. The pursuit of one opportunity can lead to the discovery of others. For instance, the founders in Case #1 discovered the opportunity for remote monitoring systems from their involvement in the parent company Call Direct Telecommunications Pty Ltd and spun off Call Direct Cellular Solutions. Through the act of learning by doing, they discovered another set of opportunities to which the original technology could be applied. One of the founders explains:

“We quickly realized that it [remote monitoring technology] was not limited to read only electricity meters...it can read anything...air conditioning control systems, building management systems, security alarms, fire alarms...or anything that needs controlling, reading or interrogating...then we provide solutions to do that...and the beauty of our solutions is that they’d be able to do it over mobile phone networks”

The founder in Case #3 initially discovered an opportunity in the areas of web application development, e-commerce, and e-business through his experience as an IT consultant and later formed SmartBlue with another partner. The initial discovery led to their seeing new opportunities in Location Based Services, a technology with mobile or remote monitoring and tracking capabilities. The founder explains:

“Online payment integration, credit card processing, content management, integration of web application to back-end application...that’s what we started off as....but after in the past one and a half years we spent a lot of effort and energy developing competencies in mobile computing space....we’ve developed expertise in Symbian system...one of our first areas of focus of mobile computing is the Location Based Services.....it provides telemetry; ability to know on a real time basis the location of their resources, field force, mobile assets (cars, trucks)...it’s more than just tracking...it’s also for monitoring, such as temperature inside the truck, pressure of the tire, amount of petrol”.

The role of prior knowledge, absorptive capacity, creativity in the discovery process, learning by doing, action leading to unexpected outcomes, and creative formulation of opportunities were observed during the firm's formation and early operations phase. This section illuminates the processes by which opportunity is recognized initially and describes the starting conditions to better understand how they impact on further entrepreneurial acts in international markets. The next section discusses the internationalization phase.

3.4.2. International opportunity discovery

The cross-case findings reveal that the *first* internationalization among firms with little or no international experience and knowledge is nearly always preceded by some kind of process of *discovery* rather than a deliberate search (case #1, 2, 4, 5, and 8). This is summarized in Table 3.3. Prior technical knowledge alone does not explain seeing the first international opportunity. In the absence of prior knowledge of foreign markets, the discovery was the consequence of the founders' prior technical knowledge and the alertness to the possibility suggested by new information that they either: (a) encountered from network ties and/or others; or (b) gained from the actions of others who, acting on their own knowledge and new information, found the focal firms, and their willingness to act on it. In contrast, those with extensive prior international knowledge did deliberately search for their first opportunity (case #3 and 7), lending support to proposition 1.

For example, in case #1, the founder of a mobile computing company *discovered* his first international entrepreneurial opportunity to supply an innovative remote meter-reading solution to an Irish electricity company during a Nokia conference in Germany. This opportunity was not discovered by chance but through a combination of factors, including a presentation to an international conference in Germany held by Nokia, a partnership with Nokia and Ericsson, prior technical knowledge in mobile computing, possessing and pioneering a unique technology in remote monitoring systems, strong R&D skills, EO (proactiveness, innovativeness, risk taking, autonomy), and being easily found by search engines such as Google. The opportunity found them as much as they found it.

“Deliberate search?...not really....it tends to come to us....we don't actually go out there and advertise in overseas magazines...or travel overseas to sell our products.....so we do it in indirect way...it come from our website, in working relationship with Nokia and Ericsson, attending international conferences and network with people”

“We went to a Nokia conference in Frankfurt where we gave a talk of what we were doing for an Australian utility company...at the conference there's a gentleman from the Irish power/electricity company...they came and spoke to me personally afterwards...they said they liked what we were doing then we talked about it and communicated when we came back...we sent them a trial...then they placed a commercial order”

Table 3.3 – The Recognition of First International Opportunity

Firm & founding	Presence of prior knowledge of int'l market prior to first entry	Presence of prior technical knowledge	Presence of international weak ties	Entrepreneurial Orientation	Mode of recognition of the first international opportunity	Country of and time to first int'l opportunity
Case #1	None. But have tacit experience from the domestic market	Expertise in electronics and computing	Member of Nokia and Ericsson networks	Innov, Proact, Auton (High); RiskT (High & Low); Aggressv (Low)	Discovery. When presenting a client's story in a Nokia conference in Germany they were approached by an Irish power company.	Ireland (1 year)
Case #2	None. But the three founders have domestic business experience	World class expertise in military antenna and radar technology	Not directly, but is well known in the telco forum in the region as a supplier to Telstra, Optus etc	Innov, Proact, Auton (High); RiskT (Medium); Aggressv (Low)	Discovery. Was found by a Singapore-based Telco vendor for a project in SingTel. The vendor has strong international operations and presence and was not satisfied with their current supplier	Singapore (3 years)
Case #3	One shareholder has extensive international experience with IBM, two founders have experience in India and Indonesia	Expertise in IT and wireless technology	An Australian with extensive int'l experience in high tech venture capital in Europe and US	Innov, Proact, Auton (High); RiskT (Medium); Aggressv (Low)	The firm knew the market in Europe very well particularly the UK so they Deliberately search in the UK market by hiring the Australian consultant	UK (not exploited yet, under negotiation)
Case #4	None. But the founder has extensive experience in SAP in Australia	World class expertise in SAP; the founder has a PhD in Applied Mathematics	Member of SAP networks	Innov, Proact, Auton (High); RiskT (Medium); Aggressv (Low)	Discovery. Was approached by SAP Hong Kong to fulfill a job that they could not handle in Hong Kong.	Hong Kong (3 years)
Case #5	None. Two scientists with zero commercial experience	Expertise in genomics and molecular biology (a PhD and post-doc in biotech)	A post-doctoral mentor in Japan who knew of the president of a large biotech firm in Japan	Innov, Proact, Auton (High); RiskT (Medium); Aggressv (Low)	Discovery. The alertness leading to discovery heightened as the firm faced a financial difficulty after early failure to secure financing	Japan (1 year)
Case #6	Strong. Previous international consulting but the client faced serious failures in the US market. Key employees (CFO, strategist, tech teams) have extensive int'l work experience	Expertise in smell-sensing technology (four professors in science/engineering and psychology)	The main founder and key employees have strong personal networks overseas	Innov, Proact, Auton (High); RiskT (Low); Aggressv (Low)	No international opportunities recognized	None
Case #7	The founder has extensive int'l business experience in banking and finance in India, US, Asia, Australia	Expertise in the interface of IT and cross-border transaction	Strong networks in India, US, Australia	Innov, Proact, Auton (High); RiskT (High); Aggressv (Low)	Deliberate search for international opportunities with E-Bay. But the search for B2B service led to discovery of C2C services to facilitate online credit card payment)	Virtual market in E-Bay (1 year)
Case #8	None. But has developed tacit experience in the domestic market	Expertise in electronics	Relations with an Australian architectural firm with multinational presence in Asia	Innov, Proact, Auton (High); RiskT (Medium); Aggressv (Low)	Discovery. Was approached by a large public hospital in Indonesia who was referred by the architectural firm's office in Indonesia	Indonesia (16 years)

Other entrepreneurs report similar stories. For example, the director of a telecommunication/antenna manufacturing firm (case #2) described how, prior to his first international market entry into Singapore, the company already had a strong reputation in the region as an innovative antenna manufacturer supplying world class clients like Telstra in Australia. This reputation led international firms to approach the company resulting in their first international opportunity. The director describes it this way:

“At that time, SingTel had a requirement...and they were unhappy with their current suppliers for whatever reasons...and they contacted a company called PetraCarbon based in Singapore to see if they could help them out with the particular problem...PetraCarbon is the middle man...they add value by being able to supply as a complete solution as they can...it saves SingTel from sourcing to multiple vendors...then they contacted us directly...they found us....as opposed to we actively go and seek an export market....so that's how the initial contact was made...and ofcourse we were interested...that's how it first started

“One of the main reasons ...was that we had superior performance product wise compared to others in the market a lot of this telco forum where people get together and it became known whose equipment is being used and its's not a trade secret (of who's doing great job)”

In case #8 an electronics company was led to particular international market opportunities through the effect of word-of-mouth. A multinational architectural firm that was a good customer recommended the firm as a potential supplier of nursing call systems to a large private hospital in Jakarta (Indonesia). The opportunity did not come through deliberate search or by chance, but as a result of existing strong relations with an international firm and their networks and referrals. *Here again they were discovered more than did their own discovery.* This case provides evidence that networks can create ‘blockage’ to the outside world such that the firm only discovered its first international opportunity 16 years after the firm’s inception. This architectural firm had the modus operandi of bringing their partners together on a construction project. This ‘client followership’ evidence is similar to that reported by Bell (1995), however, in this case embeddedness with networks may come at the cost of a much longer time horizon to recognize the first international opportunity. Industry characteristics play a role here, but without the existence of these networks of relations it would be difficult for the firm to discover the opportunity by itself.

“Essentially health-care is quite a referral-based market...although they do advertising, it's not a great way of generating business...it's more based on referral, especially in aged-care, ...there're a handful of preferred architects for aged-care, so it is a tightly-knit community...so referral is very strong business for us”

“We have no idea about that (Indonesian market)...we don't really understand what their market requires for a product....all we know is that they came to us and want to launch our product....we don't know their problems...so we think it must be viable in their marketplace”

A biotech start-up firm (case #5) found themselves in a cash-strapped position due to failed negotiations with a university-based venture capital organization, and their failure to secure early R&D financing. The entrepreneur's strong motivation heightened his alertness to new opportunities and, coupled with his ties to a scientist known from the past, led to the discovery of an opportunity in a large Japanese biotech firm.

"The decision to enter the Japanese market was not a conscious one....it is that just I had a contact in Japan...so it could have been in Switzerland, Germany, Alaska...it doesn't matter...we just need the resource....so we did not go to the neighbouring market first"

"At that stage we were desperate....BioRad dropped us...we had no source of income....I thought about a mentor of mine whom I worked with when I was doing my postdoc...he is extremely famous in biochemistry and molecular biology in Japan...he's Japanese American...he has strong links to Japanese companies....so after signing confidentiality agreement, we showed the technology to him and he said it was really cool and he wanted me to show it to Takara Bio...and he was consultant to Takara Bio...through this contact, I was invited to Japan to make a presentation of ASIN, the novel genome sequencing system"

The cross-case findings suggest that the incidence of *deliberate search* for a first international opportunity occurred when there was extensive prior international experience and knowledge. For example, the management team in the mobile computing company (case #3), had extensive prior international experience and knowledge. Specifically, one the founders had experience with IBM in a number of countries, including Europe, while the other two managers were IT professionals with extensive experience in India and Indonesia. Their understanding of the relatively mature and well established infrastructure of the mobile/wireless market in Europe, especially in the UK, led to their *deliberate search* for opportunities in the UK. This process was assisted by the hiring of an experienced Australian consultant who had extensive high tech venture capital experience in Europe and the US. The founder explains:

"Instead of spending so much effort and money in educating the market, we think let's try and see if we can operate in a more mature market...that's where we identify UK as the very first in the rank...we know that telco in Europe have deployed mobile location services on the telecommunication network.....so they can find a location based on the triangulation of signals from three different cell sites"

"It started off with us hiring a consultant here to carry out our marketing activities.....but when I hired the person I knew I was looking for somebody ... with strong connections with people at the senior level.....we identified this person who has been very successful in the US and Ireland for 11 years in taking small tech firms to market...he's an Australian guy but lived in the US for 11 years and Ireland in 4 years...and he's now back in AustraliaI have been looking for this kind of guy...because we knew we are small"

In another example, the founder of an online payment company (case #7) had extensive international experience in the banking and finance sectors in India, the US, Asia and Australia. His in-depth knowledge of cross-border transactions allowed the firm to *deliberately search* for

opportunities with E-Bay. The search for a B2B service opportunity eventually led to the discovery of a C2C service opportunity based on facilitating E-Bay's customers' online credit card payments. Thus, knowing what and where to search, the firm deliberately searched for international opportunities at the outset. Thus, deliberate search was found to play another important role in this case. That is, through this process the firm *discovered something unexpected and unsought*. The founder explains:

"I was always interested in the cross border trading because there is a lot of friction in cross border payment....banks work through correspondence banking arrangements globally...it's a network style organization....where buyers and sellers from two different countries may have different banks....the money transfer between the two companies may involve four other banks in between...so it is a system designed for low volume, high value transactions....but today with internet and the emergence of SMEs trading, the volume has gone up but the value has gone down....the traditional system is prone to the friction....so maybe there's an opportunity for us to do something different....we reengineered that process...that was the thing that led to the creation of Paymate...we defined the business....then we identify partners with whom we could solve the problems first"

"We pitched to E-Bay to offer them B2B services. They want credit card services instead...for their clients to do transactions with each other....so then we customize our service for a C2C model....E-Bay is operating in 28 countries, with around \$16 billion worth of trade worldwide....so we started off in bed with a global partner....so from the time we began, our focus has been on cross border transactions....and we have tens of thousands of clients, probably half are in overseas....we are still partnering with E-Bay...we don't have other partners"

Surprisingly, those factors that the literature has traditionally suggested as important sources of knowledge about international markets (i.e. international business experience, foreign education, proficiency in foreign languages, and foreign residency) did not lead to opportunity recognition in the specific countries where the founders and members of the firm had prior histories. However, they more generally influenced the level of international entrepreneurial alertness, willingness and ability to search internationally, and willingness to accept the uncertainty associated with the first international opportunity.

The first internationalization provides new information, new network ties, tacit experience through learning by doing, and further efforts to develop and refine the opportunity first recognized. Firms were discovered by others as much as they had made their own discovery. The cases suggest that the discovery process also encompasses creativity, imagination, willingness and alertness as new opportunities are formulated from new information which is derived from network ties, from others and from the knowledge they have and develop.

A few of the cases (Case #1, 4, 5, and 7) *subsequently* engaged in a deliberate search guided by the initial formulation of the international opportunity. Such searches could also produce unexpected results and the creative co-development of opportunities with others which are international (Case #5 and 7). *Search is initiated by the focal firm as well as others* as they seek

to improve existing supply or to meet existing demand. This often results in the focal firm being found by others, which from the focal firm looks like discovery. In addition to network ties, the *internet also helped the firms be discovered by others*. The role of the internet to facilitate opportunity discovery began to appear in two of the cases (Case #1 and 8). These patterns are well illustrated in the cases below.

The lessons gained from the first opportunity discovery in international markets led the biotechnology firm in Case #5 to subsequently engage in a deliberate search and the creative co-development of an opportunity in the US market. The founder, Dr. Paul March, explains:

“Although I am from the US, I don’t have good contacts with those genome centers in the US....but then it came to just a matter of knocking on the doors and we kept doing that until we get a chance to present our products....just keep banging on their doors....just keep visiting them and show them we’re a company that’s going to be around..... there are only a small number of large centers....we phoned them up and said we are a new company and have got some new products....we visited them monthly....or at least every other month....it takes a while to get in that way”

“If you have 50 automated machines doing the same thing, it’s an industrial application. So if they are going to change one little thing like take our product which is a liquid and add into their sample, it’s incredibly complex....it’s like going into an industry and say change the bolt on this one process and you have to change all the bolt on all machines in the factory. So there’s a whole implementation process ...”

The mobile computing firm in Case #1 was subsequently discovered by an international opportunity through contact made by an Nokia-related end user in the Czech Republic. Subsequently, the firm was discovered by a US company (Land Cellular) via a Google search. In this case, the discovery would not have been possible without linking the knowledge and abilities of different firms to create new means-ends combinations. After a number of international opportunity discoveries and tacit experience in international markets, the firm began to deliberately search the Indian market, with the ex ante rationalization that it was a massive market for remote meter monitoring technology. Although they believed they knew what they were looking for, they did not. It was an unknown and unknowable adventure; a false opportunity despite the substantial resources and time spent. In the absence of a degree of relevant prior knowledge the opportunity was not recognized. The founder of this firm explains:

“Through the representative of Nokia in Czech, he contacted us and we had a conversation with the end users and that’s how we got there”

“if you type in GPRS modem through Google, you will find that our website will appear on the first page....it’s a highly viewed site for people looking for this type of technology....so the internet for us has been the driver....and it’s where we get three or four sales leads from overseas....they [Land Cellular] found us through the website”

“There was one time we also spent some time in India....a company that worked for a lot of energy companies....simple visits over there and a lot of customer demonstrations....a lot of products suitable for them...but no sales at the end of it....that’s when we say that from now on let’s focus on

Australia.....India is probably a good lesson in terms of how we run the business....it's just a different way of doing business in India.....if you don't have a lot of expertise and being with the right partner, the way of doing business there is different from here, the US or Europe....we didn't understand that and we tried to apply our business principles in India so it didn't work"

Following the discovery and exploitation of the first international opportunity in Singapore, the antennae manufacturing firm in Case #2 subsequently discovered an opportunity through an approach made by an ex-employee of one of its competitors in New Zealand. Later it was discovered by the same vendor PetraCarbon (whom it dealt with 5 years earlier) for a telco project in Pakistan. Further international opportunity was discovered through a weak, previous tie (an ex-employee, a Chinese lady, who became the managing director of a small sub assembly firm based in Hong Kong). The firm acquired the small assembly firm and turned it into Argus Hong Kong. Through the ex-employee's Guanxi in China, the firm 'discovered' further international opportunity in China and set up Argus Guangzhou, Shanghai, and Beijing. The marketing director of Argus explains:

"There was a company in NZ called Deltec which manufactures antennas...they were acquired by Andrew Corp (US)....they closed down the NZ operation...but one of its key sales people (a NZ born Chinese) who was working at Deltec at that time approached us...and said he had contact in Taiwan and can help us expanded to Taiwan market ...that agent's relationship is very important for us.....that agent also came through his (NZ born Chinese) contact"

"It came through PetraCarbon again...we have broadly 2 customers...like Telstra (the carriers) and the OEM (Lucent, Nortel, Ericsson) who provide turnkey solution....they put together the base station.....they consolidate everything....when Pakistan was starting to develop their mobile market, it was Nortel who provided everything.....Nortel's regional HQ was based in Singapore, that's where the request tender quotes came out....so from Nortel to PetraCarbon....they came back to us here....So (as drawn by the key informant) it was originated from Pakistan operator → Nortel Pakistan → Nortel Singapore → PetraCarbon (Singapore) → Argus Technologies"

"We bought a small company who's doing sub assemblies in Hong Kong....the MD of the company used to work for Argus...she's a Chinese lady.....and has a lot of relationships in China through her family....it comes back to Guanxi"

The logistics software firm in Case #4 was initially discovered by its network ties. SAP Hong Kong could not handle a job for its local client so contacted SAP Australia, and this led to Supply Chain being discovered by the first international opportunity. *Here they were discovered more than did their own discovery.* This is another example where the initial trigger of a very small first international opportunity (in Hong Kong) led to a *deliberate search* for opportunities (in Asia) in a highly systematic manner. This firm was the largest of all firms in the sample, with 180 employees, thus making such systematic investigation possible. The founder, Dr. Tony Carr, explains:

"The way that we entered Hong Kong is to take some adhoc consulting with another partners, i.e. SAP Hong Kong....we work with our SAP partners there....when our partners cannot fill their role, we come

and do it.....that gives a bit of exposure and knowledge of what's going on...and that's what we've done to date..."

"I have traveled to various parts of Asia to investigate the opportunity that might be there...I am very fortunate that the SAP community is tight community and we do get quite a significant amount of information/feedback from people we know in the region...for instance, one of my close associate is a Managing Director of SAP service provider in Vietnam....so I am able to get some very interesting data and information with regard to market in the country....and they are also a start-up in that country....so it's easy for me to see the pitfalls, problems they encountered"

The electronics firm in Case #8 discovered its second international opportunity in Malaysia just two years after its first discovery in Indonesia. This was the result of learning by doing and responding to Thompson Adsett's Malaysian subsidiary which discovered the firm. The firm's next international opportunity was recognized through the discovery of a Canadian business school professor using the internet. The son of the founder of this firm explains:

"The second internationalization experience was in 1998 to the Malaysian market with similar method as in the Indonesian market....contacted by customers through architectural firm's (Thompson Adsett) referral"

"It was the business school professor at the University of British Columbia...his MBA students researched us and showed that we were one of the best companies in Australia in nursing call system.....the professor then came to Australia and made an offer to buy our IP to launch the product in the US market....later they became our sister company as we bought share ownerships in their company"

A common characteristic found in all firms in this study is their high-level of innovativeness, proactiveness and autonomy providing support for proposition 3. Their innovativeness and proactiveness is reflected in their ability to be pioneers in world-class technology. But they also know their limits and the consequences of being innovative and proactive, as demonstrated in the following quote:

"R&D is very important to us....although this company is young but it has the world's first technology....it won 12 awardsthere's a reluctance to change....but from technological and manufacturing point of view we do think out of the box" (Case #2, telecommunication/antenna entrepreneur)

"We survive by being a leader in R&D and offering new product to the marketplace....we are seen in the market as the leader, with advance and cutting edge technology for aged-care equipment....we are interested in trying new things, but in a limited way....we are approaching things in a fairly focused way but we are also willing to step off that tangent to try and see what else is available....but we haven't done any radical departures though" (Case #8, electronics entrepreneur)

Autonomy is reflected in the ways the firms are organized, which tend to be organic and less hierarchical.

“We allow freedom in discussing, researching, trying out new ideas...if there are new ideas....let’s analyze the ideas....but we pursue ideas where the distance between concept to reality is achievable and we can do it” (Case #3, mobile computing entrepreneur)

“From an engineering/technology viewpoint.....there’s a lot of freedom” (Case #2, telecommunication/antenna manufacturer)

“The company is non-tiered structure...there is no hierarchy in this company, anyone can talk to me and make suggestions” (Case #8, electronics entrepreneur)

Our findings also highlight the opposing views in the literature in relation to risk taking. Firms in our sample that recognized international opportunities ranged from those that can be described as prudent and calculating risk takers (case #2, 3, 4, 5, 6, 8), to those that can be described as relatively high risk takers (Case #7). Further, in any one firm the level of risk taking can be both high and low. Case #1 is an example:

“In day-to-day business, we play it safe because we know we have good, solid products....We are conservative in a lot of respect...in terms of technology, we only build if there’s customer demand for it....that’s what we call prudent management.....however there’s a different risk, for example the fire alarm project where we have to invest new office, hire four to five extra people....a lot of our focus will be given for this customer alone....it’s a large and important project....it’s something that can’t get wrong....even though it’s risky but we decided to proceed because we know the technology we have is good enough to do this basically”, (Case #1, mobile computing entrepreneur)

The online payment company in case #7 showed a relatively high propensity for risk taking in that it was involved in a number of risky projects to create a new market for online trading and payment.

That’s part of our business....we are always looking for things and try things that haven’t worked....myexport.com.au is an example.....it is high risk, nobody would bet a dollar on this...I have personally invested two years of my time in this project....we invested our money, with the opportunity cost we could have done other things...the whole thing is complete risk because there is nothing like it....so nobody can be sure if SMEs would take it up..... we do try and do things which are new and risky but not all are successful” (case #7, online payment company)

Other firms tended to be risk averse and preferred a safer approach to doing business. Nonetheless, these firms were also able to discover and deliberately search for international opportunities.

“We are risk averse...as long as we can manage the risks using our expertise, we will choose riskier projects” (Case #4, logistics software company)

“We are cautious, we don’t want to jump in too early....ensure that the shareholders are protected from massive losses....we spend a lot of money understanding if internationalization is the right thing to do....we seek advice from independent advisors (i.e. IDC), boardroom table, government trade agency, from my peers who have internationalized”, (case #4, a logistics software entrepreneur)

“Our preference, at the moment given our size, we want to undertake projects where the chance of failure is low to medium....that’s just being prudent in management...knowing we are a small company...not having a lot of money, we can’t afford to have too many failures”, (Case #3, a mobile computing entrepreneur)

The founder of the biotechnology firm in case #6 witnessed the failure and near bankruptcy of its consulting client in the US market. This led to his extreme cautiousness and risk aversion in international markets which may in fact inhibit the firm from recognizing opportunities in the future.

“There are many sharks everywhere! There are the competitors that could come in with a price point which you couldn’t reach. Because they have large capital, they can ignore the patent and you would be able to fight them because you are too small.... Our competitors can be just anybody, pharma, software etc. As soon as the big players see this technology, they will soon compete or buy us.” (Case #6, a biotech entrepreneur)

“We are also new in the business, so we are reluctant to getting ripped off, we are a typical knowledge-company with of 20 years of research, we are not going to let people steal it from us, and that fear may limit our growth....we are going to be risk averse and rip-off averse....and because we are new to it, we can’t discriminate a true friend from a false friend”, (Case #6, a biotech entrepreneur)

The cross-case findings showed that most of the firms had a relatively low-level of competitive aggressiveness, but were rather more focused on leveraging contingencies to their advantage and to find their own unique opportunities. Case #2 was an example:

“We are not in a position to go head to head to our competitors.....we are aggressive in as much as we are looking at niche market where we can grow our business without having to ring the bell to the major competitors” (Case #2, telecommunication/antenna entrepreneur)

“We have never focused on competitors....we always said to our staff to forget about what our competitors are doing and focus on what we do....if you focus on your competitors than on your own business...it’s detrimental to what you are trying to do” (Case #1, mobile computing entrepreneur)

The results provide support for Proposition 3. However, contrary to our expectations, a moderate attitude to risk-taking helps opportunity recognition. Extreme risk-aversion causes a blind-spot preventing entrepreneurs from cognitively contemplating or formulating an opportunity. Competitive aggressiveness was relatively low among these firms, rather, ‘aggressiveness’ in this study referred more to a firm’s strong desire to leverage contingencies that present themselves than to “undo-the-competitors” as suggested in the original EO scale. Thus, the object of their aggression was not competition but to leverage new opportunities which arose.

3.4.3. International opportunity evaluation

The cases reveal that the evaluation of the first and subsequent international opportunity tends to be spontaneous, creative and improvisational, based on simple heuristics (Case #1, 2, 5, 7, and 8). There was little evidence of market research, competitive analysis, or systematic evaluation of alternatives. Country market factors were occasionally considered but most cases did not conduct systematic country market analysis. This is consistent with prior studies (Ellis and Pecotich 2001, Ellis 2000). The exception is Case #4. The boundary between evaluation and exploitation occasionally blurred and converged in time as an opportunity was refined and developed. The refinement leads to the choice to exploit or not. This occurred in Case #5's venture into the US genome centers. Although there was little systematic evaluation of alternative opportunities, there were some basic considerations in judging the opportunities. In general, issues related to feasibility (i.e. the firm has the resources/capabilities or access to exploit it) and value (i.e. the opportunity offers cash flow) became the firm's baseline considerations. This selection is evident across all cases, except for Case #6 which has not yet considered any international opportunities.

Affordable loss was an important heuristic. The biotechnology firm in Case #5 had been in a state of desperation when it discovered the opportunity to sell its patent to Takara Bio. It was a potential collaborative R&D with no risks on the patent and the technology was still at an early stage. The firm was willing to 'sacrifice' one of its inventions to get started. It was a quick and easy decision for Nucleics as they needed the cash flow, which was attractive for them. Moreover, the firm had four to ten inventions at that time so they considered commercializing one of them just to get started. The decision was 'spontaneous' in that this firm did not conduct a systematic evaluation of alternative opportunities. However, they considered the value of the opportunity which will be worth millions of dollars of commitment by the US genome centers and could set the world benchmark once they are adopted by the lead users. The evaluation and exploitation process occurs almost simultaneously as they refined the opportunity. The founder, Dr. Paul March, explains:

"When we were making the decision...we were making a decision out of desperation to get resources.....the most important decision was to get someone who would agree to sign a contract to buy a piece of IP that we considered dispensable. Dispensable in that sense that it was a good invention, but we have 4 or 5 or 10 invention and said...lets take one and sell it and use the money to get started....so our decision making process was not at all a conscious thing "lets go to the Japanese market".....it was just that I had a contact who knew someone in a Japanese company.....it could have been in Switzerland, Germany, Alaska....it didn't actually matter...we just needed the resources....so we didn't actually have a plan of how to get into a market....we weren't really a company at that stage.....we were two scientists....we needed money to develop and do R&D from the backbone of the company"

"So I presented it. They said excuse me...they didn't even leave the room...they had a conversation among themselves in Japanese....and then the President talked to me "yep".....so lets now negotiate the price. The price negotiation happened at that time as well. So when I left the room 30 or 40 minutes

later the only thing I had to do was to draft the contract. So I had to go out of the room and called my founding partner in Sydney...and it happened. So it's really fast"

"That technology we were willing to sacrifice totally just to get funds to develop the stuffs that we are now just about ready to sell"

"If the US sequencing centers take this product onboard, they'll get more efficient and get better data...then all the sequencing centers around the world will come knocking on our door to try to get the product....because if they don't their data won't be as good. So the standard will be set in the US by the centers"

The firm in Case #1 was only interested in obtaining cash flow and did not consider exporting as "rocket science". Furthermore, this firm also made no systematic evaluation of alternative opportunities. Gaining a local partner was a critical issue for them, particularly after their failed attempt to explore the Indian market. The founder, Michael Ash, explains:

"Nothing....money. Just give us the money...it's just the money [snaps his fingers]....pay the money upfront and that's it....that's the only consideration we've got.....I don't believe exporting is a rocket science....there're some simple rules to follow...it depends on the type and size of company you are....what your personal and business objectives are....by leveraging off strong relationships with other companies....by promoting well and differentiating our product in the market....and ensuring anything we do we have a buyer for it....the only criteria for me is that at the end of the day there's someone who's going to pay me and put a deposit into my account....so it's that simple for me....they pay and we'll do it"

"It's because it was the first one that we came across. Back in 1998 we didn't have a mindset like let's set up a company in Ireland...it was a sale that came to us ...we found it by taking our work and speaking at the conference....it's again a sale which came to us...We weren't considering other overseas market opportunities at that time" - Michael Ash

"So there's always a danger in setting up your own resources overseas that you'll take your eye off your own backyard....if you can find a partner, like Land Cellular which we have in the US...then that's a different story altogether because none of our resources are tied up...they're all still here"

"India is probably a good lesson in terms of how we run the business....it's just a different way of doing business in India....if you don't have a lot of expertise and being with the right partner, the way of doing business there is different from here, the US or Europe....we didn't understand that and we tried to apply our business principles in India so it didn't work....doing business in India is not difficult anyway but we wasted a lot of time there....our ambitions were clouded by the promise of the massive market there and because our technology was so good for them"

Upon the initial contact, two of the founders of Case #2 went to PetraCarbon in Singapore for negotiations. Four months later the contract was signed. *No systematic identification and evaluation of alternatives is evident.* Subsequently, no systematic comparison of alternative opportunities was made by this firm either. The decision to acquire the small sub-assembly firm in Hong Kong (which became Argus Hong Kong) was based on simple heuristics and familiarity with the managing director of the acquired firm (who was an ex- employee) and the notion of Hong Kong as being the gateway to China. Operational issues such as the availability to provide local support and value of opportunity were considered. To date, the firm has a list of

international opportunities but the selection is not based on ‘maximizing’ logic but on those which are doable. The marketing director, David White, explains:

It was more driven by conscious decision and recognition of the Chinese market...this is the biggest growth in Telco in the world...only 8 hours flight away....we have a technology that they appreciate...and there’s obviously a huge opportunity in China” – Mr. David White (Argus Case #5)

“But the question is, can you make money out of it, how do you support it in the first place, and what do you need to do to establish yourself in the market”

“We’ve been lucky up till now because the growth is there, we’ve been able to be selective with the customers we deal with....we’ve got a list of opportunities a page long....we are trying to select the one that is not necessarily most profitable but where we are going to be successful ...we can chase that”

In Case #3, the choice of UK as a target market was related to ‘ripeness’ of UK’s Telco industry for remote monitoring technology which allowed the firm to undercut the market without spending too much to educate local clients about such technology. This is consistent with the Kirznerian view that discovery was based on “unfocused, unspecified, purposefulness – a general intentness...not rational, maximizing choice with deliberate cost-conscious search activity...not to have any specific search objective or search procedure in mind” (Kirzner 1994, p.107). For the firm in Case #3, the operational matters were important. That was why having a local partner was critical for them as it would help make local clients feel more comfortable. The founder explains:

“Instead of spending so much effort and money in educating the market.....we thought, let’s try and see if we can operate in a more mature market...that’s where we identified the UK as the very first in the rank....Time zone difference is a critical matter....all the support we have is from here...if the customers have problems, I can’t respond quickly from here.....that’s why we intend to have a licensee there in the UK....we need to train the licensee”.

The firm in Case #4 is the only case that systematically evaluated alternative opportunities. The firm showed clear profit maximizing, cost-conscious behaviour, and was concentrating on China for its market size. Intellectual property protection was a key issue. Furthermore, Asia is a choice for the firm due to its similarity in time zone and distance, important considerations when responding promptly to local clients. The founder, Dr. Tony Carr, explains:

“Our biggest concern is the cash cycle/return on investment. This translates into factors such as, the cost of setting up an overseas office, time to market, capital to invest, size of the market, availability of local skilled human resources, trust, and tax regime”

“We are concentrating on China....it is a pretty good opportunity, the largest consumer base in the world. If you are interested in serving the manufacturing sector, China is a big market....It is easier to serve Asia from Australia given the similarity of time zone and close distance that will enable an Australian firm to respond to clients promptly. In my investigation, it appears easier for an Australian company to operate in Asia rather than in the US or Europe”

“We are cautious, we don’t want to jump in too early....we want to ensure that the shareholders are protected from massive losses....we spend a lot of money understanding if internationalization is the right thing to do....we seek advice from independent advisors like IDC, boardroom table, government trade agencies and, from my peers who have internationalized. We do analysis on SIC codes before approaching potential clients and target firms which don’t have SAP systems in place, including our competitors’ customers”

3.4.4. International opportunity exploitation

The cases suggest that opportunity refinement and development is an integral part of the exploitation process. The refinement process involves a creative combination of prior knowledge, new information, internal and external resources. The firms tend to make do with what is at hand, i.e. bricolage (Baker and Nelson, 2005). In the refinement process, the practice of bricolage extends to include identifying, accessing, and creating resources from network ties and other firms to exploit opportunities. Therefore, how the refinement and development process is carried out, influences the form of exploitation. As a consequence, it is not surprising that the cases reveal that partnership or cooperative mode and contractual mode are preferred forms of exploitation (Case #1, 2, 3, 4, 5, 7 and #8). In the later stages of internationalization, some firms began to use integration mode, which included equity joint venture (Case #8) and small scale foreign direct investment (FDI) (Case #2). This may reflect a growing level of prior knowledge, network ties, and development of the firms’ resources. This is well illustrated in the following examples:

The firm in Case #5 initially developed its opportunity by means of an R&D collaboration. Next, it co-refined and co-developed the opportunity with the US genome centres to solve the potential clients’ problems. The founder of this firm explains:

“We sold them the intellectual property....we sold them the patent....we were meant to develop the patent in a collaborative manner; they didn’t actually carry through with the collaboration...the technology was still at a very early stage.....this was probably only one of the many projects they’re dealing with.....so collaboration and the whole contract has since stopped...we don’t have any business with them anymore...It was not easy to do business with a huge company....the relationship was not easy... they can easily swallow or crush us”

“They haven’t started buying our products but they are targeted.....a few of them have agreed to have us go there and install our products....If you have 50 automated machines doing the same thing, it’s an industrial application. So if they’re going to change one little thing like take our product which is a liquid and add into their sample, it’s incredibly complex....it’s like going into an industry and saying change the bolt on this one process, then you have to change all the bolt on all machines in the factory. So there’s a whole implementation processthey actually have to test it on a small scale to make sure it works....then once they’re convinced that it works, it has to be implemented into their workflow, they have a whole workflow with all these protocols...it’s a whole industrialized process. So our implementation isn’t simply me giving them a box and there you go and use it....it’s and industrialized process and we have to be there.....to make sure the whole process goes smooth....and that doesn’t cost anything to them but it does to us”

The firm in Case #1 has consistently relied on partnerships as a way of reducing uncertainty and avoiding large foreign market investment. The importance of partnership was emphasized, particularly its failure to explore the Indian market without a local partner. The founder of this firm explains:

“Find a strong global partner who you can leverage off ...Nokia and Ericsson are the prime examples.....as a small company I don't think you can do it all by yourself....I don't think you should put the resources such as manpower and finance to try to set up your own overseas operations because it's hugely costly and risky....a better way is to find a partner overseas who has the sales channel already”

The firm in Case #2 is a prime example of ‘vendor followership’ which continued to rely on the vendor to exploit international opportunities. Through network ties (an ex-employee) the firm also used a small scale FDI (by acquiring a Hong Kong sub-assembly firm) and used the new resources and network ties to enter China. The marketing director of this firm explains:

“PetraCarbon has grown in many countries as well ...in Thailand, Philippine, Jakarta, Malaysia in the whole region.....so wherever they move, we sort of move with them as default”

“In this case we were working for a reseller.....so the product was not sold directly to the end customers.....it was sold to PetraCarbon and then re-sold to the end customer)...”

“We also bought a small company who's doing sub-assemblies in Hong Kong....the MD of the company used to work for Argus...she's a Chinese lady.....and has a lot of relationships in China through her family....it comes back to Guanxi”

The firm in Case #7 also continues to rely on partnerships in foreign countries, especially after the success of its partnership with E-Bay. The founder of this firm explains:

“We have to change the current behaviour of sellers and buyers so they can trust us....so the partnership we go in with is critical to us.....we have interest from the US Dept of Commerce and the Hong Kong Trade Development Council...so we make a model of that here with Australia and we can replicate that in those countries”

“The idea is to prove this business model is working in Australia before we take it worldwide.....we 're continuously looking for partnerships that will extend our reach into the markets....the project we are doing with Austrade is so that we get another partner....if we go overseas we have to find a partner like E-Bay and they would market our service locally”

“The next 12 months is about global partnerships....what we do now is to raise money in order to do that.....we've been dealing with venture capital firms”

The firm in Case #8 shows that the exploitation process can be dictated by others. Initially, the firm responded to its client' request by directly exporting its nursing call systems to South East Asia. Next, it responded to requests by a Canadian business school professor to sell not only the product but the intellectual property (i.e. licensing) as well. The growth of the Canadian

licensee led to the firm's equity investment in the licensee, with the firms becoming sister companies. Lack of an appropriate local partner is a barrier to exploiting further international opportunities, as the son of the founder of this firm, who is also the General Manager, explains:

"They researched us and said that they wanted to launch this product in North America....but they said we do not want to buy your product, just your intellectual property..."

"Later, VHM became a sister company of Questek as Bob and Richard and a few other staffs had bought share ownerships in the company"

"The obstacles are to find the appropriate partner...as well as finding the time to give to New Zealand in forming the relationship and giving them the education and trainingso time is a major constraint.....we have an offer from a Malaysian company interested to be our distributor there....they came to us.... but we don't have the time to follow it up"

3.5. Conclusion

The exploratory research explores the international entrepreneurial processes by focusing on the opportunity-firm nexus. That is, why and how opportunities are discovered, evaluated, and exploited, from the new venture formation to the first and subsequent internationalization phase. The cases reveal that new venture formation and the first internationalization phase is largely a process of opportunity *discovery* rather than a deliberate search when little or no prior international experience and knowledge is present. This supports the Austrian economics view of market as a discovery process (Kirzner, 1997; Shane, 2000). In the absence of prior knowledge of foreign markets, the discovery was the consequence of the founders' prior technical knowledge and alertness to the possibilities suggested by new information they encounter either from (a) network ties and/or others, or (b) the actions of others who, acting on their own knowledge and new information, found the focal firms, and their willingness to act on it.

The first internationalization is critical as it provides new information, new network ties, tacit knowledge through learning by doing, and further efforts to develop and refine the opportunity first recognized. The cases suggest that in *subsequent* internationalization, firms were discovered by others as much as they made their own discoveries. The discovery process encompasses creativity, imagination, willingness and an alertness to formulate new opportunities from information derived from network ties and others, and knowledge they possess and develop. Firms occasionally engaged in *deliberate search* which is guided by the initial formulation of the international opportunity. Such searches could also lead to unexpected results and the creative refinement/development of opportunities with others that were international. Search is initiated by the focal firm as well as by others and this often results with the focal firm being found by others which, from the focal firm, looks like discovery. The path

can be traced as a mutual and/or one-sided discovery/search emanating from the focal firm and from others as they interact and as one finds the other. In addition, the internet also helped the firms be discovered by others.

The finding that the internationalization amongst firms with little or no prior international experience is *more discovery rather than deliberate search* is consistent with prior research (see Simmonds and Smith, 1968; Ellis and Pecotich, 2001). The finding is also consistent with prior studies that show that *subsequent internationalization is often driven by deliberate search, and that some of that search can lead to further discovery* (see Crick and Spence, 2005). In this instance, a firm's known unknowns have developed from subsequent international experience and knowledge, and hence they know what and where to search. Although the findings show that 'luck' or serendipity can be a factor, it is the firm's 'ability to see' new means-ends combinations that allow the firm to discover an opportunity. This supports prior conceptions of the difference between ability and luck (see Kirzner, 1997; Denrell et al, 2003).

The results support previous findings that idiosyncratic prior knowledge creates knowledge corridors that shape what can be seen and responded to. In particular, prior technical knowledge proved to be important in the high technology cases studied, as it provided the basis for formulating an opportunity from the various ideas and information available. The social and business relations and networks in which a firm is embedded play a critical role in determining what information and ideas move around and who can and does what and when. A lack of business-related knowledge in foreign markets was mitigated by the openness to new ideas, or what may be called a firm's absorptive capacity (Cohen and Levinthal, 1994). A firm's absorptive capacity shapes the development of its knowledge base which in turn affects what they can see and discover.

The importance of accessing and leveraging the ideas of others as well as one's own, comes across as a central finding in this study and parallels recent developments in theories of innovation which stress the role and importance of relations and networks (e.g. Chesbrough, 2003; Hargadon, 2003; Roy et al., 2004). Key success factors here seem to lie in the ability to generate diversified ideas as the raw ingredient for further processing and refinement. Organizations can create this diversity by enhancing the mix in their own and their extended brain represented by their network (Wilkinson and Young, 2005). For smaller firms, the experience of these SMEs clearly showed that generating diversified ideas through networks, partnerships, conferences, or internet made practical and effective sense leading to opportunity discovery.

The cases reveal that the evaluation of the first and subsequent international opportunities tends to be spontaneous, creative and improvisational based on simple heuristics including affordable loss. Contrary to the dominant logic in marketing/strategy literature, there was little evidence of market research, competitive analysis, or systematic identification and evaluation of alternative opportunities. This was consistent with Herbert Simon's (1957) satisficing principle and Sarasvathy's (2001) effectual reasoning, which reflects smaller firms' ways of handling Knightian Uncertainty (Knight, 1921). The boundary between evaluation and exploitation tends to blur and converge in time as an opportunity is refined and developed. This refinement leads to the choice to exploit or not and the action that follows. The refinement and development in the exploitation process involves a creative combination of prior knowledge, new information, and internal and external resources. The firms tend to make do with what is at hand, i.e. bricolage (Baker and Nelson, 2005). During the refinement process, the practice of bricolage extends to include identifying, accessing, and creating resources from network ties and other firms. Therefore how the refinement/development is carried out influences the form of exploitation. In light of this, the cases reveal that cooperative and contractual forms of exploitation were frequently used, as firms responded to conditions of uncertainty (unknown and unknowable).

Most firms rated high on three of the five dimensions of entrepreneurial orientation (Lumpkin and Dess, 1996): *innovativeness*, *proactiveness* and *autonomy* dimensions. This suggests that some entrepreneurial dimensions are more important than others in the international opportunity recognition process. This study also offers clarifications of the EO construct. The results suggest that *aggressiveness* does not mean being aggressive to competitors as suggested by the original EO scale, but rather 'aggressively' seeking to leverage opportunities when they present themselves. This propensity to leverage contingencies or to exploit unexpected discoveries is based on effectual reasoning (Sarasvathy, 2001). The original EO construct, which originated in the strategic management logic or causal reasoning, may need modification and/or additions to suit the reasoning and practices of entrepreneurs.

Results relating to *risk taking* reflect the opposing views seen previously in the literature (Brockhaus and Horowitz, 1986; Khilstrom and Laffont, 1979; Begley and Boyd, 1987; Gartner, 1988). In general, the results suggest that risk taking does not appear to differentiate between firms that recognize international opportunities and those that do not. This suggests that trait/psychological theories of entrepreneurship, that focus on the personal attributes of individuals, are not as effective as process oriented perspectives of entrepreneurship, that focus more on the role of information, capabilities, and network ties (Gartner, 1988; Gartner, 1990; Shane and Venkataraman, 2000).

In summary, the results indicate the apparent role of chance in the unplanned way new knowledge derived from a firm's position in networks interacts with prior knowledge to reveal potential opportunities. But even though firms cannot deliberately search for what they do not know exists our results show they can enhance the opportunity recognition process through the diversity of their existing knowledge base, their positioning in communication networks and their willingness to consider new possibilities. The act of exploitation leads to learning by doing, further discovery and further search with unexpected results, and further creative refinement and development of opportunities previously exploited, including using forms of exploitation with higher levels of commitment (integration mode). Therefore, there is a feedback effect in which what a firm exploits affects what and whom it can see in the future, what new types of information may come its way, and the resources it has or can access or know about to create new means-ends combinations.

Returning to the basic propositions, the exploratory research found support for the role of prior knowledge, international network ties, and EO in the international entrepreneurial process, supporting Proposition #1, #2, and #3. New factors also emerge, which include the role of absorptive capacity; the fuzzy boundary between evaluation and exploitation process, including the lack of systematic identification and the lack of evaluation of alternative opportunities; and the feedback effect in international entrepreneurial processes.

Similar prior studies (Ellis and Pecotich, 2001; Ellis, 2001) describe first internationalization as “irrational reasons that appear to defy the optimizing logic of the market”, and “completely lacking in rhyme or reason”. The exploratory pilot case studies reveal that seeing and making new means-ends combinations in international markets is inherently a condition that approximates Knightian uncertainty, in which discovery (rather than deliberate search), satisficing (rather than optimizing), leveraging contingencies (rather than formal strategizing), bricolage (rather than goal-oriented resource construction), and refining and developing opportunities by including network ties and or others (rather than systematic evaluation and going solo) tend to prevail. Through retrospective sense making processes firms get better at seeing and making subsequent means-ends combinations. In other words, the firm does not know what they are dealing with until they see the outcome of what they have done. Earlier acts of recognition and exploitation shape subsequent acts.

3.6. Summary

The objective of the exploratory research was to further investigate those variables that the literature suggests are likely to have an impact on internationalization, viewed from an entrepreneurial perspective, and any other type of factors that may need to be considered. The study supported the basic propositions and new factors emerged. Insights from the exploratory research were used to inform the development of an initial conceptual model of internationalization as an entrepreneurial act as well as formulating a number of key propositions (Chapter 4). These propositions were examined in the main study (Chapter 6).

4. THEORETICAL FRAMEWORK AND PROPOSITIONS

4.1. Overview

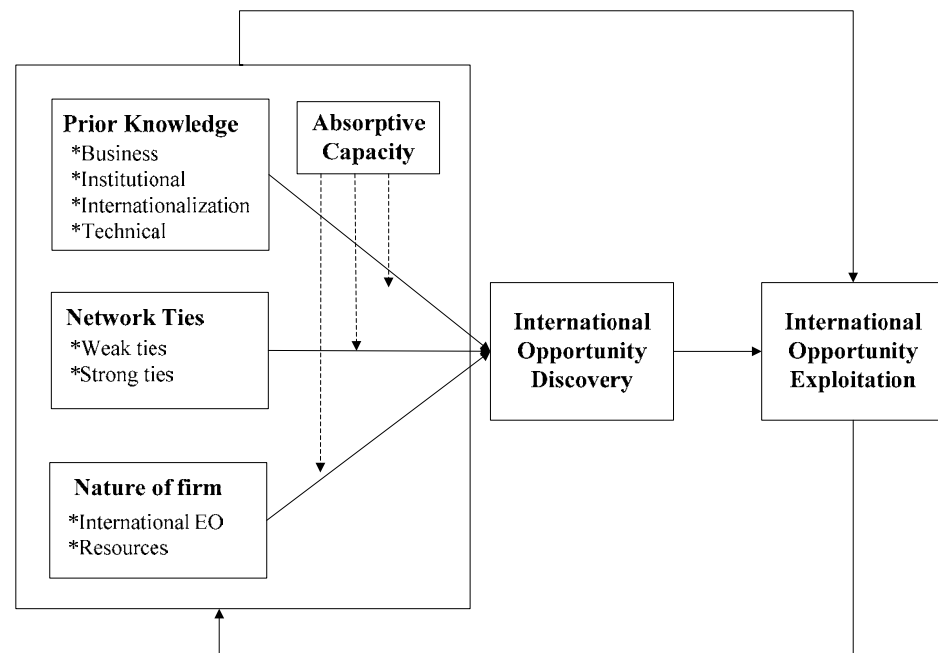
The purpose of this chapter is to develop an initial conceptual model of internationalization using entrepreneurship as an organizing framework. The motivation behind the initial model is to have a “sufficient blueprint” (Yin 2003, p.29) that specifies theoretical propositions prior to the main data collection and analysis. As shown in Chapter 3, entrepreneurship is a useful lens for understanding how and why firms internationalize. The initial model development is informed by the literature review (Chapter 2) and is refined by the results from the exploratory research (Chapter 3). It is based on theories of entrepreneurship, network theory and resources-based theory. The model is presented in the following section.

4.2. A model of internationalization as an entrepreneurial process

The model views internationalization as an entrepreneurial process: as the process of discovering and exploiting opportunities in the international markets that consists of an outcome that is unknown and unknowable – Knightian Uncertainty (Knight, 1921). The model acknowledges the discovery process and opportunity refinement/development as part of the exploitation process. The entire process depends on a firm’s starting conditions including its prior knowledge, how it is embedded in networks of relations with other actors (which both enable and constrain the firm’s ability to discover and exploit opportunities) and the firm’s willingness to engage in international behaviour involving the commitment of time and resources to international market opportunities with uncertain outcomes.

The process involves ongoing feedback in which earlier acts of discovery and exploitation shape subsequent acts in a history dependent manner. The model is summarized in Figure 4.1. The following section discusses the central feature of the model.

Figure 4.1 – A model of internationalization as an entrepreneurial process



4.2.1. International opportunity discovery

Opportunity discovery involves identifying new means-end relationships with business potential containing various degrees of newness. Opportunity discovery comes from recombining an actor's existing and newly encountered knowledge in new ways. According to Hayek (1945, p. 519), "knowledge of the circumstances of which we must make use never exists in concentrated or integrated form but solely as the dispersed bits of incomplete and frequently contradictory knowledge, which all the separate individuals possess". Ideas, knowledge, and resources are dispersed across people, places, and time and recombining them in novel and productive ways, which involves gaining and accessing different parts of the knowledge puzzle underpinning the recognition of an opportunity. Merely having the necessary pieces of the knowledge puzzle in the form of prior knowledge and newly encountered knowledge is not sufficient for opportunity recognition – it involves a creative cognitive act. All firms have different histories, prior knowledge, interests, motivations and entrepreneurial orientation which endow them with the capability to see different kinds of opportunities and to act on them. This may be termed their absorptive capacity. Prior knowledge is not only about what a firm knows but also what it knows others know within its network, which it can access or utilize. Thus, prior knowledge is embedded in the network of which the firm is a part and depends on the kinds of relations and interactions it has with others in the network.

New information can come from various sources, through deliberate and non-deliberate actions of the focal firm and through the actions of others in its existing networks, or from outside. Firstly, sources are found in everyday business activities including learning by doing, acts of communication and interaction, and by accidents. Secondly, new ideas can also result from a deliberate information search but not in terms of what was initially sought. Search is about looking for the known unknowns but the act of searching can result in unexpected and unintended new information. Thirdly, new knowledge and ideas come from relations and network ties, which are the channels through which knowledge moves or is passed on from one to the other, resulting in firms gaining access to new types of knowledge. Both strong and weak ties are important as the conduit for the knowledge flow. Weak ties may act as bridges linking a firm to new types of networks with different types of knowledge whereas strong ties are the means by which valuable information is passed on to others who may be able to use it. Fourthly, the search by others can result in firms being found and being included in new types of opportunities, as when firms seek to improve their existing supply or to meet existing demands by international search activities. Although the opportunity has already been discovered it is unknown to the firm until others discover it. From the focal firm's perspective it looks like a discovery it has made itself. Lastly, the exploitation of opportunities can lead to further opportunities either related or unrelated to the original opportunity, as attempts to develop and refine the initial opportunity and to exploit it leads to new types of discoveries. Developing the opportunity which leads to the founding of the firm can lead naturally or unexpectedly to knowledge about international opportunities. Likewise, developing an international opportunity can lead to knowledge about a domestic opportunity as well as further international opportunities.

While the entrepreneurship research divides opportunities based on the conditions of their pre-existence, i.e. discovery vs. creation vs. enactment (Kirzner, 1997; Alvarez, 2005; Sarasvathy et al., 2003; Gartner et al., 2003), the model proposed here does not make such distinctions, rather they are all seen as aspects of the same basic process. Opportunities could be said to pre-exist and are found by those willing and able to recombine knowledge in the appropriate ways, but we only know they exist when they are discovered or rather created, formulated or produced from a knowledge assortment. This is the same process as in the invention or the creation of new artifacts, scientific discoveries and artistic masterpieces. Opportunity recognition often looks fortuitous but this is deceptive because the logic of the opportunity discovered requires access to particular types of knowledge assortments as well as a willingness and an ability to act. New knowledge obtained via networks affects what can be seen, similarly prior knowledge also limits and enables what can be seen. The process can be self initiated or other initiated and, through feedback effects, can involve both of these. The internet also widens and speeds the

flow of knowledge within and among people and firms. This leads to the following formal propositions, which summarize the main elements of the model depicted in Figure 4.1.

Propositions

- P1a: Prior knowledge influences the likelihood and types of international opportunity discovery.
- P1b: Prior knowledge includes the knowledge of others in a firm's network that it knows about and can utilize.
- P2a: The social and business networks in which a firm is embedded influences the nature and likelihood of international opportunity discovery.
- P2b: Weak ties play a role in bridging the structural holes and providing access to new knowledge and ideas critical to opportunity discovery.
- P2c: Strong ties are the means by which potentially useful new knowledge acquired by other firms in a business network is passed on to others to use.
- P3: The international entrepreneurial orientation of a firm, in particular its international interests and motivation, and its resources, influence the likelihood of international opportunity discovery.
- P4: Absorptive capacity moderates the relationship between (a) prior knowledge, (b) network ties, (c) the nature of the firm and the international opportunity discovery.

4.2.2. International opportunity exploitation

Opportunity refinement/development is viewed as part of the opportunity exploitation process, in which time and resources are committed to investigating and evaluating the opportunity until a decision is made to commit the firm to exploiting the international market opportunity. This can involve an incremental process of increasing commitment as reflected in the stage models of international market development. Search may start from the original opportunity recognized, i.e. known unknowns are identified and searched for, including potential international counterparts, and information about relevant markets and environments necessary to exploit an identified opportunity. This may uncover unexpected new information leading to further refinement of the existing opportunity or the identification of other types of opportunities. For instance, a firm may seek other firms to offer a service/product to and suggest other types of problems or opportunities as relevant, such as a proposed product or service more suited to another type of market or need. Thus finding and acting on an opportunity leads to further problems, leading to further creative effort and opportunity recognition as a means of overcoming subsequent problems.

Opportunity exploitation involves a decision to act, based on the opportunity recognized and refined. Refinement and exploitation fade into each other as any cognitive effort, commitment of resources and time based on the opportunity recognized, including search, evaluation and exploitation, can lead to learning new things and feedback effects on earlier stages of the process.

Exploitation involves identifying, evaluating, accessing, creating, and using resources to exploit the opportunity, including all potential forms of international market entry. The existing resources and capabilities of the firm affect what it can do and see, and its motivations affect how it evaluates alternatives. A firm can use and develop its own resources and capabilities, making do with whatever they have on hand, i.e. bricolage (Baker and Nelson, 2005), and/or access, use, and co-develop other firms' and other people's resources. The involvement of others not only augments internal resources, but also reduces uncertainty as the firm co-develops the opportunities with others to improve their existing supply or to meet existing demands. It also creates potential problems because of conflicts of interests and perceptions. The process is partly creative and entrepreneurial in character as the firm does not know all that is required to exploit an opportunity when it begins. Nor does it know all potentially relevant partners; it still faces a condition of Knightian uncertainty. The process of exploitation continues over time and involves a mix of deliberate rational action and refinement of the initial opportunity, as well as unexpected contingencies and feedback effects, which shape the pattern of development over time. As a result the patterns of exploitation are strongly path dependent: history matters.

Research shows that, in conditions of Knightian uncertainty, people and firms' behaviour are not characterized by a systematic evaluation of a number of identified alternatives (see Sarasvathy, 2001; Simon, 1957). It is a matter of discovering and formulating any alternative worthy of consideration and choosing to pursue it further or not. Under conditions of uncertainty, firms rely on 'satisficing' rather than 'maximizing' decisions (Simon, 1957); affordable loss principle; exploiting contingencies (Sarasvathy, 2001); and willingness to accept uncertainty (McMullen and Shepherd 2006; Knight, 1921). This varies by firm according to their resources, motivations, experience and current situation. A firm may also involve others as a means of accessing and co-creating resources and reducing the degree of uncertainty.

The act of exploitation leads to learning by doing and further search with possibly unexpected results as the firm interacts with others, including actual and potential customers, suppliers, competitors and complementors, and observes the consequences of their and others' actions. New knowledge is obtained and prior knowledge is confirmed or adapted. The outcomes of

exploitation in the form of refinement and international market entry has additional multi-dimensional feedback effects on the development and depletion of the firm's resources, network ties, and on its attitudes and interests in international business and markets (its international entrepreneurial orientation). What and how a firm exploits an opportunity affects what it can see in the future, what new types of information may come its way, and the resources it has or can access or know about. The opportunities exploited by a focal firm, its network ties, and the opportunities exploited by others, offer future potential sources of ideas, knowledge and resources which can be recombined, refined and exploited as future opportunities. Through retrospective sense making processes firms get better at seeing and formulating subsequent means-ends combinations. In other words, the firm does not know what they deal with until they see the outcome of what they do. Earlier acts of recognition and exploitation shape subsequent acts.

These processes apply to a focal firm as well as to other firms to which it is, or has become, connected. A discovery from a focal firm's perspective might be the result of a deliberate search by other firms or vice versa. Mutual discovery or search can also occur. The sequence can be described in various alternative paths emanating from a focal firm and from others that can interact and come together as one finds the other. But not all paths are possible and the exploration of the space of possibilities is history and path dependent. Seemingly insignificant events and decisions can lead a firm down one path and away from others that it may never become aware of. Events, contacts, and decisions in the past can re-emerge later and play an important role in shaping the direction of the firm in international markets. There is no reason to believe that optimal solutions and outcomes eventually arise for a particular firm or for firms and networks in general, as is argued in economics in terms of which firms survive. Firms survive and international strategies are maintained and reproduced because they are reinforced in the relevant environment and business networks in which they exist. There is a constant co-evolution of firms, networks and environments as actors discover and exploit opportunities and act and respond to each other's acts of discovery and exploitation. In this way the waves of creative destruction described by Schumpeter (1934) take place and the economy and business change and evolve. As Wroe Alderson describes it, a proliferation of opportunities arises over time, as one entrepreneurial act stimulates, enables, and begets others. But not all of them are discovered and acted on and we have no way of knowing what percentage of potential opportunities are discovered, although work in evolutionary modeling gives some insights into this. The heterogeneous starting conditions and the history of different firms mean they do not all see the same opportunities or exploit them in the same way; business is a massively parallel system for processing opportunities that guarantee many different types of opportunities are seen and acted on, but they are not necessarily the best or indeed all the opportunities.

This leads to the following final propositions:

Proposition

- P5: The pattern of international opportunity refinement, development, and exploitation is path and history dependent. Earlier acts produce feedback effects that shape future acts in important ways, leading back to further refinement of identified opportunities and/or the identification of new opportunities as well as to subsequent internationalization acts and decisions.
- P6: The act of refining and developing international opportunities leads to learning by doing, further search with possibly unexpected results, further opportunity refinement and development, and the development and depletion of resources and network ties.

4.3. Summary

Existing theories of internationalization predominantly leave the issue of ‘opportunity’ and ‘seeing’ the opportunity at the periphery of their argument. But this is where the strength of an entrepreneurship lens lies. Moreover, the concept of ‘seeing’ is related to the concept of ‘thinking, refining, and developing’ opportunities, which also appears to be lacking in the current theories of internationalization. With a focus on the opportunity-firm nexus, the time-based process of learning and response, and the conditions of Knightian uncertainty as the conceptual cornerstone, this chapter advances a model of internationalization as a form of entrepreneurial act. By integrating various schools of thought about entrepreneurship, the model offers a number of important propositions necessary to answer an important research question, i.e. how and why firms internationalize. In addition, the model can help resolve some of the discrepancies among the predictions of theories of internationalization and enrich our understanding of the underlying mechanisms involved. The main propositions are summarized in Table 4.1. The methodology for further assessing these propositions through more in-depth case studies is presented in Chapter 5.

Table 4.1 – Summary of Propositions

International Opportunity Recognition	
P1a:	Prior knowledge influences the likelihood and types of international opportunity discovery.
P1b:	Prior knowledge includes the knowledge of others in a firm's network that it knows about and can utilize.
P2a:	The social and business networks in which a firm is embedded influences the nature and likelihood of international opportunity discovery.
P2b:	Weak ties play a role in bridging the structural holes and providing access to new knowledge and ideas critical to opportunity discovery.
P2c:	Strong ties are the means by which potentially useful knowledge acquired by other firms in a business network is passed on to others to use.
P3:	The international entrepreneurial orientation of a firm, in particular its international interests and motivation, and its resources, influence the likelihood of international opportunity discovery.
P4:	Absorptive capacity moderates the relationship between (a) prior knowledge, (b) network ties, (c) nature of the firm and the international opportunity discovery
International Opportunity Exploitation	
P5:	The pattern of international opportunity refinement, development, and exploitation is path and history dependent. Earlier acts produce feedback effects that shape future acts in important ways, leading back to further refinement of identified opportunities and/or the identification of new opportunities as well as to subsequent internationalization acts and decisions.
P6:	The act of refining and developing international opportunities leads to learning by doing, further search with possibly unexpected results, further opportunity refinement and development, and the development and depletion of resources and network ties.

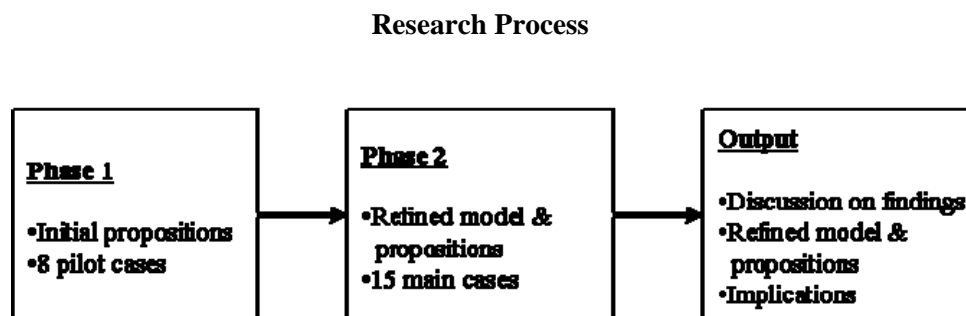
5. METHODOLOGY

Following the exploratory research (Chapter 3) and subsequent literature review, an initial theoretical framework and a set of propositions were advanced (Chapter 4) for further empirical study. This chapter describes the research method used to investigate the propositions.

5.1. Overview

The literature review in Chapter 2 identified a gap in our understanding of internationalization process that has been partly attributed to the methods traditionally used in internationalization and entrepreneurship research. The objective of this study was to bridge this gap, by devising a method of inquiry to investigate the factors and processes that affect how and why a firm's pattern of internationalization changes over time. The process approach using multiple case study methodology was followed to achieve the research objective. This research method is well positioned with the growing calls for a study that focuses on the time-based dynamics of various behaviour and processes in internationalization and entrepreneurship (Coviello and Jones, 2004; Jones and Coviello, 2005; Zahra, 2005) and, more generally, how history matters in international business (Jones and Khanna, 2006).

The study used case studies in two phases: exploratory research (Phase 1) and main research (Phase 2). Phase 1 investigated 8 pilot case studies of knowledge-based firms to refine the initial set of propositions. Phase 2 investigated the refined set of propositions using 15 main cases of knowledge-based and non-knowledge-based firms. This chapter summarizes the rationale behind the research methodology used in both phases and elaborates the procedures used to investigate the 15 main cases in Phase 2. The figure below depicts the overall research process conducted in the thesis.



This chapter is divided into three parts. The first part presents an overview of the process approach. The second part presents the case study approach and justification for the use of a process approach to case study research and its applicability to this study. The final part then documents the actual implementation of the research process and method of analysis.

5.2. Process approach or event-driven method

5.2.1 Overview

Process approach or event-driven method is a form of inquiry that focuses on the explanation of temporal order and sequence of change of events based on a story or historical narrative (Abott, 1988; Pentland, 1999; Poole et al., 2000; Van de Ven and Engleman, 2004). It is concerned with the process of ‘how change unfolds’. In this approach explanations are built forward, from observed or recorded events to outcomes and researchers choose certain kinds of events a priori and then record their occurrences over time (Aldrich, 2001). This approach adopts a different epistemology from the variance approach or outcome-driven method that seeks explanations of change driven by deterministic causation, grounded in a general linear model. In variance approach, change is represented as a dependent variable, which is explained with a set of independent variables that statistically explain variations in the dependent variable of change (Mohr, 1982).

The process and variance approaches differ in their assumptions (Van de Ven and Engleman, 2004; Van de Ven and Poole, 2005). First, unlike variance approach (VA) that assumes the world is made up of fixed entities (e.g. people, firms) with varying attributes, process approach (PA) assumes that the entities are evolving as well as their attributes. Second, VA concerns itself with identifying a few critical factors that are necessary and sufficient to explain causality between independent and dependent variables, while PA concentrates on necessary causality by focusing on critical events and conjunctions of events, including confluences and subsequent events that may alter the direction impacted by earlier events. Third, using Aristotle’s typology of causes (Randall, 1960; Ross, 1949), VA is concerned with efficient cause that downplays other sources of change or push-type causality. PA is concerned with efficient, final and formal causality. It requires pull-type causality: X (the precursor) does not imply Y (the outcome) but rather Y implies X (Mohr, 1982) or so-called effectuation processes (Sarasvathy, 2001). Fourth, while the generality of a VA explanation stems from its uniformity and consistency across a broad range of contexts or at all levels of independent and dependent variables, the generality of PA explanation stems from its versatility, or the breadth of domain (cases, contexts, events, patterns) to which the theory can be applied to and encompasses. Fifth, VA is not concerned with the time order in which variables come into operation in the level of outcome, while PA holds that the order in which the causal forces come to bear is critical and can make large

differences in outcomes. Sixth, VA explanations are ‘causally shallow’ as they explain the state of development at any point in terms of the prior history of events while PA explanations are ‘causally deep’ because the ordering and context of previous events are critical. Finally, VA treats each variable as though it has the same status or meaning over time while PA presumes each entity, attribute or event may undergo change over time. The differences between variance and process approaches (Van de Ven and Engleman, 2004) are summarized in Table 5.1.

Table 5.1 - Comparison of Variance and Process Approaches

Variance approach (VA)	Process approach (PA)
(1) <u>Fixed</u> entities with varying attributes	(1) Entities participate in events and may <u>change over time</u>
(2) Explanations based on <u>necessary and sufficient</u> causality	(2) Explanations based on <u>necessary</u> causality
(3) Explanations based on <u>efficient</u> causality	(3) Explanations based on <u>final, formal, and efficient</u> causality
(4) Generality depends on <u>uniformity</u> across contexts	(4) Generality depends on <u>versatility</u> across cases
(5) <u>Time ordering</u> among independent variables is <u>immaterial</u>	(5) <u>Time ordering</u> of independent events is <u>critical</u>
(6) Emphasis is on <u>immediate</u> causation	(6) Explanations are layered and incorporate both <u>immediate and distal</u> causation
(7) Attributes have a <u>single meaning</u> over time	(7) Entities, attributes, and events may <u>change in meaning over time</u>

The process approach has a long history in other social sciences disciplines including sociology, history and political science where processes of change are dissected into epochal social, economic and political events to identify underlying micro and macro processes producing these changes over time (Emirbayer, 1997; Mahoney and Rueschemeyer, 2003; Pierson, 2004; Buttriss and Wilkinson, 2006). In business research, this method has been used to study change and innovation processes (Poole et al., 2000; Van de Ven and Poole, 1990). More recently, it has been used to study internationalization (Buttriss and Wilkinson, 2006).

Processes here refer to *activities, decisions and events and how they unfold over time* within their context. This approach in viewing and investigating processes was previously used by scholars in strategy, organization science and entrepreneurship disciplines such as Burgelman (1996), Eisenhardt (1989), Mintzberg (1982, 1985) and Van de Ven and Engleman (2004).

The process approach employs eclectic designs that identify or reconstruct the process through direct observation, archival analysis, or multiple case studies (Van de Ven and Poole, 2005). The combination of a process approach and multiple case study design has been used to study new technology implementation processes (see Leonard-Barton, 1990).

5.2.2. Justification for process approach

The choice of process approach as opposed to variance approach was based on (1) the nature of the phenomenon under study and (2) the previous research conducted in the area of internationalization and entrepreneurship.

(1) Phenomenon under study

The nature of the phenomenon under study, i.e. internationalization as an entrepreneurial process, necessitated the use of process approach for two key interrelated reasons. First, internationalization and entrepreneurship involve the dimensions of: (a) *time*, against which all processes can be described, and (b) *behaviour*, manifested as the accumulation of actions, events and decisions in relation to time (Jones and Coviello, 2005). Time is a key element that characterizes so-called international ‘new’ ventures or born globals (Oviatt and McDougall, 1994), and poses challenges to received theory of internationalization (Johanson and Vahlne, 1977). De-internationalization or other forms of change in mode of entry, the reduction and/or increase in market commitment and operations, and the use of multiple modes of entry at one time can be seen as ongoing processes that are part of the broader range of behaviours that occur over time, space and context as firms seek to maintain the viability of their international operations (Benito and Welch, 1997). A process approach enables the researcher to study actions and interactions taking place over time and space, through which entrepreneurial opportunities are recognized, evaluated and exploited.

Second, the inconsistencies among the predictions of various mainstream theories of internationalization may stem from our lack of understanding of the ‘causal mechanisms’ or generative processes in internationalization. A process or event-driven approach to internationalization – studying the way that opportunities and firms evolve over time, space and context - offers new ways to understand the mechanisms underlying internationalization and to potentially reconcile these contradictory predictions and explanations.

(2) Calls for process approach in the internationalization and entrepreneurship research

A further consideration was the call for the use of more process approach in internationalization and entrepreneurship research. In their review of the ‘state of the art’ of international entrepreneurship methodologies, Coviello and Jones (2004) found that research in this area was characterized by static, cross-sectional studies that do not incorporate time-dependent variables. They highlighted the need to better capture entrepreneurial behaviour and processes over time. Jones and Coviello (2005) suggested that “research in internationalization should explicitly incorporate the role and influence of time” (p.290). In a review of a decade of research in international new ventures, Zahra (2005) called for future research to examine how new

ventures learn. This is a gap that requires methods that incorporate a temporal lens. More recently, Jones and Khanna (2006) argued that “the field of international business should evolve its rhetoric from the relatively uncontroversial idea that ‘history matters’ to exploring *how* it matters” (p.1). Process approach will provide a more comprehensive lens to better understand concepts like born globals, how history matters and how various dynamics may be a part of more general entrepreneurial behaviour and processes over time.

5.3. Case study research

5.3.1. Overview

The case study method has been a common research method in social sciences, from sociology, psychology, political science to business. Case study is a research strategy, to be likened to an experiment, a history, or a simulation and not linked to any particular type of evidence or method of data collection (Yin, 2003). It is a method of inquiry that allows a researcher to understand a phenomenon in an holistic manner within its real-life context. Unlike the grounded theory approach (Eisenhardt, 1989; Glaser and Strauss, 1967; Strauss and Corbin, 1998) that deliberately avoids specifying any theoretical propositions at the outset of an inquiry, Yin’s case study approach begins with ‘theory’ or ‘proposition’ development prior to data collection. The former and latter approaches to doing case studies have subtle differences, except for the use of theoretical propositions. This theory-first case study research has also been advocated by other scholars (see Shane, 2000; Johnston et al., 1999; Bonoma, 1985).

The use of theory/propositions in doing case studies serves two purposes. First, it is an immense aid in defining the appropriate research design and data collection, no matter whether the study is to be explanatory, descriptive or exploratory (Yin, 2003). A complete research design embodies a “theory” of what is being studied (Yin, 2003). Theoretical propositions offer the ‘blueprint’ that guides the data collection process so that a researcher will not be tempted to cover ‘everything’, which is particularly difficult when studying a large amount of historical and contemporary data of a firm’s international entrepreneurial process over time. As a researcher combs through data, its volume makes it easy to be overwhelmed by a shapeless mass of information or so-called “death by data asphyxiation” (Pettigrew, 1990, p.281). In the words of Yin (2003): “No guidance could be more misleading” (p.28). Second, theory/proposition becomes the main vehicle for generalizing the results of the case study, or analytical generalization, in which a previously developed theory is used as a template with which to compare the empirical results of the case study.

This approach to case study design involves a “tight and evolving framework” (Dubois and Gadde, 2002) or ‘abduction’ because the tightness reflects the degree to which the researcher

has articulated his ‘preconceptions’, and the framework should evolve during the study because empirical observations inspire changes of the view of theory and vice versa. It is an iterative process of theory building in which initial theoretical ‘preconceptions’ are refined over time through carefully selected multiple case studies, and discoveries are allowed to occur to refine the preconceptions.

5.3.2. Justification for the use of case study research

Yin (2003) recommends that the choice of research design be based on three conditions (see Table 5.2): (1) the type of research question posed, (2) the extent of control and access the researcher has over actual behaviour and events, and (3) the degree of focus on contemporary versus historical events.

Table 5.2 - Relevant Situations for Different Research Strategies

Strategy	Form of research question	Requires control of behavioural events	Focuses on contemporary events
Experiment	How, why?	Yes	Yes
Survey	Who, what, where, how many, how much?	No	Yes
Archival analysis	Who, what, where, how many, how much?	No	Yes/No
History	How, why?	No	No
Case study	How, why?	No	Yes

Source: Yin (2003)

The case study was determined to be the most appropriate research strategy for this study because: (1) the nature of the research question being posed is *how* and *why* a firm’s pattern of internationalization changes over time. To address this research question, (2) the researcher neither has, nor requires control over the actual behaviour or events, and (3) the focus of the study is on relatively contemporary events, since entrepreneurial internationalization in the study was relatively recent and is still ongoing in most of the firms under study. Moreover, case study is useful to explain the presumed causal links that are too complex for other methods such as survey or experimental design (Yin, 2003). Quite importantly, the case study method is useful because they enable the researcher to trace chronological processes (Yin, 2003).

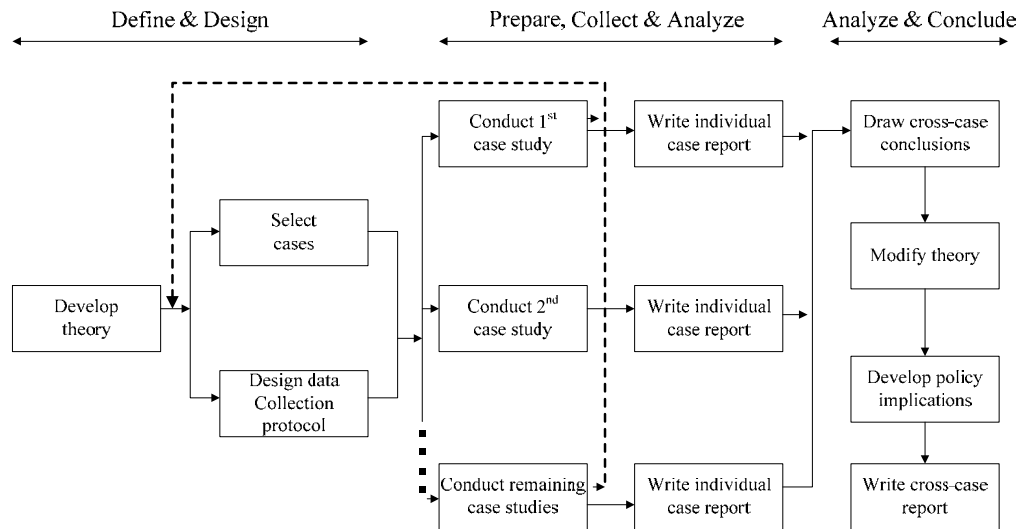
Of the different research strategies suggested, alternative methods for this study were considered and would have included histories and surveys. Although histories also focus on how and why questions, they differ from case studies in that the researcher does not have access

to the events under study since there are no reliable people living to recount the events retrospectively. Yin (2003) suggests that histories are more suitable when the researcher has to rely on primary documents, secondary documents and artifacts as the main sources of evidence. The survey methodology involves answering what, who, and where questions. As a result, the survey method is more appropriate “when the research purpose is to describe the prevalence or frequency of a phenomenon, or when it is too expensive or impractical to survey the entire universe” (Parkhe, 1993, p.524). This method is less effective in explaining processes and understanding of how change unfolds in a firm’s international entrepreneurial trajectory.

5.3.3. Designing multiple case studies

There are five components of a case research design (Yin, 2003): (1) a study’s questions, (2) its propositions, if any; (3) its unit of analysis; (4) the logic of linking the data to the propositions; and (5) the criteria for interpreting the findings. These components are encapsulated within the case study ‘cookbook’ procedure suggested by Yin (2003) as shown in Figure 5.1. The procedure consists of three phases: (a) define and design, (b) prepare, collect and analyze, and (c) analyze and conclude.

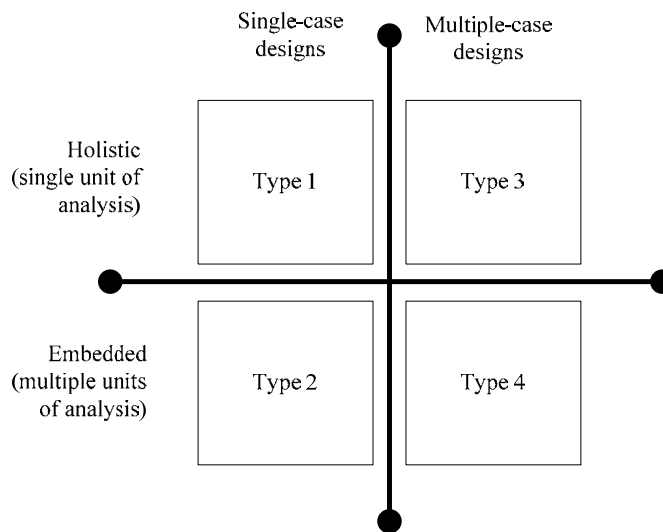
Figure 5.1 – Case Study Method



Source: Yin (2003, p.50)

The unit of analysis for defining the ‘case’ is a fundamental issue in case study research. Essentially, a unit of analysis is “what you want to say something about at the end of a study” (Merriam, 1988, p.44). According to Merriam, focusing on the unit of analysis is critical for establishing bounded cases, which is the cornerstone of case study methodology. Yin suggests that the tentative definition of the unit of analysis is related to the way that the initial research question has been defined. In addition to planning the number of cases (i.e. single vs. multiple), a researcher also needs to be clear about the number of units of analysis relevant to the study. Yin (2003) offers a typology of case study design based on the characteristics of the number of cases and units of analysis (see Figure 5.2). Single-case study is deemed appropriate under several circumstances, i.e. a critical case, extreme/unique case, representative/typical case, revelatory case and longitudinal case. However, the evidence from multiple cases is often considered more compelling and therefore more robust but only if it follows a ‘replication’ logic (not through random case selection) such that theoretical propositions are refined in an iterative manner (Yin, 2003). Therefore, multiple case studies were determined to be a more appropriate strategy for this research.

Figure 5.2 – Basic Types of Designs for Case Studies



Source: Yin (2003, p.40)

After defining the research objective and question and the units of analysis of the study, a case study researcher will develop theoretical propositions and data collection protocol to guide the entire data collection and analysis. Next, each case will be carefully selected so that it either (a) predicts similar results (a literal replication) or (b) predicts contrasting results but for predictable reasons (a theoretical replication). Each case's conclusions are then considered to be the information needing replication by other individual cases. Yin's approach allows for an important discovery to occur during the conduct of the individual case studies and subsequent discoveries which require researchers to reconsider one or more of the study's original or initial theoretical propositions (the discovery feedback loop is shown in the dotted line in Figure 5.1). This "continuous interplay" between induction and deduction so as to "lessen the gap between known and the knowable" is encouraged by Parkhe (1993, p.256), Miles and Huberman (1994) and Eisenhardt (1989). This approach is similar to Bonoma's (1985) process model for case research which suggested a theory/data/theory revision cycle within the drift-design-prediction-disconfirmation logic.

Subsequently, each individual case report will be written and should indicate how and why a particular proposition was demonstrated (or not demonstrated). Yin (2003) suggests two main general analytic strategies for case study, which defines priorities for what to analyze and why. First, relying on theoretical proposition (i.e. follow the theoretical propositions that led to the case study). The most desirable technique for this is pattern-matching – a logic that compares the pieces of information from the cases to the propositions to determine the degree to which

they are consistent. Second, thinking about rival explanations. That is, the pieces of information from the cases are compared to rival, mutually exclusive propositions to determine the degree to which they are inconsistent with alternative explanations (e.g. whether network ties may *inhibit* as opposed to *enhance* opportunity recognition).

The outcome of the individual case analysis serves as a foundation for cross-case analysis, refinement of the initial set of theoretical propositions and analytical generalization. Finally, cross-case report will be written and conclusions are drawn.

5.3.4. Justification for the application of process approach to case study research

The contribution of process approach to case study research here lies in the *reconstruction and mapping of the chronology of events*. In this study, this refers to the chronology of the *opportunity discovery-evaluation-exploitation events*. There is a natural fit between process approach and case study research methodology, particularly the ‘time series analysis’, among others by compiling and tracing the chronology of events over time (Yin, 2003). The combination of the two approaches enables a researcher to study the way that opportunities and firms evolve over time, space and context and for understanding the causal mechanisms or generative processes in international entrepreneurial behaviour.

5.4. Conducting the research

The next section provides a description of the detailed account of the research process, following the procedures outlined in the case study research ‘cookbook’ (Yin, 2003), combined with the process approach. The research process, which is an elaboration of the procedures depicted in Figure 5.1 above, consists of three related phases: (1) define and design, (2) prepare, collect and analyze, including reconstructing and mapping the chronology of events with a focus on opportunity recognition-evaluation-exploitation and (3) analyze and conclude (see Table 5.3). The aim is to provide the reader with a complete understanding of the decisions made during the research process and ultimately, to aid in the assessment of the quality of the research.

Table 5.3 - Process Approach Using Multiple Case Study Design

Phase	Key Steps	Description
Define and Design <i>(including the exploratory research)</i>	(1) Define the research questions, unit of analysis [CHAPTER 1] (2) Specify ‘theory’ or proposition from the literature [CHAPTER 2 and 3] (3) Design data collection plan (including preliminary case study protocol, unit of analysis, specified population, theoretical sampling) [CHAPTER 3] (4) Conduct an exploratory study [CHAPTER 3] (5) Revise propositions and data collection plan [CHAPTER 4]	[1] “What factors and processes affect the way a firm’s pattern of internationalization changes over time?” Unit of analysis: “entrepreneurial opportunity-firm” nexus [2] Three basic propositions were advanced from the internationalization and entrepreneurship literature [3] Embedded, multiple-case designs for replicability; ‘opportunity-firm’ nexus; Knowledge-based industries within NSW region; Two-stage key informant screening; Case study protocol and case recruitment protocol; University ethics clearance [4] <i>Eight pilot cases</i> were selected. Case histories were constructed. Created a case study database. Within-case and cross-case analysis were conducted; Use of data, theory and investigator triangulation. [5] The basic propositions were revised as well as supported by the findings. Subsequent literature review helped develop an initial conceptual model and a set of propositions. No compelling reason to change the research questions.
Prepare, Collect and Analyze	(6) Finalize data collection plan (including theoretical sampling) [CHAPTER 5] (7) Select cases and conduct case study research [CHAPTER 5] (8) Reconstruct and map the chronology of events [CHAPTER 5 and 6] (9) Write the case history for each case [CHAPTER 5]	[6a] Embedded, multiple-case designs; ‘opportunity-firm’ nexus; Knowledge-based and non-knowledge-based industries; Two-stage key informant screening; Some modification to the case recruitment protocol and case study protocol; University ethics clearance [6b] Theoretical sampling was used to select four types of firms to achieve literal and theoretical replication: (born globals, de-internationalized and/or re-internationalized, gradually internationalized firms; firms that use multiple modes of entry) [7] <i>Fifteen cases</i> were selected from five states in Australia. Interviews with key informants were transcribed. Pursued multiple sources of evidence. Created a case study database. [8a] A chronology of events was created for each case. This was used to develop an ‘event mapping’ for each case. Focus: opportunity recognition-evaluation-exploitation events. [8b] Multiple, iterative interviews and collection of additional case evidence helped fill in the missing information on important events, actions and decisions [9] Based on the output from step 8a and 8b, a case history was written for each case and sent to key informants for feedback
Analyze and Conclude	(10) Analyze case study evidence (within-case and cross-case analysis) [CHAPTER 6] (11) Draw cross-case conclusions and refine initial conceptual model and propositions [CHAPTER 7] (12) Write cross-case findings and conclusions [CHAPTER 7 and 8]	[10a] Linking case study evidence to propositions; pattern matching and explanation building; entertaining rival explanations (Uppsala, Network Perspective and Eclectic Paradigm) and researcher triangulation [10b] Compared similar and different cases; Seeking causal mechanisms or generative processes in the internationalization phenomena [11] Drew cross-case conclusions; compared emergent findings with supporting and conflicting literature; and Refined the initial model and propositions [12] Wrote cross-case findings and conclusions

Source: Adapted from Yin (2003), Van de Ven and Poole (2005)

5.4.1. The Define and Design Phase

As presented in Table 5.3, this study began with the ‘define and design’ phase, including the conduct of exploratory research (Chapter 3). The methodology used in the exploratory, pilot case study research was explained in Chapter 3 and hence will be mentioned only briefly in this section. This section consists of the definition of the research question, unit of analysis, specification of theory/propositions and specified population.

5.4.1.1. Definition of research question

Several gaps were identified following a review of the internationalization literature (see Chapter 2). The research question for this study was based on these gaps. The research question is:

What factors and processes affect the way a firm’s pattern of internationalization changes over time?

5.4.1.2. Definition of the unit of analysis: opportunity-firm nexus

The focus of this study was the factors and processes that affect a firm’s pattern of internationalization changes over time. By conceptualizing internationalization as an entrepreneurial process, this study examined the processes of opportunity discovery, evaluation and exploitation in international markets. Consequently, the unit of analysis in this study was the *entrepreneurial opportunity* and *firm*. This is in contrast with prior research in internationalization, which has extensively focused on: firm, market/relationships, country/nation, industry and region/cluster (see Chapter 2). Therefore, the study adopted a multiple-case design with embedded units of analysis or Type 4 design as shown in Figure 5.2 above. In contrast with the exploratory research, the main case study research captures significantly more internationalization events or ‘cases’ in the history of each firm and in more depth. Entrepreneurial opportunity is defined as “situations in which new goods, services, raw materials, markets and organizing methods can be introduced through the formation of new means, ends or means–ends relationships” (Eckhardt and Shane, 2003, p.336). This definition of opportunity includes the situations which an entrepreneur *believes* will yield a profit rather than those that are *profitable* (Shane, 2003, p.18). Therefore, this study covers both true and false opportunities, i.e. successes and failures of the firm’s entrepreneurial venturing.

5.4.1.3. Specification of ‘theory’ or proposition from the literature and exploratory research

Following a literature review (Chapter 2), three basic propositions were advanced from the internationalization and entrepreneurship literature (Chapter 3). The propositions served as the ‘blueprint’ that guides preliminary data collection and analysis. The findings from the exploratory research informed subsequent literature review and the refinement of the initial conceptual model and a set of propositions (Chapter 4). From here, the refined model and propositions were used to pursue the second phase of data collection and analysis.

5.4.1.4. Specified population

While the population in the exploratory research (Chapter 3) was defined as firms with less than 200 employees or SMEs in Australia within the knowledge-based industries (Austrade, 2002), the population in the main study was defined as SMEs in Australia within the knowledge and non-knowledge based industries. Knowledge-based industries are defined by the OECD as “those industries which are relatively intensive in their inputs of technology and human capital” (Austrade, 2002; OECD, 1999). It is known that the knowledge-based industries in Australia internationalized faster than the non-knowledge-based industries (Austrade, 2002), therefore by sampling a mix of both types of industries, the aim was to account for possible industry effects to some extent. The classification of knowledge vs. non-knowledge based industries can be found in Appendix D.

5.4.2. The Prepare, Collect and Analyze Phase

5.4.2.1. Theoretical, not random sampling

Purposive sampling was used in this research (Pauwels and Matthyssens, 2004; Yin, 2003). Cases were selected for theoretical reasons that enabled an experiment-like replication logic. To pursue and refine the initial propositions (Chapter 4), the study sampled cases with different patterns of internationalization in order to maximize the variance in the sample (Pettigrew, 1990; Leonard-Barton, 1990; Styles and Hersch, 2005). Case studies were conducted of four types of SMEs to capture various dynamic processes of internationalization: (1) born global firms, i.e. firms that entered the international markets early in their life cycle, i.e. within 6 years of inception, and earned not less than 25% of revenues from foreign markets, (2) firms that internationalized, then fully or partially de-internationalized and/or re-internationalized, and (3) firms that internationalized gradually. The case selection was also aimed at including (4) firms that incorporated more than one mode of entry at any one time. The aims of the case selection included:

- *Literal replication* to predict similar results for predictable reasons. For example, a number of cases from the born global category were selected to ensure that the results are replicated among the firms in that category.
- *Theoretical replication* to produce contrary results for predictable reasons. Specifically, cases from knowledge vs. non-knowledge based industries were selected, as were cases with born global, gradual internationalization and those that de-internationalized and re-internationalized.
- *Analytical generalization* to generalize a particular set of results to a broader theory. This is in contrast to statistical generalization in which results are generalized to a particular population. Thus, a small sample of cases is sufficient, so long as theoretical saturation is achieved.

The Kompas database, The Australian Biotechnology Directory, Australian Technology Showcase, Australian Technology Park's list, Australian Trade Commission's website, BRW Magazine, and The Australian Financial Review were used to create a pool of potential firms and informants. In selecting the sampled firms, several criteria were used to screen firms. First, the firms are SMEs which was defined as less than 200 employees (Australian Bureau of Statistics, 1998; Austrade, 2002). Second, they are Australian owned firms so they will not be affected by foreign decision making processes. Third, the key executives (i.e. founders or CEOs) instrumental in the internationalization process are still with the firm and are willing to participate in the study. To prevent problems with the respondents' memory recall, the sampling was restricted to firms whose history was still relatively recent. Fifth, they are Proprietary Limited (Pty Ltd) and/or Partnership legal entities but not public listed companies or government owned firms. This is important to control for the effect of direct government or public intervention in the firm's decision making. A case study protocol was developed for the research. This incorporated some revisions from the protocol used in the exploratory phase in which the themes related to opportunity recognition, evaluation and exploitation received greater focus, in addition to the firm characteristics and external factors (see the case study protocol for the main research in Appendix E).

The researcher did not begin with a pre-determined number of cases to be selected. Rather, the replications of findings, based on the theoretical sampling plan, acted as a rule to decide when to stop adding cases. First, a professional recruiter assisted in the recruitment process and was briefed and followed pre-specified screening procedures (see the recruitment procedure and quality control in Appendix F). Upon verification of the companies in the database, a letter was sent to the founder or CEO of each company inviting them to participate in the study. A copy of

the letter can be viewed in Appendix G. Clearly stated in the letter were the aims of the study, the extent of the company's involvement and benefits of participating in the study. For candidates who qualified and agreed to participate, the researcher conducted a second screening by phone and spoke to the person to be interviewed. Of sixty firms contacted and screened, eighteen firms agreed to participate. Case studies were conducted of fifteen SMEs operating in knowledge-based and non-knowledge-based industries in five states in Australia, i.e. New South Wales, Victoria, Queensland, Tasmania and South Australia. The other three firms were excluded from the study due to a lack of cooperation from key informants and lack of willingness to have subsequent interviews or data collection. The industries range from biotechnology, information technology, chemicals in the knowledge based industries (eight firms), to textiles, food and beverages and personal services in the non-knowledge-based industries (seven firms). The cases include eight firms in the born global category, two firms in the de-internationalization and re-internationalization category, and five firms in the gradual internationalization category. Three firms in the sample can be categorized into more than one category (i.e. ANC, SKY and JCS). Most firms use multiple modes of entry. In sum the cases achieved the theoretical sampling plan. Figure 5.3 below describes the firms selected for this research.

Figure 5.3 – Case Selection

	Born Global Firms	Internationalized, De-internationalized, Re-internationalized firms	Gradually Internationalized Firms
Knowledge-based Industries	BVA NKC BSD SSW ANC	EMI	WSR SKY
Non-Knowledge- based Industries	WSS RMW 2SP	NUD	JCS OPO KEA

During the data collection stage, it was found that SMEs often change their business registration names, therefore, the researcher paid greater attention to this issue because it can affect the initial conditions and prior histories of the firms under study. A legal background check was made on each firm and their predecessor firms through ASIC (Australian Securities and Investments Commission) online database, which allows the verification of the legal incorporation of all firms in Australia. For example, one of the firms (WSR Pty Ltd) was

initially classified as a born global case however, after a careful investigation, it turned out to have existed long ago under a different name/legal entity and had changed its business registration name a few times. Thus, WSR Pty Ltd was re-classified into the gradual internationalization case not a born global case.

The research found that a number of firms were preceded by other firms. Many important stories and events in the focal firms can be found in these predecessor firms. In addition to the WSR case described above, this includes ANC, EMI, KEA, OPO and NUD cases.

A more detailed description of the cases is presented in Table 5.4a and 5.4b.

Table 5.4a - Summary of Cases in the Study – Knowledge-Based Industries

Company (all Pty Ltd)	Predecessor & Start Date	Industry	No of Employees	Venture Start Date	First International Market Entry	Subsequent International Market Entry	Current FSTS Ratio	No of Interviews (total)	No of Persons Interviewed
BVA Pty Ltd	-	Biotechnology	2	June 2001	Aug 2005	Nov 2005	100%	3	1
ANC Pty Ltd	Anosmia P/L (1991)	Chemical	6	May 1994	Nov 1992	Dec 1992	60%	3	1
WSR Pty Ltd	M. Resource P/L (1993)	Biotechnology	5	Jan 2003	Sept 2004	Nov 2004	100%	4	2
NKC Pty Ltd	-	Manufacturing (wine cork)	90	Mar 1998	2000	Nov 2000	50%	3	2
SSW Pty Ltd	-	Software	4	Sept 1994	July 1996	July 1996	99%	5	2
SKY Pty Ltd	-	Software	8	July 1998	2003	2003	30%	3	2
EMI Pty Ltd	ARC Solution (Jan 1998)	Software	20	May 2000	Oct 1998	Dec 1999	15%	3	1
BSD Pty Ltd	-	Manufacturing (DNA robots)	20	Sept 1991	Sept 1992	1993	98%	3	2

Table 5.4b - Summary of Cases in the Study - Non Knowledge Based Industries

Company (all Pty Ltd)	Predecessor & Start Date	Industry	No of Employees	Venture Start Date	First International Market Entry	Subsequent International Market Entry	Current FSTS Ratio	No of Interviews (total)	No of Persons Interviewed
WSS Pty Ltd	-	FMCG (spring water)	1	Oct 2001	May 2003	June 2004	90%	2	1
JCS Pty Ltd	-	Services (hairdressing)	4	Nov 1983	Dec 1997	-	3%	3	3
RMW Pty Ltd	-	Fashion	18	Feb 1996	Feb 2000	Jan 2001	45%	3	3
2SP Pty Ltd	-	Fashion	3	June 2001	Aug 2005	Feb 2006	10%	3	2
KEA Pty Ltd	Mick Erwin Sports ('84)	Fashion	30	May 1988	1996	1997	30%	2	1
OPO Pty Ltd	Bondi Charcoal Chicken ('86)	Food (Fast-food)	30	Jan 1995	June 2001	-	5%	4	2
NUD Pty Ltd	Real Juice (2002)	Food (Juice)	20	Oct 2002	Jan 2004	Aug 2004	1%	5	5

5.4.2.2. Multiple data collection methods

Data were collected from multiple sources to enhance the validity of the study. This consists of (1) in-depth interviews and questionnaire, (2) other primary and secondary data sources, (3) supplementary and expert interviews and (4) memos.

In-depth interviews and questionnaire

Personal interviews using a semi-structured format were conducted with key informants from each firm. These were the founders, owners, CEOs involved in the decision making process for the firm's internationalization and strategic decisions. The interview covered issues such as the prior history of the founder(s), the founding of the firm, the process of first domestic market entry (wherever applicable), the process of first and subsequent internationalization, firm characteristics, as well as key success factors and obstacles in international markets. The focus of the interview were the processes, behaviour and events relating to the model/propositions, including opportunity recognition, evaluation and exploitation in international markets, and the role of prior knowledge, network ties, resources, absorptive capacity and international entrepreneurial orientation and how these evolve. New themes and variables that emerged were carefully recorded. At the end of each interview, the investigator asked the key informants to fill in a short questionnaire. From the questionnaire, a number of perceptual measures were gathered, i.e. international entrepreneurial orientation, prior knowledge, network ties, absorptive capacity, and firm performance (see Appendix H for the questionnaire).

All interviews were recorded and transcribed for further data analysis. Each informant signed a consent form to release the company information (see participant consent form in Appendix I). The interviews, subsequent interviews and collection of additional evidence were conducted between August 2005 to May 2006. Each interview lasted from one to two hours. The interview process was iterative as the researcher gradually accumulated the case evidence to obtain an holistic but detailed picture of the key events, actions and decisions in each firm. This involved between two to five rounds of face-to-face interviews with each firm, some conducted through phone interviews/discussions. All interviews were transcribed by a professional transcriber, followed by verification by the researcher by comparing each tape to the transcription word by word. Words or technical details that the researcher could not understand were confirmed with the key informants by phone and/or email correspondence.

Other primary and secondary data sources

During and after each interview, the researcher attempted to obtain as many other primary and secondary data sources as possible. Various types of data were gathered. This included (1) archival records and documentation such as technical manuals, corporate plans, financial statement, standard

operating procedures, firm history and news from internet sources, newspapers, corporate fact sheets and brochures; (2) informal observation of the activity of the firm, their laboratory or manufacturing facilities; (3) physical artifacts such as tools, devices, and products. Many photographs were taken in each case for documentation purposes, such as photos of factories, workshops, showroom, labs, offices, stores, warehouses and locations etc.

Supplementary and expert interviews

The researcher also conducted supplementary interviews with the connected others of some of the focal firms who have given their permission. This was crucial to verify the events and to gain additional perspectives about how and why certain events occurred. As a result, ten out of the fifteen cases had multiple key informants (see Table 5.4a and 5.4b). For example, in the SSW case, interviews were conducted with the founder of SSW and the founder of its international distributor who plays a critical role in the commercialization of their software in the global market. In the JCS case, the interviews were conducted with the founder of JCS, its master franchisor in New Zealand who plays instrumental role in its first international market entry and a former member of staff who triggered the idea for franchising the JCS hairdressing system. In the RMW case, the interviews were conducted with the two founders of the firm and the Texas agent who was responsible for the firm's vertical growth in the Northern American market. In the NUD case, in addition to the interview with the principal founder, supplementary interviews were conducted with the co-founder and business development manager (both of whom have left the company), the founder of the advertising agency who was responsible for the firm's branding strategies, and an important distributor in NUD's early days.

Further interviews were conducted with six expert informants. They ranged from consultants, high-ranking government official, university professor to venture capitalists. The interviews lasted for between one to two hours. The informants provided independent insights into the nature of the high technology and low technology firms in Australia and how the Australian government policy had an influence on firms' entrepreneurial and internationalization behaviour. Relevant information obtained from the supplementary and expert interviews were used to complement the case database of each firm. The profile of the expert informants can be found in Table 5.5.

In total, the researcher interviewed 36 informants, which consists of 30 informants from the focal firm and their connected others and 6 from the expert informants.

Table 5.5 - Expert Interviews

Organization	Organization's principal activities	Name of Person Interviewed	Position	Cases to which the interview is relevant to	No of Interviews
University of NSW	Education & Research	Prof. Andrew Terry	Consultant & Professor in Franchising	NUD, OPO	1
Australian Trade Commission	Government agency	Cheryl Scott	The only expert/specialist in Austrade in Franchising	All low tech cases	1
Innovation Policy Branch, Department of Industries, Tourism and Resources	Policy making institution in innovation	Tricia Berman	General Manager of Innovation Policy Branch	All high tech samples	1
IDC	Global research and consulting in IT related industries	Tim Sheedy (Research Director, Software & Services)	IT Analyst	SKY, SSW, EMI	1
Allan & Buckeridge	A leading Australian venture capital firm in high tech areas	Roger Buckeridge	Founder and Partner of Allan & Buckeridge	All high tech cases	1
Nanyang Ventures	A well respected Australian venture capital firm	Chris Golis	Founder & CEO of Nanyang Ventures	All high tech cases	1

Memos

Memos were used throughout the whole research as a primary sense-making tool during the data collection and analysis (Miles and Huberman, 1994). This began shortly after the first interviews had been conducted and lasted through until the end of the data collection. This allows the researcher to write summary of the important themes or ideas intermittently that emerged from the cases and to bring them for discussions with two other researchers. The discussions with the two researchers generated new ideas and confirmed the researcher's findings and offered multiple perspectives to make sense of the ideas that emerged. The memos also help the researcher keep track of ideas for the within and cross case analysis write up. This was part of the researcher triangulation to enhance the validity of the study.

5.4.2.3. Creation of case study database

In addition to using multiple data collection methods, the creation of a case study database is important in ensuring the validity and reliability of the research. A case study database was created so that other researchers can review the evidence directly. The archival records, physical artifacts, photos, articles, news clippings, table of chronology of events, event mapping, and case histories, memos and other analytic reflections and data displays were stored in 15 containers (i.e. each case in one container) for ease of retrieval. Some of the data which are available electronically (e.g. graphs, tabular materials, corporate information, and email correspondence with key informants) were stored in the computer system accordingly for each firm. These formed a case study database as recommended by Yin (2003).

5.4.2.4. Data Structuring

Reconstructing and mapping the chronology of events

Scholars have proposed three general stages in process-based research which are relevant for data collection and analysis (Van de Ven and Poole, 2005; Van de Ven and Engleman, 2004; Buttriss and Wilkinson, 2005): 1) identifying the kinds of events taking place, 2) identifying the sequences of events that occur over time and place and how they are or are not connected, and 3) identifying the causal mechanisms or overall patterns that drive the flow of events. Events of interest in this study are the opportunity discovery, evaluation and exploitation in international markets. This includes the first and subsequent internationalization events and any changes in internationalization behaviour or operations. However, these events are connected to other (entrepreneurial) events including the pre-firm and firm formation, development of new social and business relationships, acquisition of important resources and access to particular information. These are included as events of interest in this research.

Following each interview and collection of primary and secondary data sources, the researcher created a chronology of events for each firm. A table was used to reconstruct the key events, actions, and decisions concerning the prior histories of the founder(s), the recognition, evaluation and exploitation of opportunities leading to the formation of the firm and/or any additional firms, the first and subsequent internationalization and any other important changes in internationalization behaviour and operations such as changes in mode of entry, development of new network ties, shareholders, new capital injections, recruitment of professional CEO, changing competitive landscape or technology, changing customer preference and regulatory changes (see Table 5.6 for an example of the table of chronology of events).

The chronology of events was used to create an ‘event mapping’ for each firm which contains key actions, actors and connected others along a time and space dimension in a pictorial form (see Figure 5.4 for an example of event mapping). The chronology of events and event mapping were sent to the key informant(s) for feedback and clarification was sought to resolve any ambiguities, as well as any additional information, as required. This was an iterative process that overlapped with the iterative interviews in order to fill in the ‘missing data’ or more detailed information regarding particular event, place and time, and was helpful to assist the key informants recall past events or to see the interconnections among events which triggered the recollection of other important events. The iterations took place along the two to five rounds of in-depth interviews for each firm. The event maps served the purpose of a ‘working template’ for discussions with informants during the iterative data collection process.

Subsequently, based on more complete information regarding the event maps, a case history was written and sent to each informant for confirmation and clarification. All respondents returned or approved case histories with only minor changes being made. In some cases (i.e. EMI and JCS), the founder took the case history for discussions to their board meetings to reflect on the firm’s history and plans for the future. Quality feedback was received and many important events in the relevant cases were clarified. The case histories provide a synthesis of what is known about every single case (Miles and Huberman, 1994).

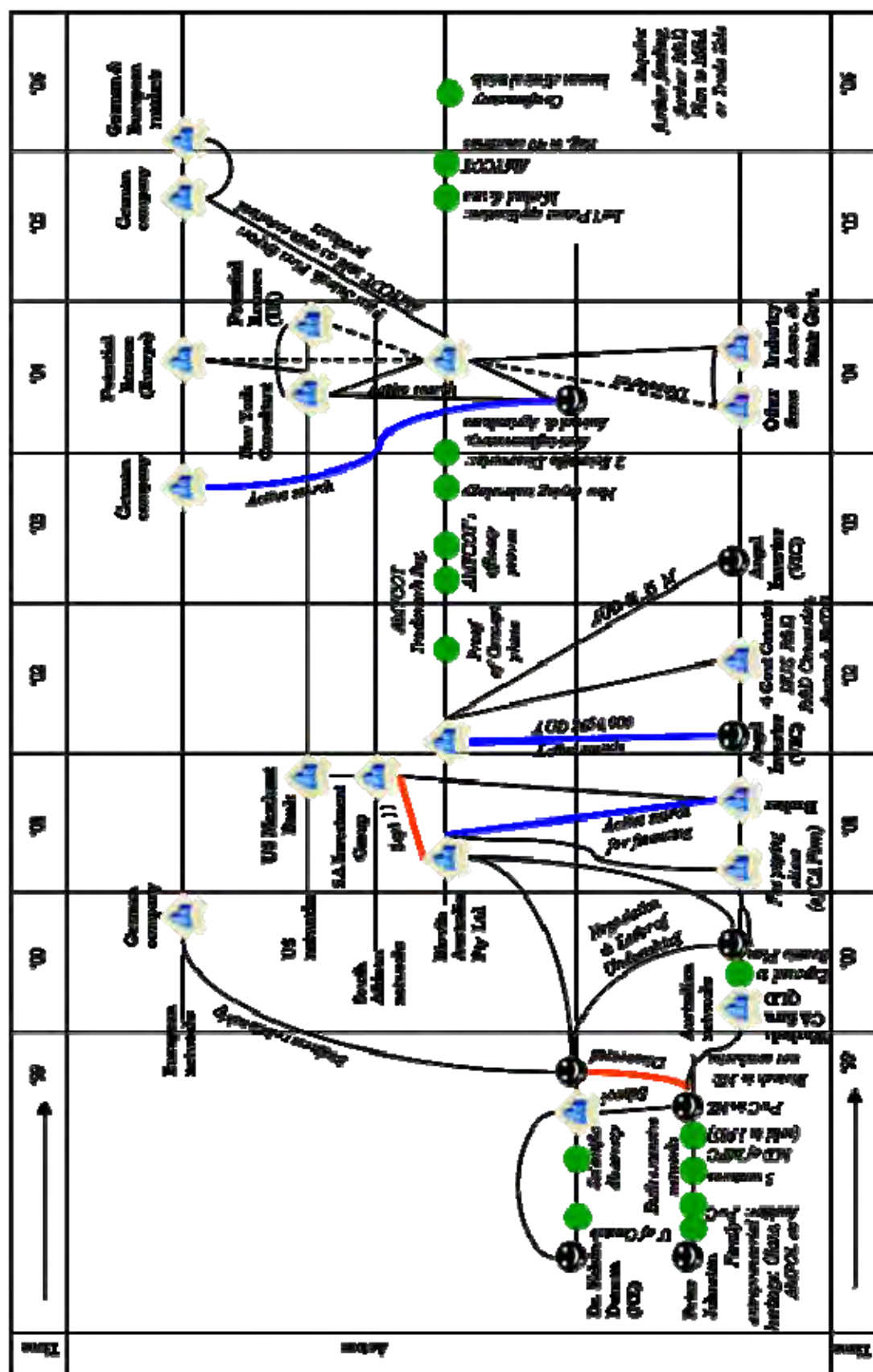
Table 5.6 - Chronology of events – BVA Pty Ltd

Event	Time	Abstraction
		Great Grandfather founded GLAXO, the seed of Glaxo SmithKline
		Grandfather co-founded Europe Oil, the 3 rd largest petrol company in NZ and a co-founder of AMPOL Petroleum in Australia
	'61	Peter Johnston graduated from the University of Canterbury, Christchurch, New Zealand, B.Com (Accountancy)
	'61 - '67	Worked as auditor in Price Waterhouse, Melbourne
	'67	Met a retired businessman from Melbourne Business Association – offered to fix the accounting/finance problem of a paper/packaging company
	'67	Part-time consultant in the paper/packaging company – worked weekends and nights
	'68-'69	Consultant to the Paper/Packaging company in Melbourne
	'69	Went back to New Zealand
	'69-'76	Commercial Manager in a manufacturing firm of 500 employees – handling exports, sales, govt contacts, legal/commercial issues
		New Zealand is a protected economy; monopolies, oligopolies that distort business
	'76-'85	Formed his first consulting company: Cultural & Economic Development Ltd (CED)– business development services to manufacturing sector, carrying out negotiations with govt and industry for clients
	'78 – '85	Bought Mercantile Finance Corporation (MFC), a public unlisted retail finance company and become its Managing Director; merged with CED to produce a broad based trade services/trade finance company.
		Peter Johnston had 2 other ventures; a building company in the 70s and an export agency in the 90s
	'84	MFC became the largest non-bank trade finance company in NZ
	'85	Sold MFC to a public company
	'89	Dr. Duncan, a New Zealand scientist, started conducting in-vitro trials of a bioactive
	'91-'99	Joined Coopers & Lybrand in 1986 as director of business services which merged with Price Waterhouse to become PwC 1998
		NZ has no biotech industry nor venture capital market to speak of
		Dr. K W Duncan, the NZ Scientist, had various inventions which had been commercialized. Sales to overseas markets, including to a Germany neutraceutical company
e1	'97	Dr. Duncan discovered a bioactive in a Cyanobacterium which had strong antibiotic activity.
	Jan '98	Dr. Duncan and Peter Johnston were both members of the board of directors of a secondary school in New Zealand
e2	Feb '98	Dr. Duncan came to see Peter Johnston in PwC NZ to discuss the feasibility of commercialising an invention –nothing proceeded
	'00-'02	Director of business services in a CPA firm in Queensland
e3		Heard the Premier Peter Beattie speaking about his Plan to use biotechnology as one of the main industry sectors for the future economic development of Queensland.
		Queensland has the highest number of botanicals in Australia; and Australia has among the largest number of botanicals in the world
	'00	Existing pharmaceutical companies (Johnson & Johnson, Aventis, Schering, Bayer) produce products that are chemical-based which are fungistatic, inhibiting certain biological functions in the cell of fungi but not killing the fungi.
e4	Feb '01	Went back to NZ to negotiate intellectual property purchase from the Dr. Duncan's company – with the idea of commercializing it in QLD
	Feb '01	Obtained Letter of Undertaking to sell the IP – given 12 months to find the seed capital to pay for the IP
e5	Jun '01	Formation of Biovite Pty Ltd (7 June 2001) (Peter Johnston as the

		founding shareholder and Dr. Duncan as a co-shareholder.)
	Jun '01 – Sept '02	Carried out the early work for Biovite as a fee paying client with the CPA firm Peter Johnston was an employee of. So he served two constituents, both the CPA firm and Biovite until September 2002.
e6	Sept '01	Found a seed capital through a broker in Brisbane which originated with an investment group in a South Africa. The funds were held by a Merchant Bank in one of the towers in the World Trade Centre, New York ready to be transferred to Biovite.
	Sept '01	Following the September 11 Attack (2001) all funds held by Banks resident in the Trade Centre were returned to the point of origin.
	Sept '01	The funds were lost and Biovite had to start again to find seed capital.
	Apr '02	Business Plan presentation to the above Angel Investor
e7	Aug '02	Biovite found an angel investor as a result of networking. A very successful businessman and high net worth individual from the State of Victoria injected seed equity capital, amounting to AUD \$650,000 during 2002/03
	Aug '02	Made initial payment to the NZ company (that held the IP of Dr. Duncan's discovery) and completed a contract for the purchase of the IP.
	Aug '02	The investment required the initial shareholding of Mr. Johnston and Dr. Duncan watered down and became minority shareholders. However Mr. Johnston still retained the executive position as the Managing Director
	Sept '02	Biovite officially opened its door for business (started its operations)
	Oct '02	Commencement of Proof of Concept phase for AMYCOT®
	Oct '02	Biovite established a laboratory at its premises on the Gold Coast, Queensland
e8	Nov '02 – Jun '03	In vitro (lab experiments) testing during this period proved the efficacy of the bioactive: common fungi, mainly Ascomycetes, died in minutes on exposure to AMYCOT
e9	Nov '02	Received ISUS (Innovation Start-Up Scheme) Grant amounted to \$85,000 from QLD state government for R&D and commercialization
e10	Dec '02	Received the Commonwealth Government's R&D START Grant amounting to \$190,384 – for R&D activities.
	Feb '03	Biovite received a certificate of registration of the trademark AMYCOT
		Biovite lodged applications for the registration of the trade mark "AMYCOT" in 40 countries by the end of 2005. An INCI was also registered under the International Nomenclature for Cosmetic Ingredients.
	'03	Two patents (method and use) granted for the IP of AMYCOT
	'03 – '05	Investment by a venture capital firm (Stage 2 financing): A\$1,350,000
	'03	Initial trials of 50 human subjects (in-vivo) under Ethical Approval confirmed the in-vitro tests: cures were rapidly achieved for a variety of fungal and bacterial conditions, with subjects reporting almost immediate relief from itching in dermatitis. In the case of Athlete's Foot, the cure was permanent and usually took no more than two to four days. The itching in fungal infections is an indication of the release of metabolites from the fungi. Once normal fungal metabolism was disrupted as the cell wall was destroyed, then itching ceased.
e11	'03	The initial trials led to another three discoveries. First, AMYCOT was active against Acne or P.acnes bacteria. Second, AMYCOT has other important properties including for anti-inflammatory and skin repair mechanisms – this opens up the opportunity in the pharmaceutical and cosmetics industries. Third, AMYCOT was effective against fungal diseases of plants; and animals such as Facial Eczema in sheep and cattle, opening opportunity in the animal health and agriculture/horticulture sectors.
	'03	Received an R&D Tax Concession Rebate: which allowed Biovite to obtain 30c rebate applied to 125% of approved R&D expenditure
	Sept '03	Received EMDG Grant from Austrade

		Lengthy and expensive FDA approval in US: 5-6 years + hundreds of millions of dollars
	'04	New patented drying technology changed Biovite manufacturing process: it transforms wet mixes into a dry pre-mix powder – easy to export and re-hydrate under Biovite formula overseas
e12	Feb '04	Dr. Duncan introduced Biovite to Ocean Pharma GmbH, a German nutraceutical company, whom it had previous business dealings with for different products
e13	Sep '04	Completion of Proof of Concept: successful trials of AMYCOT
e14	Oct '04	Commencement of commercialization with a search for strategic partners in each applicable sector for global distribution of AMYCOT and products thereof. Biovite initially appointed a consultant based in New York to identify and introduce targets and commence discussions with potential licensees in USA and Europe. The consultant was the principal of Corporate Capital Group Inc, a consulting in New York with many years of experience and was known to Dr. Duncan as he apparently was a New Zealander.
	'05	Application to the TGA (Therapeutic Goods Administration) to have the AMYCOT dry pre-mix added to the ARTG (Australian Register of Therapeutic Goods) as an ingredient for complimentary medicines
e15	Aug '05	The first sale and the first internationalization by licensing to Ocean Pharma GmbH, the German nutraceutical company – as cosmeceuticals: Nail Lotion and Tinea Cream for the Doctor's Only Market
e16	Jan '06	Biovite is still working on several of the introductions made by the Corporate Capital Group Inc. It has also been working independently and talking to a number of firms who it has contacted through networking and others that have found it through contact with Industry Associations and the State Government which could lead to further sales.
	Jan – Jun '06	Commencement of confirmatory human clinical trials (in vivo)

Figure 5.4 – Event Mapping – BVA Pty Ltd



5.4.3. Data Analysis Phase

There are four steps in the data analysis phase. The first step involves within-case analysis. This includes (1) relying on theoretical proposition (i.e. follow the theoretical propositions that led to the case study), (2) pattern-matching by comparing the pieces of information from the cases to the propositions to determine the degree to which they are consistent, and (3) comparing the pieces of information from the cases to rival, mutually exclusive propositions to determine the degree they are inconsistent with alternative explanations. The second step involves the creation of a summary of the opportunity recognition and exploitation events. The third step is the cross-case analysis and drawing conclusions. The final step is developing case descriptions as a way of organizing the key findings.

5.4.3.1. *Within-case analysis*

The propositions provide theoretical orientation that guides the data collection plan and case study analysis (Yin, 2003). Within-case analysis was conducted by linking case data to propositions specified in Chapter 4. This analysis focused on two aspects: (1) confirmation or disconfirmation of each propositions for each case, particularly how and why the factors and processes described in the propositions (e.g. prior knowledge, network ties, path dependency etc) influence the nature of opportunity recognition, evaluation and exploitation; and (2) exploration of new themes, factors or processes that emerge for each case (e.g. the role of entrepreneurial bricolage, the multidimensionality of absorptive capacity etc). This approach allows for the discovery of new factors/processes without ignoring potentially important constructs that have already been developed in the literature. Within case analysis allows for individual case patterns to emerge before cross case analysis is used to generalize. To aid within-case analysis, the researcher went back and forth to the interview transcripts, case history and event mapping.

The researcher also compared the case evidence with the three mainstream theories of internationalization to determine whether these theories explain the results better (i.e. theory triangulation). This approach was previously used by Coviello and Martin (1999) and Zarafullah, Ali and Young (1998) by examining SME internationalization in the integrated and holistic context of the Uppsala Model, Network Perspective and Eclectic Paradigm.

Each within-case analysis report was presented individually in Volume 2 of this thesis.

5.4.3.2. Summary of the opportunity discovery and exploitation events

Prior to cross-case analysis, the researcher created a summary of the opportunity discovery and exploitation processes, depicting in pictorial form the nature and interlinkages of the process for each case. This summary was based on coding different types of opportunity recognition and exploitation. Different colour schemes and symbols were used to mark the process in terms of whether an opportunity was the result of the focal firm's or other's active search, discovery or both, or further opportunity development from existing opportunity; the interlinkages of opportunity and the degree of separation of a network tie/opportunity from the focal firm; a distinction of substantial vs. minor and continuation vs. termination of opportunity in both domestic and international markets. The summary helps the researcher in the cross-case analysis phase. The details below explain the meaning of Figure 5.5.

Basic structure of the diagram

The diagram was formatted in a way to separate the domestic and international market events. The column on the upper left hand column on top of the horizontal line represents all events/opportunities in the domestic market, while the lower right hand column below the horizontal line the international opportunities. Firms also discover and exploit opportunities in the domestic market and these opportunities, where applicable, are represented in the lower right hand column below the horizontal line.

Colour scheme

Each opportunity is represented by a bar or square, marked by different colour and meaning, as follows. The colour scheme allows the analysis of sources of opportunities.

<i>Colour</i>	<i>Meaning</i>
Orange	opportunity as the result of the focal firm's active search
Blue	opportunity as the result of other actor's active search
Orange and Blue	opportunity as the result of the focal firm's and other actor's search (double search)
Red	opportunity development of existing opportunity
Green	opportunity discovery by the focal firm
Yellow	opportunity as the result of being discovered by others

Interlinkages of opportunity

The interlinkages of opportunity are represented by the line(s) that link an opportunity with the other(s). For example, previous business relationships between the scientist and co-founder of BVA with a German company led to an early and the first international market entry in the German market (see the diagonal line cutting across the 'discovery' and 'Germany' in Figure 5.5).

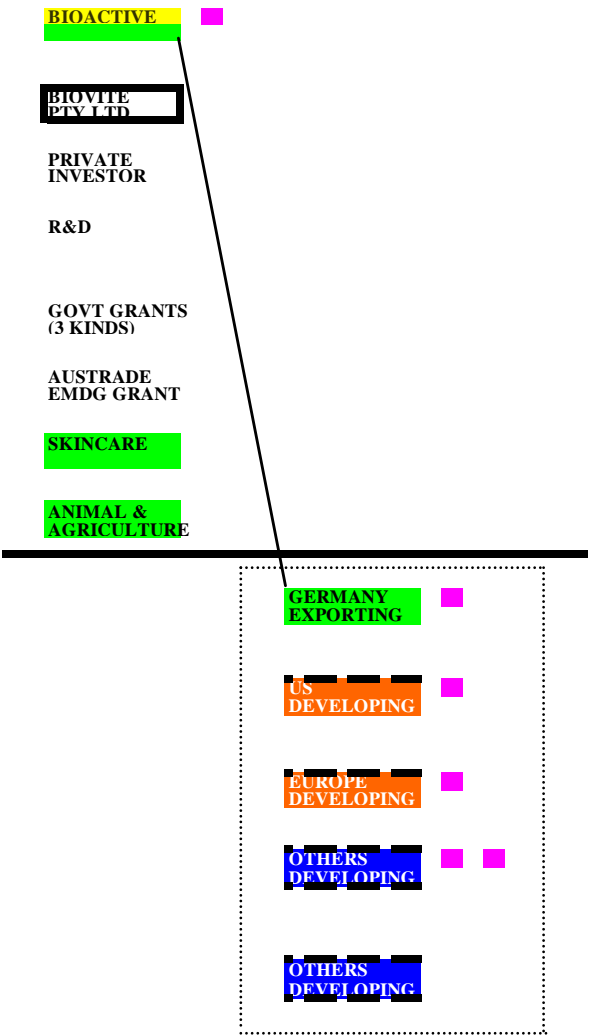
Degree of separation

The little square dot on the right hand side of the bars or opportunities refers to the degrees of separation of the opportunity from the firm. One dot refers to ‘one degree of separation’ (i.e. a direct tie to the firm) while two dots refers to ‘two degrees of separation’ (i.e. an indirect tie to the firm or a friend’s friend). No dot means that the opportunity came from a totally new tie that was previously unknown to the firm.

Size and existence of opportunity

Lucrative or major opportunities that are current are represented with a solid square line that wraps the bar, while broken square line means that the opportunity has been terminated.

Figure 5.5 – Summary of Opportunity Discovery and Exploitation – BVA Pty Ltd



5.4.3.3. Cross-case analysis

The cross-case analysis involved pattern matching logic and explanation building (Yin, 2003). The cases are treated as a series of experiments, with each case serving to confirm or disprove the propositions and emerging themes. The iterative process of case evidence assessment was used to extend and refine the initial model and proposition (Chapter 4).

The researcher began by collecting the data and analyzing the role of different factors and processes (e.g. prior knowledge, network ties, and international entrepreneurial orientation) on the nature of opportunity recognition, evaluation and exploitation of born global firms in the knowledge-based industries. Literal replication was achieved when the researcher reached the fifth case. This was further replicated with another three born global firms in the non-knowledge-based industries and the researcher became more confident of the findings. This proceeded with data collection and comparison with cases that had de-internationalized and/or re-internationalized in both types of industries, and those that gradually internationalized also in both types of industries. The sampled firms include those with high foreign sales to total sales (FSTS) ratio and those with low FSTS ratio and comparisons were made across the two classes of samples. The researcher was particularly interested in changes of prior knowledge, network ties, international entrepreneurial orientation, absorptive capacity and the path dependency over time and how they affect the changes in the pattern of internationalization. The diverse sample served to confirm/disconfirm the propositions and new themes case by case. The data collection and analysis stopped at the 15th case as the researcher found strong evidence and confirmation concerning the factors and processes influencing the dynamics of internationalization.

Analytic manipulations (Miles and Huberman, 1994) were used to help make sense of the case data. This included the use of tabulations of information into different arrays and event mapping as discussed above.

Two other researchers independently reviewed the within-case and cross-case analysis and attempted to achieve consensus in the interpretation of the cases. For the most part the focus of the analysis is not interpretive in the sense that the researcher did not seek to understand the way respondents interpreted events and outcomes, so much as to develop and understand the history of the firm's international entrepreneurial dynamics. This researcher triangulation was complemented by theory triangulation as the researchers compared the case evidence with the three mainstream theories of internationalization to determine whether these theories explain the results better.

5.4.3.4. Developing case descriptions

Finally, the researcher developed case descriptions, that is, a descriptive framework for organizing the case study. This was important as it helped to organize the main ideas and findings around the propositions described in Chapter 4. The case description is explicitly shown in Chapter 6 which depicts the cross-case findings.

5.4.4. Validity and reliability issues

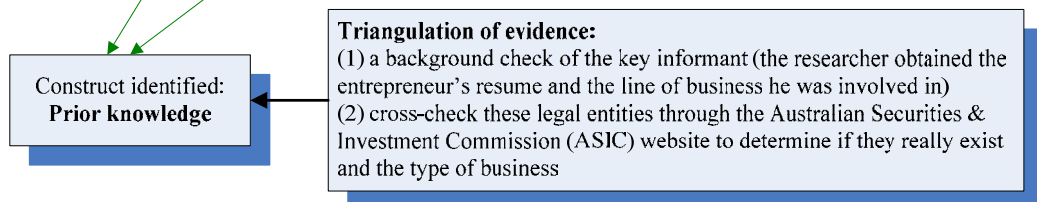
Construct validity, internal validity, external validity and reliability are discussed in general terms below, with a description of how each was handled in this study.

Construct validity

Construct validity concerns establishing correct measures for the phenomena being studied. The definition and operationalization of relevant constructs grounded in the literature review (Chapter 2) enhance construct validity. This thesis followed Yin's (2003) suggestion by using the triangulation of sources of evidence to strengthen construct validity as this provides multiple measures of the same phenomenon. The thesis also relied on key informants to review the table of the chronology of events, event mapping and case history to strengthen construct validity. For example, the construct 'prior knowledge' was observed in the founder's description of the new venture formation process below. The researcher conducted two validation activities for this construct using the founder's resume and the Federal Government's formal database of all companies established in Australia.

EVENT 0 (time 0)

The first business I had was making technical brushes of the type you would most easily recognise when the road is swept with truck that comes down the road he's got it this way and this way. Also wire brushes for cleaning fences and steel and concrete. As part of that business I also had the business that make the bristles that go in the brushes and profile extrusion.....so the first one was the brush company, the 2nd one was the bristle and profile company which gave me my extrusion experience, then we had another business in leisure where we built houseboats for hiring on the River Murray and then I retired and completely sold everything and then started this business. (Brian Dolling, founder of NuKorc Pty Ltd)



The example below, also using the evidence from the case above, indicates how the researcher ensured construct validity. Constructs such as weak ties and strong ties in the initial opportunity discovery were observed. The role of opportunity development/refinement was also evident from the text and this was related to the founder's prior knowledge in profile extrusion manufacturing in the event at time 0. By understanding events in each case, the researcher identified and cross-checked the presence or absence or significance of certain constructs in the process of opportunity discovery, evaluation and exploitation.

EVENT 1 (time 1)

my son came to me with a concept to make wine corks. He had lunch with a prominent wine maker who had 3 of his best Rieslings to try for a group of investors and two of them were corked. And that wine maker said I wish somebody would make a decent wine cork and so I was working on other project, my son rang me from ... and said it's much more fun making wine corks from what you are doing now and so that night I started to change the equipment to go from making ...brushes to making wine corks. (Brian Dolling, founder of NuKorc Pty Ltd)

Construct identified:
Strong ties

Construct identified:
Weak ties

Construct identified:
Prior knowledge
(related to Event 0)

EVENT 2 (time 2)

Well my original concept was to sell licence to produce around the world. But a group of my friends said look this is a good product, this is a good concept, lets commercialise it. So we ... I put funds in to the company and leased a warehouse and the first production line and got started.

Construct identified:
Opportunity discovery

Construct identified:
Opportunity development/ refinement

EVENT 3 (time 3)

I worked out what we needed in the product and of course every chemical company always has technical experts that you can go and talk to. So I did that...made the prototypes and took them to a winery and said try these...so it's an evolving process....I used an extrusion process to extrude our materials much like you make a sausage from a proprietary recipe of granules – it looks like this.

As a test of construct validity, the researcher covered two important steps recommended by Yin (2003): (1) select the specific types of changes to be studied and relate them to the objective of the study (i.e. early, fast and random international market entry; de-internationalization and/or re-internationalization; gradual internationalization and use of multiple entry modes at one time), and (2) demonstrate that the selected measures of these changes do indeed reflect the specific types of changes that have been selected. For example, born globals is defined as firms that internationalize not more than 6 years after inception (McDougall et al., 2003; Zahra et al., 2000) and derive at least 25% foreign sales to total sales ratio (Knight and Cavusgil, 1996). De-internationalization is defined within the range of complete to partial withdrawal by voluntary or forced actions (Benito and Welch, 1997; Crick, 2003, 2004) and the use of multiple modes of

entry is defined as the use of more than one mode of entry which can take the form of unrelated modes, segmented modes, complementary modes and competing modes (Petersen and Welch, 2002; Benito and Welch, 1994).

Internal validity

Internal validity concerns inferring a causal relationship whereby certain conditions are shown to lead to other conditions (Yin, 2003). To achieve this objective, this thesis relied on pattern matching, which involves comparing an empirically based pattern with a predicted one. If the patterns match then internal validity is strengthened. The development of the chronology of events, event mapping and summary of opportunity discovery and exploitation for each case allowed the researcher to see the causal linkages of events and the inter-relationship among constructs. For instance, in the example from NuKorc Pty Ltd above, the researcher can see the inter-relationship among events and constructs over time which enabled the examination of whether prior knowledge and networks play a role in the opportunity discovery process. The thesis also relied on explanation building where an initial theoretical proposition is compared with evidence from an initial case and then revised based on the initial and subsequent cases. In addition, rival explanations were explicitly addressed and ruled out based on case evidence. This involved, for instance, examining whether new network ties inhibit rather than facilitate opportunity discovery and whether Uppsala Model or Eclectic Paradigm or Network Perspective can explain the internationalization process better.

External validity

The thesis pursued external validity through replication logic. This involves assessing the theoretical propositions with additional cases, where they have predicted that the same results should occur (literal replication) or that different results should occur for predictable reasons (theoretical replication). This was achieved by sampling different types of SMEs (i.e. early and accelerated internationalization; de-internationalization and/or re-internationalization; gradual internationalization and use of multiple entry modes at one time) and in different industries.

Reliability

Reliability means demonstrating that the operations of this research can be repeated with the same results (Yin, 2003). This was achieved by a well-organized case study protocol and case study database. The interviews with the connected others of the focal firm and expert informants, as well as cross-checking with published sources such as newspaper and magazine archives and internet sources, also helped increase the reliability of the information and various events that occurred in each focal firm.

Table 5.7 summarizes the tactics used to ensure a quality research design in this research.

Table 5.7 - Case study tactics for quality research design

Tests	Case Study Tactic	Phase of research in which tactic occurs
Construct validity	[1] Use of multiple sources of evidence (i.e. interviews, archival records, documentation, websites, informal observation, physical artifacts, questionnaire)	Data collection
	[2] Key informants reviewed chronology of events, event mapping and draft case history that overlap with iterative interviews with key informants and supplementary and expert interviews.	Data collection
	[3] Refinement of case study protocol after the exploratory study to ensure correct wording was used; the flow of interview	Research design
Internal validity	[1] Conducted pattern matching to evaluate literal and theoretical replications across cases and explanation building	Data analysis
	[2] Entertained rival explanations (using Uppsala, Eclectic and Network Perspectives of internationalization)	Data analysis
	[3] Used time series to develop a chronological understanding of the processes under investigation	Data analysis
External validity	[1] Used replication logic in multiple-case studies and explanation building; generalizing to the 'theory' (analytical generalizations)	Research design
Reliability	[1] Used a case study protocol for consistency (for both the pilot study and main study): focusing on the "opportunity-firm" nexus	Data collection
	[2] Cross-interviews with additional key informants and expert informants on certain important events revealed by the key informant in the cases (where applicable)	Data collection
	[3] Formally assembled evidence in case study database, including notes, transcripts and tapes and other documents.	Data collection

Source: Adapted from Yin (2003)

5.5. Summary

The purpose of this chapter was to describe the methodology used to refine the propositions/model developed in Chapter 4. This involved describing the rationale for using process approach within the multiple case study design framework, the actual implementation of the research process and method of analysis and steps taken to ensure the validity and reliability of the study. The results are presented and discussed in Chapter 6.

6. RESULTS AND DISCUSSION

This chapter contains the cross-case analysis of the main study. The chapter will first present the general themes that cut across the cases and that relate back to the conceptual framework developed in Chapter 4. This will be followed by a discussion and illustration on each theme that is organized around the firm founding and internationalization phases. The chapter concludes with a general summary of the themes and their relations to prior research. The within-case analysis and a profile of individual cases is presented in a separate volume (Volume 2) of this thesis.

6.1. General themes

Collectively, the cross-case findings reveal a number of general themes related to the factors and processes affecting firm internationalization proposed in the conceptual model (Chapter 4). The themes that emerge in the internationalization phase overlap with, and include those in, the firm founding. First, the cross-case findings reveal a lack of orderly sequential processes or ‘stages’ of discovery, evaluation and exploitation in the firm founding and early stages of internationalization. Rather, they are inextricably linked, interrelated - a ‘complex and chaotic’ process (Aldrich and Ruef, 2006). The process can begin with initial discovery and is followed by further refinement as well as exploitation which involves searching, developing and experimenting in order to figure out whether there is real and substantial opportunity or not. This cycle shapes subsequent patterns of refinement as firms and their network of stakeholders make greater commitments or change course. Therefore, firms can ‘see’ then ‘act’ and ‘act’ in order to ‘see’ opportunities. The notion of evaluation as a systematic and independent act may not exist in the early stages since it is a matter of refining opportunities to the point of action and formulating a viable alternative rather than evaluating some prespecified or consideration set of alternatives. This also shows a lack of clear distinction between the discovery, creation and enactment of opportunities as they are all part of a more general process of groping forward or muddling through (Linblom, 1959). This pattern is evident across the 15 cases in both high and low technology sectors. The exploratory research (Chapter 3) provides an early indication of these patterns, of evaluation and exploitation fading into each other and discovery becoming entwined with evaluation. The cases show that systematic evaluation plays an increasing role when known unknowns and firms’ knowledge and resources develop in the later stages of internationalization. The findings pose challenges to the somewhat linear view built in the initial model (Chapter 4) and suggest various types of model refinement as discussed in Chapter 7.

Second, cross-case findings show that, generally, opportunity discovery/exploitation reflects information and knowledge already possessed, although the process can be shaped by knowledge of prior ties that can be accessed and utilized, as well as serendipity, for instance encountering new ties and/or the actions of existing and new ties who find the focal firms whilst acting on their own knowledge and new information. This supports the predicted relationship between prior knowledge, network ties and opportunity discovery/refinement in the initial model (Proposition 1a, 1b, 2a, 2b and 2c in Chapter 4) and the role of prior research (Shane, 2000; Birley, 1985; Loane and Bell, 2006).

Third, the findings show that deliberate search can play an important role in entrepreneurial activities, leading to the discovery of aspects not originally anticipated by the searcher/firm. This is partly influenced by the role of relations and networks. While prior research indicates little role for deliberate search in entrepreneurial discovery (Shane, 2000), this study shows otherwise. Moreover, deliberate search is not simply seeking and finding known unknowns but is an active, creative process of opportunity formulation and negotiation. These patterns cut across all cases and offers new insights for model refinement that are described in Chapter 7.

Fourth, the cross-case findings show that opportunities are interconnected over time as the development of one can lead to others in a way that cannot be seen in advance. This depends on the firm's exposure to new information, problems, resources, new ties, experiential learning over time and the propensity for effectual and affectual reasoning. This is consistent with the role of feedback effects and path dependency discussed in the model (Chapter 4). The patterns of interconnectedness include founding and international opportunities, interactions between domestic and international opportunities, and among international opportunities. While international opportunity development can lead to increasing commitment to international markets, as suggested by the Uppsala/Process Model, it can also lead to changes in direction towards other opportunities due to the discovery of these additional opportunities. Similarly, uncertainty can push or pull the pattern of development in many directions across home and foreign markets. The study identified eight plausible patterns of interconnectedness of opportunities over time, including the patterns described by the Uppsala/Process Model. This helps account for the irregular, non-linear patterns of internationalization reported in the literature. This finding provides support for Proposition 5 and 6 (Chapter 4) as well as providing insights for model refinement in Chapter 7.

Fifth, the findings reveal a positive feedback cycle between international entrepreneurial orientation (IEO) [i.e. proactiveness, aggressiveness, innovativeness, uncertainty/risk taking, autonomy) and firm resources and international opportunity discovery/exploitation. This cycle

is influenced by firm histories, the nature of the industry, tacit experience in international markets, the role of international networks and uncertainty. However, results offer clarifications of the IEO construct. *Agressiveness* does not mean being aggressive to competitors but rather ‘agressively’ seeking to leverage opportunities when they present themselves. *Risk taking* does not appear to differentiate between firms that are highly successful in recognizing and exploiting opportunities in international markets and those that are less successful. All new ventures involve risk taking; it is just that some succeed and others do not, and chance and contingencies that cannot be seen or planned in advance can play an important role (Taleb, 2001). This provides new insights for model refinement in Chapter 7.

Sixth, cross-case analysis reveals that prior knowledge, new knowledge, IEO and resources alone are not sufficient for opportunity discovery/exploitation but that this requires the ‘ability’ and willingness to see new connection relationships and to combine and recombine them in new ways - what may be described as absorptive capacity. The findings suggest that the dimensions of absorptive capacity are broader than those discussed in the literature to date and can involve other psycho-socio dimensions, including an openness to new possibilities suggested by the environment, judgment about what and which information is appropriate to absorb or believe, and the role of others as extended minds and sources of new knowledge (i.e. distributed absorptive capacity) (Wilkinson and Young, 2005). This offers an expansion of the absorptive capacity construct which enriches Proposition 4 (Chapter 4) and offers new insights for model refinement in Chapter 7.

Seventh, the findings reveal that bricolage is important in dealing with Knightian uncertainty and marshalling resources under conditions of resource scarcity in firm founding and internationalization. The cases reveal three types of bricolage which include keeping existing sources of income while venturing into a new business/international markets, creatively using existing resources and capabilities, and accessing and utilizing the resources and knowledge of strong and weak ties and creatively combining and recombining them with internal resources. This is to be seen in high and low technology cases as well as novice and well-endowed entrepreneurs. This contributes to our understanding of the role of bricolage in internationalization as well as the nature of bricolage in general (Baker et al., 2003; Baker and Nelson, 2005). This is an important finding that informs Proposition 3 (Chapter 4) and offers insights for model refinement in Chapter 7.

Eighth, the logic of decision making in early stages of internationalization is consistent with effectual and affectual reasoning and non-predictive approaches (Sarasvathy, 2001; Wiltbank et al., 2006). That is, when facing the complexity and Knightian uncertainty in international

markets (i.e. the unknowable prevails), boundedly rational actors leverage contingencies, rely on affordable loss thinking, form partnerships and alliances rather than engage in competitive focused analysis, rely on fast and frugal heuristics, and on emotions and feelings. The propensity for effectual and affectual reasoning explains the unstructured, non-linear, lack of rhyme or reason processes of internationalization in terms of timing, location, sequence and mode of entry frequently observed in prior research. It also helps us understand the tendency to pursue multiple opportunities and the use of multiple modes of entry at any one time.

Over time, as firms learn more about what they did not know, including their goals, options, and preferences, their resources and network ties further develop, opportunities are more refined (i.e. known unknowns develop) and the nature of decision making increasingly follows causal reasoning and rational planning. That is, firms tend to establish and use clearer criteria in opportunity evaluation, opportunity costs become an issue, less profitable/potential opportunities are pruned in favour of more attractive alternatives, predicting the market becomes more possible, and professional managers are hired to further refine the opportunities. While a number of firms showed high propensity for causal reasoning, others combined effectual and causal reasoning simultaneously, i.e. ‘quasi-causal’ reasoning, and others showed the propensity for consistent effectual reasoning. The gradual transition of mode of reasoning is not absolute or deterministic but varies among firms due to the role of routines, habits, inertia, firm contexts and situations. The choice of location, mode of entry, sequence and timing of entry may differ as the mode of reasoning evolves. Therefore, the nature of uncertainty (i.e. the unknowable vs. known unknowns) is an important contingency that influences the patterns of firms’ decision making and behaviour in the international markets over time. These offer new insights and a new proposition for model refinement in Chapter 7.

Finally, the cross-case analysis shows that born global maybe a classification error. ‘New’ international ventures are not really new, except in a legal entity sense, because prior knowledge is retained and adapted; prior relationships, contacts, and energies may be brought forward; and resources of prior ties can be accessed and utilized. Moreover, ‘new’ ventures often discover or are discovered by prior and new ties and become part of their ongoing opportunity development, and these may already have established resources, knowledge and network ties. Lucrative opportunities are not created overnight but involve the creative identification and recombination of pre-existing knowledge that has accumulated over time from prior ventures or experience and/or well established sources and are spread across people and firms. This supports the view that Nature does not make leaps (Darwin, 1859; Marshall, 1920) and is consistent with prior research (Madsen and Servais, 1997). This finding sparks speculation of the real meaning of

born globals in the literature (Oviatt and McDougall, 1994) and offers new insights and a new proposition for model refinement in Chapter 7.

The next section will discuss and illustrate each theme in more detail around the firm founding and firm internationalization phases respectively.

6.2. FIRM FOUNDING PROCESS

6.2.1. Theme 1: Lack of orderly sequential processes or ‘stages’ of entrepreneurship

The cross-case findings reveal a lack of orderly sequential processes or ‘stages’ of discovery, evaluation and exploitation in the firm founding process. However, they are inextricably linked and interrelated. The process can begin with discovery process and be followed by further refinement and active development/exploitation in order to determine if there is real and substantial opportunity or not. The cases show that opportunity discovery/exploitation is related to knowledge already possessed and new information from various sources which shape subsequent patterns of exploitation and refinement until firms are willing to make greater commitments or to change course. As will be shown in the next section, these involve the expanding commitment of the focal firm and its prior and new network of stakeholders. As Table 6.1 shows, the processes are not linear but interactive, emergent processes with unknowable results, involving learning by doing and experimentation. This pattern cuts across the 15 cases in high and low technology sectors. For example, Allan Morrison [BSD] explains how his network ties triggered the *discovery* of the initial opportunity and interest in creating a new firm. He relied on weak ties (i.e. professors and a US-Australian employee) for scientific and business knowledge and commitment to establish the neonatal screening technology firm. From this discovery, the founder sought new information and feedback by demonstrating the technology at a conference which led to a *greater commitment* of time, effort and resources, and ultimately new firm founding. Allan Morrison [BSD] explains:

“I say it was a mistake. Seriously my background was as a chartered management consultant and 10 or 12 years ago I was doing some market research work for the university office of commercial services – looking at the world market prospects for a piece of equipment that had originally developed by a couple of very smart professors of QUT and our research was such that we had lots of people replying who were very interested in this piece of equipment. So we went back to QUT and suggested to them that they should licence somebody overseas who was in this field who could take advantage of the technology and generate royalty payments for them. I think the Professors themselves were concerned about the integrity of the royalty process – they were concerned that they weren’t really going to get paid the royalty that they were due and if the licensee was overseas, they wouldn’t have an easy way of checking on that. So in a moment of weakness I said to them well you can licence me and I’ll go down the road and set up a company and you can come and visit me at any time and check over the integrity of the royalty process. In a moment of weakness they said yes” – [*Opportunity Discovery*]

We signed I think our first licence agreement with QUT in 1991 in September and then in November of that year coincidentally there was an international neo-natal meeting in New South Wales and so we arranged for the very first prototype of equipment that had been developed and sold into the New South Wales health facility. We arranged to borrow that one evening and take it up – you can drive it up to this international exhibition and show off your people which we did and they gave us a lot of interesting feedback about how they would prefer to see the specifications of the piece of equipment changed. So we then came back and toyed with a couple of consulting engineers to re-design the equipment to take into account those changes and we did that very quickly and we built one that was then available by April 1992
- *[Further Development and Refinement leading to new firm founding]*

The inverse sequence is nicely illustrated in the 2SP case, in which Rob Heinrich's *experimentation/development* led to the discovery of an opportunity in children's fashion. Next, the founder turned to his weak tie (i.e. a pattern maker friend), gained his commitment for sources of pattern designs and subsequently refined the opportunity until he was willing to make greater commitments. Rob Heinrich [2SP] explains:

"We were making t-shirts with pup paws paint print ... across the t-shirt, making them for friends and families kids and they absolutely loved it and so I went from there, I approached a friend who is a pattern maker ... who works for another big Australian design company and we started with 8 designs and then we went to about 30 and we were going to use an agent to take our designs to China to source and made and that the process of about two months and that fell through because the fact that she was going to use ... they didn't want them to do it and so I went to China direct." *[Experimentation and Development to the point of Discovery]*

"I don't know I just started making these t-shirts. I don't know how it came about... But I've always wanted to start – have my own business and I've always been interested in fashion – I didn't realize it would be kid's fashion"

As Table 6.1 indicates, while some firms 'see' then 'act' on an opportunity, others 'act' in order to 'see' opportunity. None of the founders examined alternative opportunities and they exploited what they found but new information was sought and encountered to refine the initial opportunity. The firms formulated a viable alternative rather than evaluating some prespecified or consideration set of alternatives. More examples of the lack of orderly sequential processes or 'stages' in entrepreneurship in firm founding, are provided in Table 6.1.

Table 6.1 also shows no clear distinction among the types of opportunity discussed in the literature (i.e. discovery, creation, enactment). Rather, they are all part of a more general process of fumbling forward. Opportunities could be said to pre-exist and are found by those willing and able to combine the requisite knowledge in appropriate ways, but we only know they exist when they are discovered. So they really are created or produced through combining and recombining existing knowledge and ideas in new ways. We have no way of knowing the opportunities that pre-exist to be found or how many there may be at any time because the future does not pre-exist. Opportunities can be developed only through an ability and willingness to act. With hindsight we can see how and why some were able to see an opportunity others could not but

only because of the way the opportunity discovery changes the way we see the world. This finding questions whether the ongoing debates among different ontological views of opportunity are necessary (i.e. Kirzner, 1997; Sarasvathy, 2001; Alvarez, 2005; Gartner et al., 2003).

Table 6.1 also indicates that contextual factors can play a critical role in shaping the motivation and interest to establish new firms. These include family [i.e. NUD and RMW], job security [i.e. ANC], seeing an empty space/premises [i.e. JCS], availability of time [i.e. NKC, NUD, 2SP and SSW], others' reluctance to take action or exploit opportunity [i.e. BSD and KEA] and ease of appropriability, such as the existence of supporting local infrastructure [i.e. BVA, RMW, KEA and WSR].

Table 6.1 - The dynamic process of new firm founding

Cases	Examples of Respondents' Descriptions of the Founding Process
NUD (Low Tech)	<p>Well I was – I had taken 12 months off work, I had a couple of job offers and job opportunities and just really was quite reluctant to rejoin the work force so I had for some years been talking about launching a brand in a business and so I thought this was the ideal time really because I had time on my hands. So my initial concept was to license and establish brand in the space from either the UK or the US and there were a number of similar sort of juice businesses in the UK and the US. So initially I went across to the UK and the US and I met with a whole bunch of those people and was unable to pull together a licensing deal – a brand licensing deal on the terms that I thought were attractive for us in the Australian market. I decided by September, 2002 – maybe August 2002, that I wasn't going to be able to pull off the deal with an existing brand in one of the other markets. So I started the process of creating my own." Tim Pethick [<i>Opportunity Discovery followed by further Development</i>]</p> <p>The issue of course was coming up with a brand – brand concept and brand identity. It was just a pretty laid back process really. I just came up with name after name after name. And so I went through about 270 different names and it wasn't until we got to the name Nudie. And then I began the process of trying to find a way to manufacture the product and I found a factory – a juice factory that was prepared to make it for me. I spent a deal of time working out of that factory – obtaining fruit, mixing blends, trying to come up with the recipes. And simultaneously I was doing things like looking for bottles. I needed – I wanted a custom bottle, I knew I wanted a 250ml bottle in PET. One didn't exist in this country – Tim Pethick [<i>Further Development and Refinement</i>]</p>
BVA (High Tech)	<p>He (Dr. Duncan) came to me when I was at Price Waterhouse Coopers to see if it was feasible for him to set up a company in New Zealand to commercialize a research based project ...bioactives from microscopic water borne cyanobacterium ...and I was only in New Zealand for a few months after that... So nothing had happened when I left and ... he hadn't decided to do anything... We weren't friends, we were acquaintances – that's all. He used to sit next to me in the board meetings. I didn't really know him at that time. It was a complete surprise when he came to see me at the office – Peter Johnston [<i>Information for future Discovery</i>]</p> <p>When I came out here (Queensland, in 2000) and I found out about the environment here for biotechnology created by Peter Beattie with all this investment into research facilities, government departments to foster and to help develop bio-technology, also the federal government as well were just in the process of developing an infrastructure to foster bio-technology in Australia... it rang a bell about the discovery I was aware of in New Zealand. So I went back there and negotiated the IP.... So I formed a company in June, 2001 and found a seed capitalist who came into the company in August, 2002 and that was having lost my first seed capitalist on ex September 11 as a result of that incident in New York. So we had to start again. – Peter Johnston [<i>Discovery followed by Exploitation</i>]</p>
ANC (High Tech)	<p>The company's view was 'just mix something together and sell it and just write sort of this really fancy marketing document'....they wanted to continue with it.... and that's why John wanted to pull out because it's all got to do with ethics... It just didn't work out and there was a public outcry for it... He saw that there was interest in it but the company was run by accountants who just weren't interested in research and development and really putting in science into the product. It was very frustrating – Victoria Zafras [<i>Opportunity Discovery</i>]</p> <p>So from 1989 until about 1990 we were putting together a product... We just did a lot of research and finding out whether we could put something together that would be non hazardous and it was not going to</p>

	<p>affect human or plant life or you know impact on the environment in a major way....it was so funny, we lived opposite the University of New South Wales and that's right I saw a – they had this van that had pig odour pig unit....So we went via the University, the Odour Research Laboratory there, which was part of the CWWT... what the University did was what's called olfactometry using a panel to measure the intensity of the smell....and later they introduced us to ANSTO to do what's called GCMS where they got the break down of all the chemical components that synergistically make up that odourand we found quite a significant reduction in those odours so we got all excited – Victoria Zafras [<i>Further Development, Experimentation and Refinement</i>]</p>
EMI (High Tech)	<p>I ended up working in a Telco which was Telstra and then went to Optus and then I worked overseas for a couple of years in a company called Bouygues Telecom in France and I was basically I was responsible for managing the existing customer base and churn – or customer defection was a massive problem in telcos.... So a big problem. I saw that here, and I saw that in France and I saw that in every Telco around the world – it was a perennial problem. So the main problem was churn. – David Peters [<i>Opportunity Discovery</i>]</p> <p>So while I was in France I knew this company in France (that offered him a job) and they knew what I did and I said “look I can do a short consulting assignment for you for \$15,000 or \$20,000 which is just a month's worth of work to – which was OK money..... So when I came back from France, I wanted to start my own company – David Peters [<i>Discovery followed by Exploitation</i>]</p>
RMW (Low Tech)	<p>I was a university student doing interior design and it just made me feel really bad to the point where I cried because I could not find anything to wear. Anything that was slightly stylish was around \$350...So each (of three) pregnancy I kept a look at what they had, you know what was being offered – Lisa Balakas [<i>Discovery</i>]</p> <p>We did a research into maternity underwear and we did research into maternity wear in general and we just surveyed people. And so we spoke to people who were in the lingerie both retail and the manufacturing part of it and we realized that well the larger companies would take your idea very quickly....When you are talking about bras and then you have all the different sizes then you have to – a lot of stockholding, specialize making it, it would probably didn't excite us as much as the opportunity to do outer wear – as apparel. - Lisa Balakas [<i>Deliberate Information Search and Opportunity Refinement</i>]</p> <p>I'm happy to tackle the outerwear and we didn't have the skills of pattern making....we would – I suppose –think outside the square a little bit and I would ring collegesthey happened to recommend us to a pattern maker who still works with us today who also whose family was in manufacturing. So that was great in that she could have samples and have them made up for us so that's how our manufacturing side of things started – Lisa Balakas [<i>Further Refinement</i>]</p>
WSR (High Tech)	<p>So when we realized that there were very few opportunities to sell it as essentially a food product (1993-1998), we started investigating supply value added opportunities for this resource that we had access to - JH [<i>Opportunity Development and Experimentation</i>]</p> <p>We engaged a research scientist on a consulting basis to start investigating the properties in that seaweed...we weren't earning any income we were just putting a bit of money in to see where it would go. Within 12 months or so (1999), we identified a compound in the seaweed which is called Primary Algae Extract” or PAE as we call it, had strong anti-viral properties” – JH [<i>Development to the point of Discovery</i>]</p>
SSW (High Tech)	<p>I was working for Sicpa Graphics and was putting together a unique solution to do proofing but I was missing the ability to extract the image data and process it for colour output on large format inkjet printers. I went to Encad and they recommended me to Peter to do the job...So I met Peter. He was able to process it. I said ‘that's magic!’ and he said ‘it's only a printer’. I said ‘maybe if we could put it in a black computer box we could call it Blackmagic’...So Peter made more adjustments to the software....we had a number of iterations before we were able to achieve a close colour matching which makes the proof look similar to the final printed results...Then we made a gentleman's agreement - [Robert Murphy, the partner firm of SSW] [<i>Experimentation and Development to the point of Discovery</i>]</p>
JCS (Low Tech)	<p>In 1982 the local Chamber of Commerce asked the proprietors in that street to do a promotion. In the week of that promotion I had a style cut for \$6. In that week we had 100 people come into the salon who just wanted a haircut. They didn't want all the extras, they just wanted a simple hair cut. These people were not poor people, they were people whose hair grew half an inch a month and all they wanted to do was have it cut. I then realized that possibly there was a market for it” – Denis McFadden [<i>Experimentation then Discovery</i>]</p>
BSD (High Tech)	<p>“I say it was a mistake. Seriously my background was as a chartered management consultant and 10 or 12 years ago I was doing some market research work for the university office of commercial services – looking at the world market prospects for a piece of equipment that had originally developed by a couple of very smart professors of QUT and our research was such that we had lots of people replying who were very interested in this piece of equipment. So we went back to QUT and suggested to them that they should licence somebody overseas who was in this field who could take advantage of the technology and generate royalty payments for them. I think the Professors themselves were concerned about the integrity of the royalty process – they were concerned that they weren't really going to get paid the royalty that they were due and if the licensee was overseas, they wouldn't have an easy way of checking on that. So in a</p>

	moment of weakness I said to them well you can licence me and I'll go down the road and set up a company and you can come and visit me at any time and check over the integrity of the royalty process. In a moment of weakness they said yes" – Allan Morrison [<i>Discovery followed by Exploitation</i>]
KEA (Low Tech)	<p>"I had a big disagreement with my boss who owned 75% of the company...about the direction the way the company was going...We had 15 stores and a wholesale department...He didn't agree that we should get rid of all the golf clubs etc because K-Mart were selling them and they were all so much cheaper than us so get rid of them and go for the clothing and he didn't do it so I said I'm out (in 1984)" – Mick Erwin [<i>Discovery followed by Exploitation</i>]</p> <p>"After 4 years of that, I got a bit tired of being let down and not being able to develop, I guess the manufacturers just weren't open to listening to what the market place wanted....Comfort, style, individuality, more of a cut that's fitted to a sports person.... You know just simple things and no one listened to them, variation....I saw a niche there because the manufacturers weren't listening to them. So I decided to start making it myself in 1988" – Mick Erwin [<i>Exploitation followed by Further Refinement and Discovery</i>]</p>

6.2.2. Theme 2: The role of prior knowledge and network ties in firm founding

Many firms in these cases did not have idiosyncratic prior knowledge in the domain of the new firms founded and the process of firm founding was the result of [1] adaptation of prior knowledge from one domain to another and/or [2] accessing the knowledge of others through strong and weak ties. These ties consist of many types, from prior work/business and social life and include ties with scientists, engineers, professors, producers and service providers, such as pattern makers and manufacturers who became part of the entrepreneurial team, or hired employees. As shown in Table 6.2, despite lacking the knowledge in the wine closure industry, the founder of NKC was able to see the initial opportunity in synthetic cork by adapting his prior knowledge in profile extrusion technology from former businesses. The founders of WSR, BVA, BSD, 2SP, and WSS only had prior general business knowledge and lacked the specific and technical knowledge of the new industry in which they were interested, but were able to adapt their prior knowledge into the new domain and to supplement it with knowledge from prior/existing and new ties. Other cases in Table 6.2 showed that the discovery of opportunities is related to knowledge already possessed [i.e. SSW, SKY, ANC, OPO, JCS, KEA and EMI]. For example, knowledge of sports fashion led to the founding of a sports fashion manufacturing company [i.e. KEA], knowledge of hairdressing and software led to the founding of a salon [i.e. JCS] and a software company [i.e. SKY and SSW]. These support Shane's (2000) finding of the role of relevant prior knowledge; knowledge adaptation or 'exaptation' (Dew et al., 2004), and network ties (Birley, 1985; Elfring and Hulsink, 2003) in the entrepreneurial process.

Table 6.2 indicates that the discovery, exploitation and refinement process in firm founding is rarely a one-shot, one person act but a longitudinal and social process involving prior and new networks of stakeholders and a chain of commitments among the members over time. As indicated in Table 6.2, *weak ties* such as friends, friend's friends, customers, staff and colleagues, and *strong ties* such as family, can play an important role as (1) sources of new

knowledge and ideas for commercialization that complement prior knowledge [i.e. NKC, BSD, BVA, EMI, RMW, JCS, OPO, WSR and WSS], (2) sources of financing [i.e. NKC, EMI, BVA, WSS, NUD, JCS and OPO] and (3) sources of supply [i.e. 2SP, RMW, KEA and NUD]. There is a lack of differentiation of the role of strong vs. weak ties as both can play important roles as sources of financing, knowledge and supply.

For example, Brian Dolling [NKC] initially discovered the opportunity for synthetic wine corks from his son's social networks. He adapted his prior expertise in profile extrusion manufacturing used in the production of brushes and plastics to create single extruded corks. Although he was an experienced entrepreneur, he did not have the luxury of unlimited information in this new domain so he conducted a deliberate information search, experimented with different ideas and techniques to produce corks, sought the commitment of his nine colleagues for ideas and resources and talked to experts from chemical companies and gained support from a local winery for testing. This development and experimentation led to a growing commitment of time, effort and resources and, ultimately, the founding of a new firm. Brian Dolling [NKC] explains:

“My son had lunch with a prominent wine maker with some investors looking to invest in that company and 3 of his best Rieslings they tried had trichloroanisole cork taint and it gave the wine maker a bad reputation and the wine maker said “I wish somebody would make good wine cork – synthetic wine cork.....I was retired and had nothing to do and my son came to me with a concept to make wine corks” .
[Discovery]

“I had never seen a synthetic cork before. It was how do we make a closure that will, I sat down and worked out in my mind what is necessary to make a good closure and having said I think this is important and made the first prototypes, took them to a winery and said try these and they did and they said wonderful but we need to do this, you need to think about that, you need to make these changes and so it's an evolving process.....I used an extrusion process to extrude our materials much like you make a sausage from proprietary recipe of granules – it looks like this...” . *[Exploitation and Further Refinement]*

The role of weak ties in the provision of resources for start up is nicely illustrated in the EMI case. David Peters explains how he relied on a colleague to co-finance the start up:

“So then I got a partner on board who was a corporate sales account manager and we both put some money into the company – mortgaged our houses. We started with this company with a ridiculously low amount of capital – we started with \$35,000 which was absolutely ludicrously low and then we both put in about \$100,000 each or about \$150,000 each off our mortgages to fund the company essentially for the first 12 months” – David Peters

An example of the role of others as sources of expertise and supply can be seen in the case of RMW, who relied on the commitment of a new tie and their family for sources of pattern making and garment manufacturing. Lisa Balakas [RMW] explains:

“We didn’t have the skills of pattern making....we would – I suppose –think outside the square a little bit and I would ring collegesthey happened to recommend us to a pattern maker who still works with us today who also whose family was in manufacturing. So that was great in that she could have samples and have them made up for us so that’s how our manufacturing side of things started”.

Table 6.2 - The role of prior knowledge and network ties in firm founding

Case	Market	Prior knowledge of markets and customer problems	Prior knowledge of means to serve market (technical knowledge)	Network ties (as sources of new knowledge, financing, and supply)
WSR (high tech)	Biotechnology (seaweed for anti-viral treatment)	None. Predecessor firm sold seaweed as food products but failed; but had (a) entrepreneurial experience in chartered accountancy and (b) in media business	None. (Never had any scientific or technical training in biotechnology)	Accessed the knowledge of a biochemist including her lab facility on a part time basis and her international science networks and labs.
BVA (high tech)	Biotechnology (bioactives for bacterial and fungal diseases)	None. But had extensive entrepreneurial experience in (a) accountancy & auditing, (b) construction, (c) finance retail, (d) export agency, (e) business consulting; (f) family entrepreneurial heritage (Glaxo, AMPOL, Europa Oil)	None. (Never had any scientific or technical training in biotechnology)	Relied on a scientist who became co-founder for knowledge in biotechnology
SSW (high tech)	Printing (digital proofing software for graphic arts)	(a) Education in computer science and electrical engineering; (b) work experience in a printing technology firm	(a) Expert programming skills to create 3D colour printing and software for poster printing	Accessed the knowledge of a veteran graphic arts marketer for specific printing industry requirements, technical and other commercial issues
EMI (high tech)	Telco (loyalty solutions)	(a) Education in marketing; (b) work experience in international telco in Australia, New Zealand, France	Some knowledge. Purchased loyalty solution software from ex employer	Accessed (a) the knowledge of a more experienced telco consultant, (b) partnered with a colleague, (c) employed computer scientists
SKY (high tech)	SAP productivity systems	(a) Education in computer science; (b) work experience in ERP including SAP in Africa, Europe, Australia	Expert computer programming skills	Accessed a friend also co-founder for project management skills
NKC (high tech)	Synthetic cork (for wines)	None. But had (a) extensive entrepreneurial experience in brush manufacturing and extrusion; (b) family entrepreneurial heritage in manufacturing, plastic extrusion	Profile extrusion manufacturing experience can be adapted to create extruded corks	Accessed the knowledge about polymers from chemical companies, friends who were executives of local winemakers
BSD (high tech)	Medical devices (neonatal screening & HIV testing)	None. But had (a) Entrepreneurial experience in management consultancy across Australia and Asia, (b) education and experience in economics and business	None. Never had any scientific or technical training	Accessed the knowledge of the professors/inventors and skills to re-design and solve technical problems
ANC (high tech)	Chemistry (odour control solutions)	(a) Education and experience in industrial chemistry and odour manufacturing; (b) wife’s education and experience in microbiology	Knowledge in chemistry, in designing and testing protocols for odour control solutions	Accessed the knowledge and facilities from research labs and institutes (UNSW and ANSTO)
RMW (low tech)	Fashion (maternity wear)	A dissatisfied customer of maternity wear. (a) Education in interior design	Knowledge of interior design was partly useful in fashion design	(a) Co-founder’s education and experience in physiotherapy; (b) hired a pattern maker and accessed her family’s manufacturing expertise and factory for supply
2SP (low tech)	Fashion (children’s wear)	None. (a) Hobby in fashion design, (b) Education in business, (c) work experience in banking and finance in Australia and UK	None. (a) Self experimentation with fashion	Accessed (a) the expertise in pattern making from a pattern-maker friend, (b) supply from a China manufacturer known through the friend
KEA (low tech)	Fashion (sports wear)	(a) Experience in sports retail and (b) as sportsman and couch in AFL	None. Never had any garment factory experience	Accessed an old friend’s expertise in garment manufacturing and his factory

				for supply (four years after the first firm was founded)
NUD (low tech)	Beverage (live juice)	None. (a) Education in marketing and accountancy; (b) entrepreneurial experience in accountancy, advertising, restaurant etc	None. But conducted self experimentation with different juices	Accessed the juice manufacturing expertise and factory for supply through networking
WSS (low tech)	Beverage (bottled water)	None. (a) Extensive entrepreneurial experience in cabling and IT services ; (b) experience as executives in marketing	None. (Never work or had business in consumer goods)	Outsourced all operations and only managed the marketing side of the business
OPO (low tech)	Fast Food (Portuguese style chicken)	(a) Work experience in restaurants in Portugal; (c) entrepreneurial experience in carpet cleaning in Australia	Expertise in cooking Portuguese style chicken and special chilli sauces	Accessed the entrepreneurial experience and financing from the Linz family (customer) (seven years after the original shop was opened)
JCS (low tech)	Hairdressing	(a) Training in hairdressing, (b) work and entrepreneurial experience in hairdressing in UK and Australia	Expertise in hairdressing	Stepfather helped finance the business for 10 years since inception

The cases reveal that the creative combination and recombination of prior and new knowledge from prior and new ties led to important technological and business innovations in the new firms founded. As will be shown later, these innovations play critical roles in the firms' subsequent business activities in the domestic and/or international market. Table 6.3 indicates that many firms in the study produced important innovations that solved prior technical and/or marketing problems in their respective industries. For instance, BSD's dried-sample preparation instrument was one of the world's pioneering semi-automated instruments to process dried blood samples. This replaced predecessor technologies with less reliable performance, using manual and vacuum-based processes. SSW's PostRIP digital proofing software is the world's first, based on a reverse programming logic. This technology, offering high accuracy and close colour matching of images, solves important data and image integrity problems in the graphic arts and printing industries. NKC's synthetic cork is one of the pioneers in single profile extruded cork. Unlike natural bark corks and synthetic molded corks, single extruded corks have uniform cell pressure and are more effective in preventing SO₂ loss thus better maintaining the quality of wines. JCS is among the pioneers in developing a 'fixed fee' franchising business model in hairdressing, allowing hairdressers to avoid typical franchisor-franchisee rivalry problems and minimizing the costs of policing and governing franchisees, i.e. lower transaction costs. RMW is also one of the world's innovators in designing highly fashionable maternity wear in an industry that has been lacking new ideas and overlooked by mainstream players for many decades.

The findings also show that some of the innovations in Table 6.3 had prior histories. For example, the BSD's dried-sample preparation instrument was the brainchild of decades of R&D by professors at the Queensland University of Technology. SSW's digital proofing software had

its foundation in the form of algorithms that were ahead of their time and were invented when the founder was a student. The algorithms includes ones to produce colour printing on the early dot matrix printers and to print 3-D using a printer that was originally designed to print text only. BVA's bioactive came from the scientific discovery of a well known New Zealand biotechnologist after a long period of R&D. NKC's profile extruded cork technology came from the founder's two decades of experience and refinement of the extrusion process in industrial brushes and plastic manufacturing. EMI's innovative loyalty management software was co-developed by the founder for his ex employer, which the founder licensed to set up the new firm. Thus history matters in understanding these firms' sources of competitive advantages.

Table 6.3 - Innovation at the firm founding phase

Case	Technological innovation	Business innovation
SSW (ht)	World's first PostRIP digital proofing software	n/a
ANC (ht)	Novel odour testing combining Olfactometry and GC/MS	n/a
NKC (ht)	Single profile extrusion technology for synthetic corks that improves SO ₂ retention in wines	n/a
SKY (ht)	Continuous development of productivity and mobile applications using SAP platform	n/a
EMI (ht)	Innovative models of customer and loyalty management based on one-to-one marketing principle	n/a
WSR (ht)	Proprietary method of extracting GFS (Galacto Fucan Sulphate) that maintains high molecular weight	n/a
BSD (ht)	Innovative dried-sample preparation instrument for neonatal blood screening	n/a
BVA (ht)	Discovery of bioactives from cyanobacteria that has strong efficacy against fungi and bacteria	n/a
RMW (lt)	n/a	Pushing the maternity fashion into high level fashion with creative designs
JCS (lt)	n/a	"Fixed-fee" franchising model that eases franchise governance and control (i.e. 11 hair cut per week plus 5 haircut for advertising)
WSS (lt)	n/a	(a) Creative approach and persuasion at the CEO level; (b) HIV/AIDS cause-related campaign to win new businesses
NUD (lt)	Innovative manufacturing practices to produce and handle live juice with short shelf life	Creation of cheeky Nudie icon and chatty labels using emotional branding and viral marketing
OPO (lt)	n/a	Emphasis on "fresh" not frozen, "grilled" not fried chicken

The cross-case findings also show that firm founding is not a one off but an ongoing and evolutionary process as new knowledge is discovered and created, and new problems encountered. As indicated in Table 6.4, many firms in this study have evolved from predecessor firms with different legal entities [i.e. EMI, ANC, WSR, NUD, OPO, KEA, and JCS]. The table shows how new firms unfolded for various reasons from simply re-branding or avoiding a

hostile takeover, to pursuing new opportunities. For example, the origin of WSR can be traced back to a firm selling fresh seaweed product for food consumption in 1993. The firm evolved many times under different legal entities, where experience and knowledge developed substantially before it was renamed WSR in 2003. ANC was preceded by Anosmia Technologies Pty. Ltd. in 1991. After four years of significant international market experience and to protect their interests from a hostile takeover by an unethical local businessman, ANC was formed to separate the commercialization from the R&D arm. The origin of KEA can be traced back to a sports retailing company (i.e. Mick Erwin Sports Trends Pty. Ltd.) in 1984. After four years of significant market experience and dissatisfaction with their contract manufacturers, KEA was established. Interestingly, some months after this research was conducted, the founder of WSS replaced the firm (with a new firm called Southern Cross Exports Pty Ltd) in light of its success in developing more lucrative opportunities worldwide. During the evolution process, there can be a significant development of knowledge, network ties and resources which means that new firms may not necessarily be ‘new’. This ‘gestation period’ has some implications for the appearance of born globals, as discussed in the subsequent section.

Table 6.4 – The evolution of new firm founding

Case (year of founding)	Predecessor firm (year of founding)	Reason for the evolution into new firm(s)
EMI (2000)	ARC Solutions Pty Ltd (1998) – dissolved	Re-branding following a private equity financing; (two years of significant learning and resource accumulation)
SSW (1994) and SDW (1996)	Serendipity Software Pty Ltd (1989)	Revival of old SSW. A new found partner pursued opportunity as an international distributor for SSW
ANC (1994)	Anosmia Technologies Pty Ltd (1991) – still exist	To separate the function of marketing from R&D in response to threats of hostile takeover
WSR (2003)	WA Pty Ltd (1993) replaced by SS Pty Ltd (1993), then replaced by WL Pty Ltd, WM Pty Ltd, WCL Pty Ltd (all in 2002)	The original firm was acquired and dissolved by a new owner. Following a scientific discovery, SS was replaced by 3 new firms for marketing, R&D, production purposes; but all consolidated into WSR
NUD (2003)	Real Juice Pty Ltd (2002)	Creation of the brand name “Nudie” (some learning took place)
WSS (2001) replaced by Southern Cross Exports Pty Ltd (2006)	n/a	Pursuing large opportunities as a global trading firm, WSS was dissolved
OPO (1998)	Oporto Chicken & Burgers Pty Ltd (1995), North Bondi Charcoal Chicken Portuguese Style (1986), Bondi Charcoal Chicken (1986)	Re-branding. Entry of a new business partner led to the formation of wholly owned chains and later the formation of franchising business model
KEA (1988)	Mick Erwin Sports Trends Pty Ltd (1984)	Dissatisfaction with contract manufacturers who were not concerned about quality
JustCuts Hairdressing Pty Ltd (1983); JCS (1994)	123 Hairdressing (1977)	Responding to customer requests to have simple haircut that could not be addressed by the original fully chemical salon
RMW (1998)	RMW (1996)	The original RMW ran informally and not registered after 2 years of operations
2SP (2003)	2SP (2001)	The original firm was registered and experimentation occurred; it was revived two years later

6.2.3. Theme 6: The multidimensionality of absorptive capacity

The cases reveal that having prior knowledge, new knowledge and resources alone is not sufficient for opportunity discovery and exploitation which require the ‘ability’ and willingness to see their new relationships and to combine them in new ways (i.e. absorptive capacity). Table 6.1 above indicates the presence of this element in each case. The results show that in addition to ‘ability’, seeing and exploiting opportunity involves other psycho-socio dimensions that have received somewhat scant attention in the literature. First, it involves an attitude of openness to new possibilities suggested by the environment. Through intentional and unintentional actions, a firm or individual can be exposed to new ideas, resources and people/firms but these may go unnoticed or ignored if there is a lack of openness to see these new relationships and to perceive new means-end combinations. As shown in Table 6.2 and 6.4, many firms in the high and low technology sectors did not have the requisite knowledge to see an opportunity however were ‘open’ to the new possibilities to enter new domains [i.e. BVA, WSR, BSD, 2SP, WSS, and NKC] or new ways of organizing [i.e. OPO, JCS, and KEA]. For example, Peter Johnston [BVA] had no prior knowledge, resources or networks relating to the biotechnology industry but he was ‘open’ to the possibilities of commercializing the bioactive discovery after his encounter with new information in Queensland. He explains:

“He (Dr. Duncan) came to me when I was at Price Waterhouse Coopers to see if it was feasible for him to set up a company in New Zealand to commercialize a research based project ...bioactives from microscopic water borne cyanobacterium ...and I was only in New Zealand for a few months after that... So nothing had happened when I left and ... he hadn’t decided to do anything...We weren’t friends, we were acquaintances – that’s all. He used to sit next to me in the board meetings. I didn’t really know him at that time. It was a complete surprise when he came to see me at the office”. *[Information for future Discovery]*

When I came out here (Queensland, in 2000) and I found out about the environment here for biotechnology created by Peter Beattie with all this investment into research facilities, government departments to foster and to help develop bio-technology, also the federal government as well were just in the process of developing an infrastructure to foster bio-technology in Australia... it rang a bell about the discovery I was aware of in New Zealand. So I went back there and negotiated the IP”. *[Discovery followed by Exploitation]*

“My connections from earlier years have been in different sectors and this is the first – I’ve never been involved in this sector before so it’s all a new ball game and that has made it more difficult for us because we don’t have anybody in the pharmaceutical or the bio-technology industry involved with the company. If I had understood the industry, I possibly wouldn’t have done it. It’s very difficult, terribly, terribly difficult”. *[Attitude of openness to new possibilities suggested by the environment]*

Second, more than just being ‘open’, a sense of judgment about what and which information is appropriate to absorb or believe is required. This is basically the process of filtering information when the founders find and/or are found by new information. The cases show that it is easy for an individual and firm to pass up or misperceive an opportunity without being able to judge the trustworthiness of information they may encounter [i.e. NUD, RMW, WSS, JCS, KEA, BSD, NKC, WSR, and BVA]. For example, although the founders of NUD and RMW were ‘open’ to

the new possibilities, they encountered a degree of discouraging feedback during the founding process. However they displayed good judgment in terms of what and which information they chose to absorb or believe. The founder of both companies explains what they experienced:

“Don’t go with it, it was too risqué.....You can’t call it Nudie, it’s rude, people won’t like it, will react badly to it...The food industry, it’s fast-moving consumer goods, it’s an overcrowded marketplace. The juice industry itself is overcrowded. It’s cut-throat business – why on earth would you do that? Get back and do something that you know” – Tim Pethick [NUD]

“Don’t get into this game, it’s a mugs game. Stick to your professions, you are a physio and you are an interior designer, why would you want to get involved in this?” – Lisa Balakas [RMW]

Another example that nicely illustrates the notion of judgment or information filtering can be found in the JCS case. Dennis McFadden was approached by one of his staff who wanted to set up her own salon using JCS’s brand. In response to this, Dennis sought more information from large franchisors and learnt from their experience, particularly on issues of franchisor-franchisee relationships. He showed good judgment in the information he extracted from the new ties and created a fixed-fee franchising company. So judging what information is relevant and trustworthy is critical. Dennis McFadden [JCS] explains:

“We only charge 11 haircuts a week. This is information I gleaned when I spoke to Frank Rekeeky who owned XXX franchise who unfortunately got into a little bit of difficulties later on and he told me how it was the Franchisee and the Franchisor relationship. I also spoke to a gentleman called Robert Smith from YYY franchise who also got into a bit of difficulty and the part of the relationship with their Franchisees was that there was some question of them not getting their fees but there was a little bit of corruption – but there was a little bit of not paying the right fees. So we came up with a thing of having a fixed fee. And our success I think in the growth – in the multi-store ownership has been – can be put down to a fixed fee and it happens to be 11 hair cuts a week”.

The cases also show that there is a limit to what knowledge an individual/firm can absorb and process, and that the creative intelligence of connected others may influence a focal individual’s/firm’s ability to see and create new means-ends combinations. Table 6.1 and 6.2 above indicate the presence of this dimension in each case [i.e. SSW, NKC, WSR, RMW, BVA, NUD, EMI, BSD, KEA, OPO, SKY, 2SP, and JCS]. This leads to the notion of ‘distributed absorptive capacity’, as a potential capacity that exists and lies in the prior (strong and weak) ties and new ties that may shape a focal firm’s creative intelligence. For example, Peter Skarpetis [SSW] was already in the software business for the printing industry on a small scale but it was through the valuable input of a veteran marketer in graphic arts, who was introduced to him by a weak tie, that he was able to co-create the world’s first PostRIP digital proofing software. This led to a redirection of his business and the founding of a new firm by the marketer as its international distributor. Robert Murphy, the veteran marketer, explains:

“I was working for Sicpa Graphics and was putting together a unique solution to do proofing but I was missing the ability to extract the image data and process it for colour output on large format inkjet printers. I went to Encad and they recommended me to Peter to do the job...So I met Peter. He was able to process it. I said ‘that’s magic!’ and he said ‘it’s only a printer’. I said ‘maybe if we could put it in a black computer box we could call it Blackmagic’...So Peter made more adjustments to the software....we had a number of iterations before we were able to achieve a close colour matching which makes the proof look similar to the final printed results...Then we made a gentleman’s agreement” - Robert Murphy, [the partner firm of SSW]

6.2.4. Theme 7: Bricolage in the firm founding process

The cross-case findings reveal that bricolage is an important way of marshalling resources under conditions of resource scarcity and coping with Knightian uncertainty in the founding process. It can help the founders speed up the exploitation process and reduce the costs of switching to a new business. The cases show many types of bricolage, but as indicated in Table 6.5, these basically fall into three dimensions (1) keeping existing sources of income (i.e. keeping day time job, ongoing business), (2) creatively using existing resources and facilities and (3) accessing and utilizing strong and weak ties’ resources and knowledge, and creatively combining and recombining them with internal resources. This is to be seen in high and low technology cases as well as novice and well endowed entrepreneurs.

Table 6.5 - Bricolage in the founding process

Cases	Keeping existing sources of income (i.e. day time job or prior business)	Creatively using existing resources and facilities	Accessing and using the strong and weak ties’ resources and knowledge and combine them with internal sources
RMW	Kept the physiotherapy business going while pursuing the maternity wear business; Not taking salaries for many years	Used existing physiotherapy clinic as show room, Do-it-yourself such as self designing the fashion.	Used free assistance from parents to stock products and develop shop facilities
BSD	Income from the consulting business filled in the “black hole” for the new venture for many years	Operated the new venture in parallel with and at the corner of the existing consulting business to cut costs	Borrowed a prototype sold to a client for demo in conference (to seek customer feedback)
BVA	Kept the full time job as chartered accountant while running the new venture as “fee paying client”	n/a	n/a
WSR	Kept the day time job and business as chartered accountants	Operated the new venture in the corner of the chartered accountancy office	Conducted R&D part time using a scientist’s facility from home; Relied on the scientist’s international contact to do R&D
NKC	n/a	Used family manufacturing facility to do trial and error with the synthetic cork	Accessed friends’ resources for start-up capital
SSW	n/a	Used pre-existing software for further development/refinement	Relied on the marketing experience and contacts of a potential partner to create the world’s first PostRIP digital proofing software
SKY	n/a	Used garage as office and pre-owned softwares and hardwares	Accessed a friend’s expertise to offer project management service
WSS	n/a	One-man show, did not hire any staffs	Completely relied on outsourcing
JCS	Concentrated on the pre-existing salon business while running the new venture as a side business	Used the existing salon premise and employees	n/a
EMI	Turned the existing contacts as sources of consulting expertise	Started the new venture from parent in-law’s house	Licensed a software from ex employer for use in the new venture; Accessed friend’s resources for start-up capital,
NUD	n/a	Started the new venture from home	Relied on friendship to cut labour

			costs; Accessed the manufacturing resources of a friend's friend
ANC	Took a temporary job while the wife kept a day time job	Used home kitchen as the laboratory to experiment with new products	n/a
KEA	n/a	n/a	Accessed and used the expertise and manufacturing resources of an old friend
2SP	Began venturing before the retrenchment dateline was effective	n/a	Accessed a friend's expertise for pattern making

6.2.5. Theme 8: Affectual and effectual reasoning in firm founding

The cases reveal that the logic of decision making in the founding process is consistent with the effectual and affectual reasoning and non-predictive approach (Sarasvathy, 2001; Wiltbank et al., 2006). That is, firms leverage contingencies, act opportunistically, rely on affordable loss thinking rather than expected return, form partnerships rather than competitive analysis, and conduct experimentation. There is a lack of rational calculus planning and/or strategizing in the process. Rather, emotions and feelings play an important role in dealing with perceptions of future, attitude to uncertainty and adventure. The propensity for effectual and affectual reasoning were influenced by joint interactions with prior and new ties who also exhibited the propensity for effectual and affectual reasoning. As can be seen in Table 6.1 and 6.2 above, prior and new ties did not really make plans but interacted with the focal entrepreneurs/firms effectually and affectually in the firm founding process. This cuts across the 15 cases in both high and low technology sectors.

As indicated in Table 6.1 and 6.2 above, the decision to start a new venture and what business to enter was spontaneous and contextual, based on the initial opportunity discovered and/or the means available to the founder(s) (i.e. who they are, what they know, whom they know) which shape subsequent patterns of exploitation/refinement until firms are willing to make greater commitments. None of the firms waited for the most optimal opportunity to emerge, which they cannot know in advance, but began with the opportunities they first found, i.e. 'take the first' heuristic (Gigerenzer et al., 1999) and stopped with the first one that satisfied an aspiration level or was considered 'good enough', i.e. satisficing heuristic (Simon, 1982). Two novice entrepreneurs [i.e. RMW and ANC] initially conducted surveys, analyzed the market and wrote simple business plans but they quickly shifted to effectuation and affectual processes when unexpected contingencies arose due to ill-defined goals, options and preferences.

This shows that the new firm founding process follows automatic, spontaneous, effortless, heuristic processing, and a highly socialized and contextualized type of reasoning rather than analytic processing, labourious, slower and deliberately controlled reasoning (see Stanovich and West, 2000; Kahneman and Tversky, 2002, 1979). This explains why there is a complex,

chaotic and lack of orderly sequential processes in firm founding (as in Table 6.1 above), why the founders can enter into new domains which they had no prior knowledge and networks of (as in Table 6.2 above) and how the initial firms can evolve into new firms more than once (as in Table 6.4 above).

This is nicely illustrated in the WSS case. This firm did not examine alternative opportunities and the first opportunity discovered led to the spontaneous decision to form a new venture. The founder's reason to go into the 'bottled water business' was not a carefully choreographed decision but simply the desire to experience new challenges and to stay away from organizations that required a structure and had many employees. The founder's cognitive limitations allowed him to see opportunities that would achieve only local optima at best, and over time he learnt to adapt to and leverage contingencies for survival. Ross Bennie [WSS] explains:

"Sydney hosted the Gay Games in 2002 and I knew the CEO of the Gay Games (a personal friend) and there was an opportunity for us to brand packaged water with that... It was a trigger that was based on where the opportunity of Gay Games...It was the reason to go in it because there was the idea that perhaps we could create a strong niche market in the Gay space....I said well I'll come back and create a bottled water for you... and why don't we do it for the AIDS charity and really drive a product....So it wasn't exactly a researched decision, it was more of an opportunistic decision. It just evolved". [*Spontaneous decision making*]

"I've never been in a consumer branding space before so this was a good opportunity and the fact that I travel a fair bit anyway was probably a reason as well. I wanted to stay away from organizations that required a structure that required lots of employees and also with the type that creates a recurring revenue stream versus the project by project model of consultancy project management." [*The influence of past experience in the decision making*]

"That (Gay Games) was actually not a very good idea. There is no such thing as pink dollar. However through that process we managed to get listed in Woolworths with the AIDS product. But it became pretty apparent that the real volume was sitting out in what they call the route trade which is the convenience store, corner store, coffee shop sort of space. But that [after many months of trying and desperation] is pretty heavily dominated by Coca Cola who actually own the fridges in most of those venues." [*Bounded rationality limits what opportunity can be seen at a particular stage, i.e. local search and local optima*]

"So the next step was to say well if we are going to make this a business where are we going to sell the product. So we looked at – because I have done a fair bit of travelling in the past – looked at overseas markets and obviously the UK and US were the first port of call, just because their familiarity with Australia". [*Leverage new contingencies*]

The lack of planning, strategizing and criteria for selecting between possible means to maximize expected return (or causal reasoning) is nicely illustrated in the NUD case. Tim Pethick [NUD] explains:

"My experience is that one of the great advantages of entrepreneurial businesses have is that they can operate far more quickly, flexibly and react to market conditions I guess more nimbly than a larger organization can. To do that you need to rely to a large extent on intuition. And sort of a intuitive feel for the market and market conditions and then you back those intuitions that's part of the entrepreneurial process. So I didn't do any market research – any formal market research. I did some informal market

research you know I tested the names with my friends to see what they thought of it. I tested the recipes on my friends to see what they thought of it. And I think for me at least when I was building the business in the early days there was an awful lot of – I would spend you know if I was having lunch with someone or if I was catching up with someone or dinner with someone, if I was catching up with someone I would spend an enormous amount of time asking them questions about what they thought about the direction I was heading. And so that was sort of the more immediate feedback loop that I was getting really from the market place”.

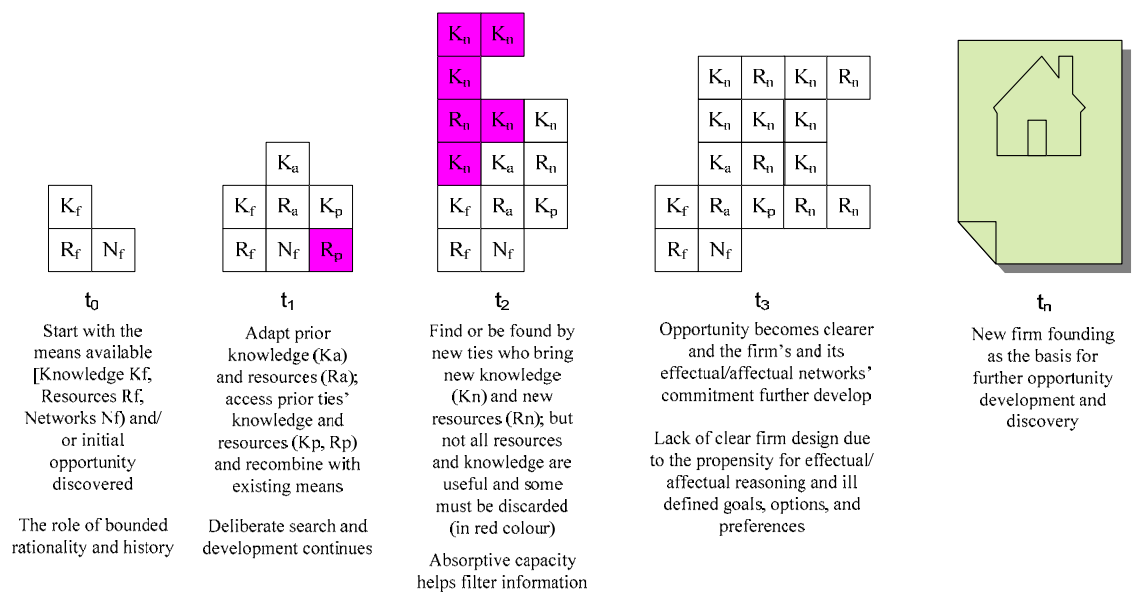
“So I think my view of business plan is that once again – a formal written business plan is that it is a device that you need in large corporations to get buy into something, it’s a device that you need if you are trying to attract finance, if you are trying to convince a bank for finance you know there is a whole bunch of staid conservative people who want to see a business plan before they will engage in discussion with you. But in terms of starting and growing a business I think it’s more important to have just an outcome in mind and then the flexibility to change quickly in the face of problems, issues and changing market conditions. And you can never capture that in a business plan document. So I’m not a great believer in business plans for start-ups”.

Other case examples are provided in Table 6.1 and 6.2. Sarasvathy (2001) showed that effectual reasoning is a form of expertise exhibited by expert entrepreneurs and can explain the formation of new markets and firms. This study reveals that both expert and novice entrepreneurs did use effectuation productively in the firm founding process. This suggests that effectuation may be a more universal form of reasoning, rather than expertise, that characterizes entrepreneurship.

As indicated throughout the 15 cases, the founding of new firms is shaped by the development of *effectual and affectual networks*, i.e. the networks with whom the focal firm interacts with and obtains commitment effectually and affectually. The founders do not have the luxury of unlimited resources, unlimited knowledge and computational powers (Simon, 1979) while options, goals and preferences are ill-defined. Therefore, under conditions of bounded rationality and given resource endowment, the founders begin with the initial opportunity discovered and/or start with the means available at hand to experiment with or develop an opportunity. This further involves adaptation of prior knowledge and prior resources where they are relevant; accessing the knowledge, resources and commitment of prior (strong and weak) ties where available; the deliberate search for information and actively developing the knowledge which can lead to discovery or being discovered by new things, e.g. new knowledge, resources and ties. Absorptive capacity plays a role in recombining the scattered information, knowledge, resources and networks as well as filtering out unreliable and inaccurate information encountered or sought. This development is dynamic in that some information, resources and networks may be abandoned or discarded depending on the aspiration and imagination of the founders and their stakeholders in the context of a lack of clear design or plan from the outset. Over time, the opportunity becomes clearer, the commitment of the firm and stakeholders grow, leading to new firm founding. As opportunity development continues over time, the opportunity space becomes larger, firms begin to see other things, including domestic and international opportunities. This incremental development is enabled and

constrained by the development of the effectual and affectual networks that find the firms, and the firms find, and describes entrepreneurial process as a patch by patch development - much like a patchwork quilt (see Sarasvathy and Dew, 2005). Figure 6.1 summarizes the entrepreneurial process leading to new firm founding that builds on the logic suggested by Sarasvathy (2003) by including the process of finding and being found, the role of accidental discovery, deliberate search and absorptive capacity.

Figure 6.1 – The process of new venture formation



The firm founding process in Figure 6.1 is well illustrated by the ANC case. The founder discovered the initial opportunity (i.e. odour control solution) after his dissatisfaction with the unethical conduct of an ex-employer. The first opportunity discovered was pursued without any evaluation of alternative opportunities. The founder conducted experiments and conducted various information searches to develop scientifically proven odour control solutions. This led to discovering and accessing the expertise, facilities and commitment of UNSW Odour Lab and the Australian Nuclear Science and Technology Organization (ANSTO) to create new testing protocols and a new product. The opportunity became clearer as more information was gathered and a new tie (a US entrepreneur who had found them) undertook a commitment to act as their distributor in the US. More resources were marshalled and commitment from the effectual and affectual networks increased, leading to the creation of ANC. The interactions with these stakeholders shaped and constrained the nature of the firm and its future path, including its involvement in the international markets.

6.3. INTERNATIONALIZATION PROCESS

6.3.1. Theme 1: Lack of orderly sequential processes or ‘stages’ of entrepreneurship

The cases show that the early stages of entrepreneurial processes in the international market look much the same as the founding process. There is a lack of orderly sequential processes or ‘stages’ of discovery, evaluation and exploitation, however, they are inextricably linked and interrelated – a ‘complex, chaotic’ process (Aldrich and Ruef, 2006). The results question the basic assumption that firm internationalization must first be triggered by recognized opportunities in overseas markets. As indicated in Table 6.6, the process can begin with discovery process and be followed by further refinement as well as active development/exploitation in order to determine if there is real and substantial opportunity or not. The cases show that opportunity discovery/exploitation was related to knowledge already possessed as well as new information from various sources which shape subsequent patterns of exploitation and refinement as firms and their network of stakeholders make greater commitments or change course. Therefore, the processes are not deterministic but interactive, creative, and emergent processes with unknowable results, involving learning by doing and experimentation. These patterns cut across the 15 cases in high and low technology sectors. As shown in Table 6, some firms ‘see’ and then ‘act’ on an international opportunity while others ‘act’ in order to ‘see’ international opportunities. The notion of evaluation as a systematic and independent act may not exist in the initial stages of internationalization since it is a matter of refining opportunities to the point of action and formulating a viable alternative rather than evaluating some prespecified or consideration set of alternatives.

The exploratory research (Chapter 3) provides an early indication of these patterns of evaluation and exploitation fading into each other and discovery becoming entwined with evaluation. The findings pose challenges to the somewhat linear view built in the initial model (Chapter 4) and suggest various types of model refinement as discussed in Chapter 7. For example, ANC’s first international opportunity was *discovered* through the initiative of a US entrepreneur even before the product was ready for commercialization. This discovery led to an increasing commitment of time, resources and efforts to the international markets following the firm founding phase leading to the first internationalization. Victoria Zafras [ANC] explains:

“Just by coincidence it happened to be an American businessman had come out to Australia looking for odour control and heard about us, and said “look I want to start doing odour control in the United States because the United States – if people create an odour nuisance, they can be fined \$75,000 a day until they fix the problem” which is pretty dumb really. So he placed an order with us and this is before we even named the product. We hadn’t named the product, we didn’t have any tech data except the testing that we had done”. [*Discovery followed by Exploitation*]

“He went and applied for a tender with the Hyperion Sewerage Treatment Plant in the United States and they happened to be the largest sewerage treatment plant in the US. It’s really funny what happened, we were very small as you know we didn’t even have a name for the product, we went into bid and Odour Science Engineering in the US had to do the testing. So this 2-man operation happened to win this bid for odour control and we ended up signing contracts with the US so that he could be our master distributor there. So we took off”.

The inverse sequence is clearly illustrated in BSD’s active *development/experimentation* in the early years to ascertain if there was opportunity in the international markets. Through the founder’s accountant’s ties with an American who resided in Australia and who had work experience in US hospitals, the firm hired the American to assist in developing its international opportunities. The initial success of this led to increasing commitment to the international markets. Allan Morrison [BSD] explains:

“We recruited a guy who was familiar with the US market who had migrated to Australia and agreed to go over there who travelled around and did a little bit of promotion for the equipment and took it to a trade show which is the way in which we get most of our leads. There are a limited number of trade shows in the world for the specific areas that we work in and we go to them all and a few of the neonatal screening field. But our original thinking was to target the 3 key laboratories – the market leading laboratories in the United States which was in Boston, New York and in Austin, Texas – it was the largest lab in Austin Texas – I think it runs 10 machines. And we targeted those people and we made sure that they were aware of what we were doing, they were aware of the equipment and we made sure that they had special demonstrations of the equipment”. [*Development to the point of Discovery*]

Much like the founding process, Table 6.6 indicates no clear distinction among the types of opportunities discussed in the literature (i.e. discovery, creation, enactment) as they are all part of a more general process of groping forward or muddling through (Lindblom, 1959). They all involve creative mental acts to see things in new ways and to create new means-ends combinations. We have no way of knowing that opportunities pre-exist to be found - we only know they exist when they are discovered. Nor can we know how many there may be at any time because the future does not pre-exist. With hindsight we can see how and why some were able to see an opportunity others could not but only because of the way the opportunity discovery changes the way we see the world. An opportunity can be found and developed through an ability and willingness to act. This finding raises the question of whether ongoing debates among different ontological views of opportunity are necessary (Kirzner, 1997; Sarasvathy, 2001; Alvarez, 2005; Gartner et al., 2003).

Table 6.6 - The Dynamic Process of Internationalization

Cases	Examples of Respondents' Descriptions
KEA (Low Tech)	<p>"One of their guys was over here on a holiday and he went to a Davis Cup. He was out here on a holiday seeing some friends and he was a sales manager – development manager and we also supplied Tennis Australia as well as the Davis Cup team with different garments but the same principle. He enquired and came down and saw us while he was out here....Two years...yes backwards and forwards (to Japan)...it's not easy to communicate – Mick Erwin [<i>Discovery followed by gradual commitment to the point of Exploitation</i>]</p> <p>"I can tell you we signed the licence agreement in Japan, 9 years ago – in 1996. Well actually it was both, now it is only licence, but for the first 5 years they used to buy some of our local garments and then make some under licence because they want some Australian made because the prices of manufacturing just went up so much it just wasn't competitive enough, so they just licence it now and we have just signed another 3 year licence so that will be 12 years at the end of this licence where we have got Japan." Mick Erwin [<i>Development of previous Discovery</i>]</p>
JCS (Low Tech)	<p>"Now with a Master Franchisee (in New Zealand), all I can go on is my own experience with Scott. He has turned out fantastic. I mean you know he's not perfect and I'm not perfect – if he gets into trouble, he rings us and asks us what to do and I would be happy to duplicate that relationship, that financial relationship, that operational relationship of assisting when he is opening new ones to where that it gets to a point that he needs to have his own structure. So he can grow gently, just go slowly, there is no hurry in this thing." – Dennis McFadden [<i>Formulating a viable alternative than evaluating alternatives</i>]</p>
NKC (High Tech)	<p>"The first 3 years was just showing the product internationally, getting people to trial it, put it into bottles, do the testing every quarter to make sure they were satisfied everything was correct and then from there it was a gradual yes we are happy with the product.... Oh yes we went out there I mean you can't wait. Just because you are making a better wine cork people do not beat a path to your door. We had a woman travelling in a plane for 6 months out of 12 and she was there knocking on the doors. Once we had the agents and then you had to go back and go out and make customer calls, train the sales men how to sell, make the calls on the customers and I did it too. Everybody did it. And there were trade fairs, we would take a booth and we would stand in the booth all day long." – Brian Dolling [<i>Development to the point of Discovery</i>]</p> <p>"We were fortunate in France that the agent at the time who approached us because the company he was working with decided not to continue with synthetic closures. So he heard about us and he rang us and said look the company I'm working with is no longer in existence. I've done a lot of work on synthetics and I want to capitalise on it and I want to be your agent for France." Brian Dolling [<i>Development in order to figure out opportunities, which led to Discovery</i>]</p> <p>"No we stayed the way we were until a year ago where we opened up a printing facility in California we felt the delay in getting to overseas markets was too long. People in the wine industry want corks tomorrow or next week. So we struggled in countries where there was a reliable producer and most of our competitors now have – well all of our competitors now have printing facilities in the markets they work in. So we now have a facility in France and we are just about to build a big facility in Spain." – Brian Dolling [<i>Formulating a viable alternative than evaluating alternatives; Exploitation followed by further Refinement</i>]</p>
BSD (High Tech)	<p>"Honestly these guys can we make things on an OEM basis – PerkinElmer Life Sciences.... When they saw our BSD 200 in the first year in 1992 when we were in North Carolina, they approached us about it to try and take that on and distribute it. At the time, that didn't work out, we didn't end up doing that. When we developed the 300 I approached them and asked them if they were interested in looking at this and they immediately said they would and we arranged to meet at another trade conference in England and then a few months later at an international trade conference in Thailand a deal was struck. So that would have been possibly in about 1998, that a deal was struck that they would buy these things – Allan Morrison [<i>Formulating a viable alternative than evaluating alternatives; Development to the point of Discovery</i>]</p> <p>They (a Chinese distributor) just went on the net and looked for suppliers of dried blood sample punch equipment and they would have seen us....Once we had signed up the deal with Eastwin and once these representatives from these laboratories went back to their respective States and started to put in their bids in the system to get money to buy these pieces of equipment we had approaches from many other liquid handling system players who were in China and saying oh gee we want to get your equipment too – Allan Morrison [<i>Discovery led to further Discoveries</i>]</p>
BVA (High Tech)	<p>The scientist who discovered this thing, he has been involved with a number of other projects and had done some business overseas and he introduced us to the German people.... These people in Germany have a model which would take us into the market.– Peter Johnston [<i>Discovery followed by Exploitation; Formulating a viable alternative than evaluating alternative opportunities</i>]</p> <p>The commercialisation stage has been going on now for about 12 months. We appointed a consultant based in New York to identify targets and to introduce us – or introduce us to those targets and commence discussion with them with the idea of entering into licensing agreements for the distribution of the product – Peter Johnston [<i>Development of previous Discovery</i>]</p>
WSS (Low Tech)	<p>So, my documentation wasn't good enough and it wasn't emphatic enough to sell on it's own. So I made a really bad mistake there. But it does mean I have to go back in December and fix it and I think what most people do in the export space is that they fail once, they give up – it's all too hard. And it is really hard. It is really difficult because you have got to – it took me 6 months, 3 nights a week to find Tesco's, to get into Tesco's, I just didn't give up and that's something – the other big difference you know is professional and persistence – Ross Bennie [<i>Development to the point of Discovery</i>]</p> <p>"In the mean time we have developed products for the Middle East, we have developed products for Japan so you know it's an iterative process as you grow the business....it's a long slow process....it is the ability to make contacts, how to make them and how to develop relationships which is you know we are looking at all these other products is because we have developed very long and deep relationships, even though Sainsbury doesn't born anything yet, I talk to him (the</p>

	<p>CEO) once a week and its developing that trust and rapport” Ross Bennie [<i>Further Development and Refinement</i>]</p> <p>Well what happened was because I’ve got the relationships with most of the senior beverage buyers in major retailers around the world, other people are approaching me to represent them which makes sense for us because we have already got the chain of supply, we understand how it works, we have got local people on the ground in some areas, we understand both the cultural and the economic fits in those organizations and how they make a decision about different beverages, so we get approached probably once a month by different beverage groups wanting us to take them into Japan or into the UK or into the US or other markets that we were in – Ross Bennie [<i>Development led to Further Discovery by others</i>]</p> <p>“So you know right now it’s sort of consolidation stuff in the UK and looking at developing the Middle East market, developing the Taiwanese market, developing the Japanese market. We will probably end up in the US this time next year to start the process there....I wish I could tell you. I don’t know. I think that’s part of a frustration and the excitement. It could fall on it’s arse by Christmas time or it could be an outstanding international success and there is sort of nothing in between the 2. It will either just be a business or it will go broke or it will be really, really successful. It’s not going to be half way or you know mediocre in any way shape or form. Just because of the space I’m playing in.” – Ross Bennie [<i>Further Refinement with unknowable results</i>]</p>
2SP (Low Tech)	<p>Well no we started last August – had the samples made and all the samples were made for the 1st summer range by March this year and that’s when we decided to open a store in China and in Sydney. When I actually saw the whole range together, I realised that this was you know this looks great and it’s going to work. It sort of fell into place because the Chinese company approached us and said you should open a store in China and do you want to be a partner in it – Rob Heinrich [<i>Discovery followed by Exploitation</i>]</p> <p>“I think the level of keeping things on track is more difficult to control in China if you are in a different city etc. That’s we are looking to franchise it because then the franchisees will control the stores. We will open up our own store ourselves probably another one in 6 weeks, 2 months time in Guangzhou and maybe another 2 or 3 over the next 6 months. So we will own – our China venture will own probably own up to 4 or 5 stores ourselves.” – Rob Heinrich [<i>Further Refinement</i>]</p>
ANC (High Tech)	<p>“When we started business in the US a lot of questions arose out of that. In other words “oh how does it work on this?”, “I don’t know”. So we were tied up testing different types of chemical components that we hadn’t done before because we started off with the sewerage type odours. You know how does it work on you know rubber or – so we had to know all these things.... Well we met more industries that I’d never known about more. You know a hot water bottle the plastic lining that they use, they are manufacturing that. Or, Teflon coating of tins, things that you don’t really think about. So all these different industries ...and you think oh wow is that how they make that. Or a slaughtering of sheep and the meat industry.” – Victoria Zafras [<i>Enactment, Discovery followed by Refinement</i>]</p> <p>“The Australian market is building up now quite significantly. So as whereas before our local market was 20%, it’s starting to rise up.... we started in the United States – we are building it up but the local markets are growing now and it’s growing quite significantly because we are restructuring now, we are bringing in more people in time to you know I mean we are working on quite some significant jobs.” Victoria Zafras [<i>Further Refinement followed by Further Discovery</i>]</p>
SSW (High Tech)	<p>So he (the partner firm) would just run around and knock on doors – it was very difficult. He would just go to a country – pick a country at random – stay in a hotel, open up the yellow pages or the white pages looking for companies that sell equipment that’s in our industry and then would just not even call them and just catch a taxi and go there and see the receptionist and try and talk to someone. And you know 9 out of 10 times, people told him to go away.” – Peter Skarpetis [<i>Development to the point of Discovery</i>]</p> <p>So I think our next sales were in Canada. In 1996, straight after that show like in July, 1996. So what happened was the Australian distributor that we had, he happened to know – he was the Australian Fuji product distributor, so like Fuji film, and he happened to know the managing director of Fuji Film in Canada so he said “I’ll introduce you”, so we said “cool”. So we sent this sales man over there on a plane with a laptop and he demonstrated to them and signed them up and then our next sale came from Canada – Peter Skarpetis [<i>Discovery followed by Exploitation</i>]</p>

6.3.2. Theme 2: The Role of Prior and New Knowledge in Internationalization

As shown in Table 6.7, in 9 of the 15 cases the founders previously lived, or had been educated, and/or worked, in foreign countries [i.e. 2SP, WSS, JCS, NUD, OPO, SKY, EMI, SSW, and BSD], including those whose founders were foreign citizens who had migrated to Australia [i.e. SSW, SKY, and OPO]. However, none of these recognized their first international opportunity in the countries where they previously resided, studied or come from. It is more their exposure to other cultures and practices that facilitated their alertness to international opportunities and their willingness to accept the uncertainties involved. Under conditions of minimal firm-level prior knowledge of foreign markets in the domain entered, the *first* internationalization was the

result of [1] accessing the knowledge of others through strong and weak ties and/or [2] the actions of new ties who, acting on their own knowledge and new information, found the focal firms, and/or [3] deliberate search for new information and active opportunity development. As Table 8 indicates, prior knowledge can include the knowledge of prior weak ties that can be accessed and utilized. These are of many types from prior work/business and social life. For example, SSW accessed the vast knowledge of its partner firm (with whom they co-created a new technology earlier) including its relationship with the managing director of Fuji Canada, leading to their first international market entry into Canada. The co-founder of BVA (i.e. the scientist) had a previous business relationship with a German nutraceutical firm and accessed the German firm's extensive knowledge and experience to commercialize the invention. More examples are provided in Table 6.8.

As shown in Table 6.7, the actions of *new ties*, who bridged the international structural holes, were critical in terms of providing information about particular needs or requirements in foreign markets. For example, 2SP discovered an opportunity to enter the China market after its new Chinese garment supplier attended 2SP's first exhibition in Sydney. An unexpected discovery by new ties can also lead to information exchange with the focal firm and proceed to international market entry involving the new ties [i.e. RMW and KEA]. Table 6.7 also shows that some firms were forced to engage in deliberate search for new information in order to survive given the lack of domestic opportunities (i.e. WSS), lack of international opportunities in a specific product category (such as seaweed for food purposes, i.e. WSR), or simply to learn from past experience that active search is more effective than waiting to be found by opportunities (i.e. NKC). WSR attempted deliberate search in many countries without success, eventually finding their first international opportunity through a professor at a research institute where they conducted clinical trials, who in turn introduced them to a large US nutraceutical firm. This study shows that the discovery, exploitation and development of the first international opportunity is rarely a single firm act but a social process involving prior and new networks of stakeholders, and a chain of interactive commitments with the firm. This finding supports prior research on the role of prior and new ties in the first internationalization (Ellis and Pecotich, 2001; Simmonds and Smith, 1968). Other examples can be found in Table 6.6 above.

Below are selected quotes regarding each of the three sources of knowledge leading to first internationalization.

"There is an organization called ABC (a research institute)....So that organization they do a lot of work on investigating pharmaceutical ingredients and natural therapeutic ingredients and those sorts of things and one of the professors there had been doing some work for XXX (a large US nutraceutical firm) which is the client in the US that we ended up doing this deal with. Now they have done a lot of work with XXX and this professor raised with them that there is this company who has developed this compound that has a

really promising scientific evidence that can be sold immediately in the US market and a number of other markets we think you would be interested in it. They said “yes, we would be very interested in it”. Within the space of 3 months we had a deal. If I hadn’t done any work at the institute and if I hadn’t met this Professor, I wouldn’t have been introduced to the company, I wouldn’t have known about the company”. – JH (WSR) – *[New knowledge from weak ties leading to first internationalization or ‘tertius iungens’ role]*

That was again I suppose by chance in that I spoke to the department store in WA and Kate and I were over in WA putting stuff in the city store and ... department store organising our stock and there was a girl there who was pregnant and she said this stuff is fantastic its great and the sales girl said look the people who run the company are here you know and she said “oh can I meet them”. We were out the back organising all the bags of stock and so we came out and said “hi” and she just loved everything about it and went back and said she wanted to open a store and went back to Dubai and opened up a store. – Lisa Balakas (RMW) – *[New knowledge from new ties leading to first internationalization]*

Well we did some research on the web through the main retailers internationally and came up to the receptionist and said who is the Managing Director. We then sent a Fedex parcel (to Harvey Nichols) across and presented with a simple letter and a simple proposition and then followed it up for 6 months on the phone every night to get an appointment. – Ross Bennie (WSS) – *[Deliberate search and Development leading to first internationalization]*

These support Proposition 1b (i.e. the role of prior knowledge of others), Proposition 2a (i.e. the role of social and business networks) and Proposition 2b (i.e. the role of weak/new ties) in international opportunity discovery.

Table 6.7 - The role of prior and new knowledge in the initial internationalization

Case	Prior knowledge in international business	Initial Internationalization	
		New knowledge from prior ties	New knowledge from new ties or deliberate search
BVA (ht)	Co-founder’s some business experience with a German nutraceutical company	Accessed the German nutraceutical firm’s 20 years of experience in the global markets leading to a contract	n/a
BSD (ht)	Consulting experience involving Asian investments into Australia	n/a	Hired an experienced Australia-based US citizen to promote the technology in leading conferences in the US leading to orders from Boston, NY, Texas labs
SSW (ht)	None. But was born and grew up in Greece.	Accessed the partner firm’s networks in US and Europe leading to distributorship with Fuji Canada	n/a
SKY (ht)	Previously lived and educated in South Africa, prior work experience in ERP systems in Europe and Australia	n/a	Discovered by a domestic client’s sister company in the US leading to a project implementation in the US
EMI (ht)	Work experience in France	n/a	Discovered by a French software firm for a managerial position but was turned into a consulting opportunity in France
WSR (ht)	Learning about the lack of opportunity in seaweed as food product from predecessor firm (8 years) leading to further R&D		<i>Deliberate search</i> to the US, Canada, Japan with no success; Connected by a professor at a research institute where they had clinical trials with a large US nutraceutical company leading to multi-million dollar licensing <i>[tertius iungens role]</i>
ANC (ht)	None.	n/a	Discovered by a wealthy US entrepreneur via the internet during the product experimentation phase; leading to distributorship with the US entrepreneur
NKC (ht)	Prior business in profile extrusion manufacturing related to Asian markets	n/a	<i>Deliberate search</i> into the European winery markets and was discovered by a French agent for distributorship
OPO (lt)	Prior work experience in Portugal as a manager of a cafe	n/a	Discovered by a brother of one of its franchisees in New Zealand leading to international master franchising to NZ
NUD (lt)	Work experience as high level executive in dotcom company in the UK	n/a	Discovered by a German company but failed. Next, it was discovered by a Hong Kong supermarket leading to exporting to

			Hong Kong
KEA (It)	None.	n/a	Discovered by a Japanese sports fashion company who happened to watch the Davis Cup and Australian Open leading to exporting to Japan
JCS (It)	Work and business experience in hairdressing in the UK	Discovered a New Zealander acquaintance in a yoga retreat in Sydney leading to international master franchising in New Zealand	n/a
WSS (It)	Extensive prior business experience and travel to Europe, Asia, US, Africa	n/a	No domestic opportunity forced <i>aggressive search</i> in the UK leading to a distributorship with a large UK supermarket
RMW (It)	None.	n/a	Discovered by a lady from Dubai who were on holiday in Australia leading to distributorship in Dubai
2SP (It)	Work experience in the banking industry in the UK	Seeking garment supplier led to an introduction to a China factory by a pattern maker friend leading to retail partnership with the Chinese garment factory	n/a

The cross-case analysis traces the evolution of prior and new knowledge over time and the way that it affects subsequent internationalization. Given the extensive number of internationalization events in many cases, the analysis illustrates *major* internationalization events only. However, this section provides evidence of prior learning after first internationalization to indicate its impact on the major subsequent internationalization events. The cases show that the first internationalization provides new information, new network ties, and tacit experience through learning by doing which further increases the firm's international interest and motivation, willingness to accept uncertainty, to recognize and develop the first opportunity recognized. *Subsequent* internationalization was the result of [1] accessing, exchanging and co-producing the knowledge with strong and weak ties and/or [2] the actions of new ties who, acting on their own knowledge and new information, found the focal firms, and/or [3] deliberate search for new information and active opportunity development, which in turn can lead to unexpected discovery.

As indicated in Table 6.8, firms learnt from their own experience as well as their foreign stakeholders (e.g. distributors, agents, franchisees, licensees, suppliers) as a form of social learning (Bandura, 1977; Laland, 2001). This cuts across the 15 cases in high and low technology sectors. Tacit experience in the international markets confirmed and disconfirmed the firm's prior knowledge, guesses and speculations and over time clarified the firm's goals, options and preferences. The cases also suggest a feedback cycle between market learning and market commitment which supports the Uppsala/Process Model. However, as will be shown in the subsequent section, Knightian uncertainty such as punctuated evolution may disrupt the cycle of learning and commitment. There is a clear pattern that the firm's knowledge grows incrementally which refines the firm's opportunity space over time. For example, there was

significant market learning in the nutraceutical industry among WSR and BVA after the first international market entry. This clarified the firms' preferences, goals and options and led to increased commitment to pursue more opportunities in the domain (i.e. nutraceutical) rather than biotechnology or drugs in general. EMI learnt that its global syndicated telco research, combined with consulting and software implementation, was not really viable. This learning led to a redirection of focus with more commitment going into the more lucrative and do-able software business. NUD learnt about the complexities and problems in handling the logistics of juices that have short shelf-life and discovered the idea for global licensing (but the idea never took off due to a change in top management). WSS learnt that it was not really in the business of 'bottled water' but in global trading due to their success in penetrating prominent UK retailers and building strong relationships with major international consumer goods buyers. Other examples are provided in Table 6.8 and provide further support for Proposition 1a (i.e. the role of prior knowledge on international opportunity discovery).

Learning by doing in the international market led to more diffusion of information about the focal firms, which triggered more discoveries (or search initiated by others). Relative to the first internationalization, *subsequent* internationalization involves stronger commitment and collaborative efforts to co-develop and co-refine knowledge and opportunities with foreign business partners in light of a better understanding of each other's capabilities, resources and aspirations. Many of these led to important technological and business innovations, as discussed in the subsequent section. Table 6.8 indicates that the extended enterprise can offer new ideas that expose the focal firms to new and/or major international opportunities [i.e. SSW, EMI, NKC, SKY, BSD, 2SP, WSS, and KEA]. For example, BSD's leading international distributor, Perkin Elmer Life Sciences, continuously offered new Original Equipment Manufacturer (OEM) opportunities for BSD. Fuji Japan, SSW's leading distributor, offered new ideas and opportunities by creating a second OEM brand for a completely new market leading to a 500% growth in SSW's revenues. This provides a critical learning point for SSW and directs their current search for more OEM opportunities. As Peter Skarpetis [SSW] explains:

"Fuji, they actually took our product for this other product and one other one and they actually sold heaps because they lost this new products and because it has a different name to our product and no one knows that its ours and they sell it in different markets, there is no clash. It just opens up this extra market for you and opening OEM's which are original equipment manufacturers, you don't have to own manuals, you don't have to packaging, you don't have to do support, you just ship them the security devices for the software and they send you money and they do everything else. So it's a really good way of doing business....its gone like absolute rocket".

This finding provides further support for Proposition 2c (i.e. the role of strong ties in the opportunity recognition). As Table 6.8 also indicates, international opportunity discovery is related to the knowledge already possessed in that none of the firms saw international opportunities beyond the domain of their knowledge base. For example, a graphic arts software company [i.e. SSW] and a maternity wear company [i.e. RMW] subsequently discovered software and maternity related opportunities respectively in the international markets, not in other domains. This supports prior research (Shane, 2000) and Proposition 1a in the initial model (Chapter 4) on the relationship between prior knowledge and the type of opportunities recognized.

As indicated in Table 6.8, *existing ties* such as distributors, agents, or partners can expose a focal firm to new opportunities through their network ties, they can refer or pass them on to others they know, that cannot be known in advance. For example, ANC's accidental discovery of its first distributor in Taiwan (which failed), led to another discovery by a school friend of the failed distributor in South Korea (which also failed). A customer of the second failed distributor was interested in the product and this led to another discovery of a distributorship opportunity in South Korea. Apparently this became a highly successful opportunity many years later. These events are repeated in KEA, where the firm went through 3 interconnected opportunities before they finally ended with a successful joint venture in Ireland. This also occurred in SSW whose distributor, Fuji Canada, introduced it to other Fuji offices around the world. As its digital proofing software worked well, SSW's client New York Times recommended SSW to The Wall Street Journal and Chicago Tribune. These led to SSW's major success in the US and a 500% revenue growth. Through a pattern-maker friend who introduced 2SP to a Chinese garment manufacturer, the firm was discovered by retail partnership opportunities with the Chinese partner in Guangzhou, which led to the development of larger franchising opportunities in China with the same partner. There is evidence of 'client followership' (Bell, 1995), as is observed in NKC, who followed their domestic client Casella Wines (i.e. Yellow Tail brand) into the US market and enjoyed Casella's reputation as the fastest growing imported wine in US market history. This supports Proposition 2c, i.e. the influence of strong ties on international opportunity recognition.

The actions of *new ties*, who become the firm's new stakeholder in foreign markets, are critical in the internationalization phase. As Table 8 indicates, new ties, in terms of individuals or firms, can discover a focal firm to fulfill their specific needs leading to important subsequent internationalization [i.e. WSR, SSW, ANC, SKY, BSD, RMW, WSS, and JCS]. For example, WSR was found by a Canadian pharmaceutical firm for a product development opportunity

leading to the development of a long term commitment to supply multi-million dollars' worth of seaweed extract every year. The CEO of WSR explains:

"That company approached us, they saw our website. They are developing a – I can't say too much, but they are developing a pharmaceutical grade product that needed an ingredient that was very similar to what we can produce. There are some other companies in the world that produce similar types of ingredients – what we call sulphated polysaccharide or carbohydrates – special carbohydrates. But they are all big companies and don't have the flexibility to do the chemistry to modify the molecules to suit individual customers. Whereas, we have that ability. I mean we had a science team of 3 or 4 chemists who can do all that sort of work and then we can produce it ourselves. So this pharmaceutical company came to us about 12 months ago and as a result of that, we signed a long-term agreement – it's actually a 15-year contract. It's a product development contract". – JH

Another example of the actions of new ties is nicely illustrated in the WSS case. After building a strong international reputation, WSS was found by various beverage groups from Australia looking to follow its path into international markets. Many of these opportunities were realized a few months after this research. As Ross Bennie [WSS] explains:

"Because I've got the relationships with most of the senior beverage buyers in major retailers around the world, other people are approaching me to represent them which makes sense for us because we have already got the chain of supply, we understand how it works, we have got local people on the ground in some areas, we understand both the cultural and the economic fits in those organizations and how they make a decision about different beverages, so we get approached probably once a month by different beverage groups wanting us to take them into Japan or into the UK or into the US or other markets that we were in".

New ties can also expose a focal firm to new opportunities through their network ties, or refer and pass them on to others they know to co-exploit an opportunity [i.e. RMW, BSD, and SSW], as well as 'block' a focal firm's opportunity. For example, a potential lead in China brought together their connections to attend a presentation by BSD, leading to extra sales and a new distributor in China. Allan Morrison [BSD] explains:

"Our Marketing Manager went over and met them and at the same time they impressed us by the fact that we thought it was just going to be a meeting and he was going to hand over demonstrations whereas they had actually organised a very impressive seminar with lots of key players from forensic laboratories across China to be there. So that impressed us and immediately they placed a large order when we came back. So, we have been having obviously – part of the role of the Hong Kong exhibition was to support these guys. So they had a large number of prospective buyers that they had brought to our booth and showed the equipment and the result of that is another sale". [*tertius iungens' case*]

RMW's way was blocked in the UK because of a competing interest. This forced them to take an alternative path by going directly to the retailers. Lisa Balakas [RMW] explains:

"But in London we haven't had any of that kind of luck with agents. Every agent that we have spoken to in London – and there is not many of them because we are niche industry so it's not like there might

be 40 out there, there are 4 and you know who they are and ... the same people and we have spoken to them. And they all said no we can't take you – we'd like to take your label but we can't. The reason why they can't is because say this agent has label B over here, this company – and they have got business through this competitor about – and this company says to the agent “if you take Ripe, we will go elsewhere. So you can't be an agent for both of us.” The agents have said that to us, quite openly that they have too much pressure with their existing wholesaler labels that they can't take us”.
[networks with a competing interest]

This evidence provides support for Proposition 2b (i.e. the role of weak/new ties in international opportunity discovery). More importantly, it reveals that weak/new ties do not always enable, but can also inhibit, opportunity discovery.

As shown in Table 6.8, firms subsequently engaged in more intensive *deliberate search* guided by the initial formulation of the international opportunity and growing knowledge [i.e. WSS, RMW, KEA, OPO, NUD, WSR, EMI, BVA, NKC, BSD, and WSR]. There is a clear pattern shown in Table 9 that the intensity of search increased as the firms better understood what they did not know and what to look for as experience grew (i.e. known unknowns develop). This is consistent with the logic that deliberate search is possible when “the searcher is aware of the nature of what he does not know and is aware with greater or lesser certainty of the way to find out the missing information” (Kirzner, 1997, p. 71). For example, following its initial success in Germany, BVA put more effort in searching for opportunities globally by hiring consultants known to the founder. Following its experience in Malaysia and Europe, SKY began searching in the US market. However this experience taught them that the US market was much harder to penetrate than Europe, so they directed more focused search and development in Europe instead. Stephen Ware [SKY] explains:

“We learnt from that (Malaysian and UK experience). Whereas in the US, we very quickly found out “well this isn't going to – no matter how hard we try and push it and sweat over this we are not going to get anywhere”. But we have to go off the boil on the US and I mean even though it's the Holy Grail, you know lets concentrate on what is achievable and Europe was achievable and had the right mix. In Europe is highly regional but they are open to good solutions from anywhere. And also the UK was a great platform”.

The cases reveal that firms conduct deliberate but general search through participation in conferences and tradeshowes [i.e. BSD, SSW, SKY, NKC, NUD, and RMW], as well as through exposure in industry media and the internet [i.e. SSW, BSD, WSR, ANC, NKC, JCS, and WSS]. The internet plays a critical role in information dissemination and the process of finding and being found by new ties throughout the 15 cases, but this does not replace the role of imagination and creativity to perceive new means-end combinations.

Table 6.8 also indicates that deliberate search for known unknowns can lead to *unexpected discoveries* (i.e. the unknowable) [i.e. KEA, ANC, and RMW]. For example, while seeking opportunities in the UK Institute of Sports, KEA discovered an opportunity with the Scottish Institute of Sports, whose CEO happened to be an Australian. While seeking an equipment supplier in the UK, ANC was discovered by British engineering firms seeking distributorship opportunities. After its first internationalization to Dubai, RMW became more interested in international markets and sent out flyers via e-mail to a number of agents in the US. This inadvertently reached a prominent Texas agent who then united with his other agent friends in Los Angeles, New York, Atlanta and Canada to co-exploit the opportunity. These agents eventually become RMW's largest business in Northern America. Following this experience, the firm engaged in more active search in the UK and Irish markets. Lisa Balakas [RMW] explains:

“Well the 2nd one was the United States. And that sort of led on into Canada. That's a big part of our business and that's where we – one of the staff in here sent out information to stores across America and the agent contacted us. So that was by accident but we happened to send out the information to an agent who represents maternity wear brands and who most of the stores – all of the stores in Texas knows. But with this guy who was really enthusiastic about product who is based in Texas and he contacted us and then he then put us on to other agents within the United States – you know one on the East Coast and one on the West Coast so we could then build up our infrastructure for the States you know have our – he at least realized that if you are going to supply into his market, his area, you have to supply to as much of the United States as possible to get the brand awareness growing. So he kindly introduced us and gave us the details of other agents in Atlanta, in LA, in New York and he also put us in touch with agents in Canada. So he was integral in our success in entering into the US market at a pretty good rate because otherwise you would be doing a lot more legwork to get to these cities”. [*tertius iungens role played by a US agent*]

Overall these findings support the role of prior and new ties as important sources of knowledge in the firm's first and subsequent internationalization (Ellis and Pecotich, 2001; Simmonds and Smith, 1968; Coviello and Munro, 1995, 1997, 1999; Bell, 1995; Loane and Bell, 2006). However, this study complements prior research by clarifying the process of [1] *accessing* the knowledge of prior ties, [2] *discovering or be discovered* by new ties and [3] *deliberate search* including the resultant *unexpected discovery* when the searchers/firms find things that they did not start out looking for. This also shows that discovery is not only influenced by the knowledge already possessed (Shane, 2000) but also by deliberate search. This supports Propositions 1a, 1b, 2a, 2b, 2c on the influence of prior and new knowledge as well as strong and weak ties in international opportunity discovery.

Table 6.8 - Prior and new knowledge in major subsequent internationalization

Case	Major Subsequent Internationalization		
	Prior knowledge from earlier international operations	New knowledge from prior ties	New knowledge from new ties or deliberate search
WSR (ht)	Learning that nutraceutical business is more promising than drug-route and biotechnology industry in general	n/a	Discovered by a Canadian pharmaceutical firm via the internet for a 15-year product development contract
SSW (ht)	Lack of success in the US taught that they needed to be compatible with Windows NT and have faster software processing speed; Learning the efficacy of exhibiting in international trade shows, online community, media	Fuji Canada referred to opportunities in other Fuji offices, e.g. Germany, UK etc (but some offices resisted); New York Times referred to mainstream US newspaper industry [<i>tertius iungens</i>]; Fuji Japan created new OEM brand (500% growth)	Discovered by New York Times through the media
EMI (ht)	Learning the efficacy of using international syndicated research to gain consulting clients	Discovered by T-Mobile UK (whose CEO was a former superior); Massive opportunity development in Hong Kong Telecom (whose COO was a colleague)	<i>Massive opportunity search</i> and development in StarHub (S'pore) known from syndicated research
ANC (ht)	Seeking pump supplier led to discovery of distributorship in Taiwan (but failed); Learning about the importance of word-of-mouth in their business	Discovered by the friend of the failed Taiwanese distributor in South Korea (failed again), then was discovered by a customer of the failed Korean distributor (highly successful)	Discovered by UK engineering firms for distributorship opportunity; worth of mouth led to discovery by a Malaysian company for distributorship
NKC (ht)	Learning the efficacy of participating in international wine trade shows and aggressive push and wine testing to get more customers/distributors	The Spanish distributor set up JV distributorship with US investors in the US; Followed Australia's Yellow Tail wine success into the US	<i>Deliberate search</i> led to distributorship in Spain, France, Italy, US
SKY (ht)	Learning that developing a distributor to be effective takes time	Discovered by a distributorship in the US through the referral by the first US client (but failed after 2 years)	<i>Deliberate search</i> led to discovery of a Malaysian consulting firm as distributor from a conference in Shanghai; Learning about the difficulty in penetrating the US market led to dedevelopment in the UK
BSD (ht)	Learning that opportunity development can have a 'long gestation' period; Learning the efficacy of participating in leading international conferences	Long opportunity development for distributorship with Perkin Elmers; Perkin Elmers further offered bigger OEM businesses; Discovered cross licensing opportunity with a former competitor	Discovered by Roche leading technology adaptation to create HIV testing instrument; <i>Deliberate search</i> led to distributorship with Whatman Inc
BVA (ht)	Learning the complexity of biotechnology business; the promise of nutraceutical not drug-route	Deliberate search through a US consultant (known to the founder) for licensing opportunities in Europe and US (ongoing)	n/a
2SP (lt)	Learning about the prospect in China and the problems of going it alone	Connected by the Chinese manufacturer for more supply opportunities in different products	Learning the Chinese interest for franchising 2SP's brand
RMW (lt)	First entry to Dubai taught about their prospect in the international market	Connected by the firm's Sydney agent to a Singaporean firm leading to discovery of distributorship in Singapore [<i>tertius iungens</i>]	<i>Deliberate search</i> via internet led to discovery of distributorship with a Texas agent; Texas agent connected the firm to their network agents in LA, New York, Atlanta, Canada (vertical growth); Deliberate search led to distributorship in Ireland
WSS (lt)	Developing opportunity in overseas market is a tough job and requires persistence and need to build strong relationships with potential buyer long before deals can be closed	Discovered opportunity to export Foster's Group's non alcoholic beverage to the global market (after Foster acquired the firm's springs source supplier)	<i>Aggressive search</i> and development of distributorship opportunity with Harvey Nichols UK, Tesco UK; Taiwanese 7-Eleven; Japan's Lawson Group, large Middle East beverage group
JCS (lt)	Learnt that the NZ master franchisor is a good benchmark for future international master franchisors (Scott's Model)	n/a	Discovered by various opportunities from Asia (but not successful); Discovered by a British solicitor for franchising but he did not fit Scott's Model
KEA (lt)	Experience in Japan led to interest to a market signal in Ireland (through the founder's brother's visit to Ireland)	Discovered new licensing opportunity with the manufacturer related to the failed Irish licensee (failed again); Discovered a JV opportunity with a large Irish manufacturer	<i>Deliberate search</i> led to discovery of a licensing opportunity with an Irish man in a pub (but failed); <i>Deliberate</i>

		related to the second failed licensee; Being embedded in the Irish/British sports networks led to discovery of opportunities to supply to world class sports institutes; Discovered opportunity to supply Scottish Institute of Sports (through links with UK Inst. of Sports)	<i>search</i> led to opportunity to supply to an Irish Sports Institute and elite UK Sports Institute
NUD (It)	Learning about licensing as a more viable opportunity due to the product's short shelf life	n/a	<i>Deliberate search</i> led to discovery of distributorship opportunity in Singapore through Austrade
OPO (It)	Learning about the viability of master franchising for international expansion	n/a	<i>Currently searching</i> and developing opportunities in China and India

6.3.3. Theme 3: Deliberate search as active, creative process of opportunity formulation

The cross-case findings show that deliberate search is not simply about seeking and finding known unknowns but is an active, creative process of opportunity formulation and negotiation. It is not uncommon that the persuasion and negotiation required with potential stakeholders in opportunity development takes a long time. Some opportunities may have longer gestation period than others, which can be influenced by the nature of buying and/or the industry. Thus being 'persistent', being around, waiting for the information to diffuse in a network and for people to follow up were critical in the refinement and development process. This is evident in 8 of the 15 cases [i.e. WSS, NKC, BSD, WSR, SSW, EMI, KEA, and JCS]. For example, WSS's development of distributorship opportunity with Tesco, Harvey Nichols and Sainsbury in the UK involved weekly follow ups for six months and creative relationship development with the CEOs of potential distributors long before the deals were closed. BSD's distributorship with a global firm, Perkin Elmer Life Sciences, was developed over two years of on-and-off development and negotiation. EMI's large project implementation with Hong Kong Telecom involved over 20 flights to Hong Kong for opportunity and relationship development despite the fact the CEO was a personal friend of the founder. KEA's opportunity development with a Japanese sports company took two years of visits, negotiation and solving various language/cultural issues in Japan. David Peters [EMI] explains their experience in Hong Kong and Singapore:

"So he (a contact from previous job at Telstra) went up to run Hong Kong Telecom and we had a bit of a relationship here and we went up there and sold to Hong Kong Telecom. That would have been about again 20 trips on the plane – I can show you my passport, heaps and heaps of time up there just face to face and the following we got that deal with them and that nearly put us out of business to be honest because 1.5 million dollars again we spent a lot of money developing the product and getting the best product possible so we didn't make a great deal of profit again on that job – profit comes later".

"Star Hub (a large client in Singapore) which was a couple of years before there was a lot of plane trips and we did that direct and the same sort of thing there – lots of time on the plane, lots of time in the country about 15 or 20 trips and to sign them up for that as well.....But I tell you what the trick is there is no trick it's just lots of time on plane".

Other examples of deliberate search as an active, creative process of opportunity formulation and negotiation are well illustrated in the BSD and NKC case. Allan Morrison [BSD] and Brian Dolling [NKC] explain how long it took for their opportunities to come to fruition and of the need to be persistent and to be visible:

“In the case of the Irish, we had actually been to an international trade show in France in 1994 and I think we had originally met the Irish laboratory representatives in 1994. But it wasn’t until 1996 that they in fact had the money to buy it. So, some of these things have a *long gestation period*. So the good work that we might have done in Hong Kong a month ago some of that is not going to come to fruition for 2 years. We’ve got to be out there constantly within business otherwise it’s a *very long time between drinks*.” – Allan Morrison [BSD]

“When they (Perkin Elmer Life Sciences) saw our BSD 200 in the first year in 1992 when we were in North Carolina, they approached us about it to try and take that on and distribute it. At the time, that didn’t work out, we didn’t end up doing that. When we developed the 300 I approached them and asked them if they were interested in looking at this and they immediately said they would and we arranged to meet at another trade conference in England and then a few months later at an international trade conference in Thailand a deal was struck. So that would have been possibly in about 1998, that a deal was struck that they would buy these things”. – Allan Morrison [BSD]

“Oh yes we went out there I mean *you can’t wait*. Just because you are making a better wine cork people do not beat a path to your door. We had a woman travelling in a plane for 6 months out of 12 and she was there knocking on the doors. Once we had the agents and then you had to go back and go out and make customer calls, train the sales men how to sell, make the calls on the customers and I did it too. Everybody did it. And there were trade fairs, we would take a booth and we would stand in the booth all day long”. – Brian Dolling [NKC]

“You have to be persistent. You have to *keep knocking on those doors*. When you get a rejection you have to go back and do it again. And there is no substitute for it. People smile and shake your hand and say “yes we love your product” and then when they shut the door they ... see you next time. So it is all about being persistent”. – Brian Dolling [NKC]

This finding complements prior research about the role of deliberate search as an active, creative process of opportunity development and negotiation with new stakeholders in firm internationalization. This offers new insights into the role of deliberate search and development and suggests refinement of the initial model (Chapter 4) as discussed in Chapter 7.

6.3.4. Theme 4: The interconnectedness of opportunities over time

The cross-case findings reveal that opportunities feed off each other as the development or exploitation of one can lead to others in a way that cannot be seen in advance. This depends on the exposure to new information, problems and knowledge accumulation over time and through interactions and commitment with prior and new ties, co-adapting the requirements and co-development of resources with prior and new ties [i.e. SSW, WSR, RMW, BSD, WSS, 2SP, EMI, ANC, NKC, and KEA]. The cases show that the patterns of interconnectedness of opportunities include [1] founding and international opportunities; [2] interactions between domestic and international opportunities; and [3] interactions among international opportunities. As indicated in Table 6.9a, the lessons learned from firm founding and refinement serve to

refine and sensitize those concerned to the issues involved, including the nature of demand and supply problems. From here, they have a more developed mental model regarding further development of an opportunity, including international market opportunities. Thus a founding opportunity can lead to international opportunities [i.e. 2SP and ANC]. For example, 2SP was discovered by a new tie and hence an opportunity while seeking suppliers in China during the firm founding phase. ANC was discovered by a new tie and hence an opportunity from the US while seeking information in the BBS (pre-internet) during the firm founding phase. This is one of the mechanisms by which ‘born global’ firms emerge (this will be discussed in the subsequent section).

Table 6.9a - The interconnectedness of founding and international opportunity

Case	Examples of quotes where founding opportunity directly lead to international opportunity
ANC (ht)	“This guy in the United States was looking for odour control....This is how I remember it happening, they had these bulletin boards which was you would log into your computer but it was before Windows came out ... and we had been doing research (to create odour testing protocol) where you would dial a number and you get research and that’s how I was getting all my information with regards to odour control in the United States and of course ... when I enquired ... like there and they asked well what business do you do... are you using and I think that’s how it happened. It was just word of mouth and they said we’ve been looking for you and in fact I could show you a letter where it says “we’ve heard about you, where can we ...” – Victoria Zafras [ANC]
2SP (lt)	I approached a friend who is a pattern maker who works for a big Australian design company [during the founding period]...So getting over the minimum is the biggest hurdle....he said he had a very good relationship with her (a Chinese garment manufacturer)...she really went out of her way to do the samples and did so much work for us before we started paying for anything and this was way before we talked about opening this store in China.... she saw the range in its entirety and was so impressed that she said that this would sell very well in China so she approached us to go into partnership in China – Rob Heinrich [2SP]

International opportunities open up additional types of problems, issues and uncertainties, depending on the prior knowledge and experience of those involved and the networks they have access to. Some of these can lead back to the founding of new firms by the focal firm and others involved [i.e. WSS, ANC, NKC, EMI, and BSD]. For example, the founder of WSS established a new venture to replace WSS (i.e. Southern Cross Exports Pty. Ltd.) following successful development of prior international opportunities. In the ANC case, the Sydney-based Malaysian and the South Korean businessmen who discovered ANC established new ventures to exploit the opportunity in their home countries. NKC’s large distributor in Spain, along with a group of wine-savvy Californians, established a new international joint venture as NKC’s exclusive distributor in the US.

Table 6.9b indicates that while exploiting opportunities in the domestic market, some firms increased their knowledge of the nature of demand and supply and accumulated resources which led to a greater openness to new opportunities including those from the international markets [i.e. SKY, KEA, NUD, ANC, EMI, RMW, and OPO]. For example, while exploiting domestic

opportunities for many years, JCS accidentally discovered opportunities for international franchising with a weak tie from New Zealand. Some of the international opportunities can also lead back to domestic opportunities, for example, NKC became an agent for its Spanish distributor's wine closure in Australia, much like a 'barter' of opportunities between the two firms. More case examples are provided in Table 6.9b.

Table 6.9b - The interconnectedness of domestic and international opportunity

Case	Examples of quotes where domestic opportunity leads to international opportunity
SKY (ht)	Sky is at that position right now where we are going to market. Prior to that you know we spent the last 5 or 6 years converting our idea into something tangible and we have used local industry to do that. So we have found people like SouthCorp, Toyota and Nissan, Visy Industries, One Steel you know a whole range probably about 20 odd Australian companies where we have gone to them with our ideas and actually developed the product in conjunction with them.....The US one was you know we were working with a company called NAMPAC North American Packaging (who was a sister company of a domestic client named SouthCorp) and they run our software and by word of mouth there were a few consultants because it was an outsourced IT by word of mouth they approached us and said "we can sell this in the US". But they were 2 people out of an office in North Carolina, you know it wasn't like a proper – so we went with it hoping to sell something. – Stephen Ware [<i>Domestic to International Opportunity</i>]
KEA (lt)	Well we sponsored the Australian team (during the Davis Cup). One of their guys (a Japanese sports company) was over here on a holiday and he went to a Davis Cup. He was out here on a holiday seeing some friends and he was a sales manager – development manager and we also supplied Tennis Australia as well as the Davis Cup team with different garments but the same principle. He enquired and came down and saw us while he was out here. – Mick Erwin [<i>Domestic leading to International Opportunity</i>]
NUD (lt)	People – inevitably people hear about it. You know today its such an electronic world that you know people hear about things really quickly and so in Hong Kong's case for example, the supermarkets in Hong Kong had heard about it. It might have been someone from one of those supermarkets had been down here in Australia or heard about us or something and got in touch with us and said "we love the brand name, we love the product and can you send it to us?" And so we just started air freighting it up to them. – Tim Pethick [<i>Domestic leading to International Opportunity</i>]
EMI (ht)	"By that time we were looking for partners who we could go out to the market with. And we had Accenture as a partner – who is a big 5 consulting firm – and they do a lot of work in this area. And we were trying to sell into Telstra at the time and Hong Kong Telecom via Telstra. One of they guys who we were seeing in Telstra ended up going up to Hong Kong Telecom as their COO so he was somebody who we've met here and we try and sell to" – David Peters.....So he went up to run Hong Kong Telecom and we had a bit of a relationship here and we went up there and sold to Hong Kong Telecom. That would have been about again 20 trips on the plane – I can show you my passport, heaps and heaps of time up there just face to face and the following we got that deal with them and that nearly put us out of business to be honest because 1.5 million dollars again we spent a lot of money developing the product and getting the best product possible so we didn't make a great deal of profit again on that job – profit comes later. [<i>Domestic opportunity led to International Opportunity</i>]
RMW (lt)	"That was again I suppose by chance in that I spoke to the department store in WA and Kate and I were over in WA putting stuff in the city store and ... department store organising our stock and there was a girl there who was pregnant and she said this stuff is fantastic its great and the sales girl said look the people who run the company are here you know and she said "oh can I meet them". We were out the back organising all the bags of stock and so we came out and said "hi" and she just loved everything about it and went back and said she wanted to open a store and went back to Dubai and opened up a store" – Lisa Balakas [<i>Domestic leading to International Opportunity</i>]
ANC (ht)	"We hit a few stumbling blocks with application equipment, engineering problems. So we make contact at a Taiwanese company that builds pumps and has machines that ... pump and they said oh what do you do oh we do this oh maybe we could take it over there oh alright well let's try it. Basically most of our business is generated from companies that are engineers from overseas – the same with the UK. With the application equipment and we have got to know what they are using to apply whatever you know whether it is cooling or fogging or whatever it is and we tell them what we do and they get interested and we'll have this relationship." – Victoria Zafras

The refinement of international opportunities leading to further international opportunities is the most common pattern observed. At subsequent stages, when resources, network ties and commitment, prior knowledge and international entrepreneurial orientation have accumulated and a reference point formed, the refinement can lead to greater commitment of resources in international markets as in the Uppsala/Process Model [i.e. SSW, NKC, WSR, BSD, BVA, RMW, WSS, OPO, KEA, and 2SP]. This is clearly illustrated in BSD's case. Through gradual success in forming a customer preference for their dried-sample preparation instrument, particularly the top three largest genome laboratories in the US, BSD began to attract the attention of large players such as Perkin Elmer Life Sciences, Whatman and other end users. This led to more international opportunity discoveries. Having created the new dominant design in neo-natal screening markets, BSD became an easy object of search by other global players including Roche Diagnostics. More case examples are provided in Table 6.9c.

Table 6.9c - The interconnectedness of international and international opportunity

Case	Examples of quotes where international opportunity leads to international opportunity
BSD (ht)	Once we are international, it was easy for them (Roche Diagnostics, a global healthcare company; and others) to spot us on the radar. That's what happened" – Allan Morrison [BSD]
WSS (lt)	Now we understand – I don't need to go to the CEO anymore, I can talk to the buyers now because I understand how they are operating. – Ross Bennie I wish I could tell you. I don't know. I think that's part of a frustration and the excitement. It could fall on it's arse by Christmas time or it could be an outstanding international success and there is sort of nothing in between the 2. It will either just be a business or it will go broke or it will be really, really successful. It's not going to be half way or you know mediocre in any way shape or form. Just because of the space I'm playing in. – Ross Bennie <i>[but finally they successfully developed all opportunities in Japan, Taiwan, Middle East and a new firm was formed to act as a global trading company]</i>
NKC (ht)	We stayed the way we were until a year ago where we opened up a printing facility in California we felt the delay in getting to overseas markets was too long. People in the wine industry want corks tomorrow or next week. So we struggled in countries where there was a reliable producer and most of our competitors now have – well all of our competitors now have printing facilities in the markets they work in. So we now have a facility in France and we are just about to build a big facility in Spain. - Brian Dolling [NKC] Now it's huge – 100 companies that use NuKorc some of them using 200 million pieces a year of course everybody know us now. We don't knock on the door anymore, they open it for us at then we go" – Brian Dolling [NKC]
SSW (ht)	Well the German distributor was actually the Fuji distributor. So we had a very good relationship with Fuji Canada and they introduced us to other Fuji offices. Because we were so good to the Canadians, we always did all the stuff they wanted, and our product never gave them any trouble, they introduced us to some of the other offices. We have a lot of Fuji offices around the world selling our product. One office will introduce us to another one and another to another one. So we have built the relationship that way. But the other people who are not Fuji offices, we met at trade shows or they heard from customers, or get the customer to sell something and they would say "look I've got this new black magic, check it out". And the guy would say "oh that's good, I should sell that". And then they contact us. These days a lot of the dealers that we find are people who have emailed or ring us because they have read in a magazine about our product or they saw it at a trade show somewhere or one of our distributors and they want to sell it. So now it's easy, but in the early days, it was hard because you had to beg.- Peter Skarpetis
2SP (lt)	Yes well I wouldn't have opened the store in China. We wouldn't have an expansion plan for China. It would have been a whole different – this may not have even happened if I made the samples and tried to sell them and then we would have had to sort of start off very small and maybe wait until the season after and got some orders etc., it would have been much more difficult to do. We wouldn't have had the 2 stores...with the goal of having a lot more over the next 6 months, even if it's only 3 or 4 or 5 more stores, we would probably have those in the next 6 months. – Rob Heinrich

The cross-case findings also reveal irregular patterns of interconnectedness of opportunities in which greater commitment to international opportunities can be followed by [1] a temporary hold back in international markets to prepare the development of international opportunities in a larger scale (i.e. JCS), [2] a temporary retreat to domestic markets due to lack of international opportunities and re-entry into international markets in light of new opportunities (i.e. EMI), [3] a change of direction to other opportunities due to lack of opportunities in the targeted domain or country (i.e. SKY), [4] a renewed focus on domestic opportunities while maintaining further international opportunity development (i.e. ANC and RMW), [5] a permanent pull out from international markets (i.e. due to managerial conflict between the founder and new investor in NUD). This shows the role of not only the interconnectedness of opportunities but also of Knightian uncertainty which can push or pull the patterns towards many plausible directions. Other case examples are provided in Table 6.9d. This evidence shows that the Uppsala Model's gradual progression in international markets is but one type of a larger set of plausible patterns of interconnectedness of opportunities over time.

Some of these irregular patterns involves learning from failures that improve future opportunity recognition and evaluation, at other times it is merely moving on to new things when the road is blocked. This is nicely illustrated in the SKY case in Table 6.9d. Some of the seemingly false opportunities were later revisited and further successfully developed, drawing on the knowledge, experience and contacts developed later in the process. This is illustrated in by EMI who, in light of new circumstances, re-pursued their former opportunities in global syndicated telco research by partnering a former executive from a leading competitor.

Table 6.9d - Irregular patterns of interconnectedness of opportunity

Case	Examples of quotes of irregular patterns of interconnectedness of opportunities
JCS (It)	<p>We are currently reviewing and restructuring all departments in this head office. We are now in a change process to prepare a model that is more transportable to meet overseas market expectations. – Denis McFadden</p> <p>Definitely I would need to do – we would like to have another couple of countries on the go as well as New Zealand and that manager running this organization here in Australia with me being more in an ambassador role, setting up the deal and then leaving it for someone else to make it happen. That would be an ideal role for me I think going forward. I see myself as not having the skills necessary to run a bigger organization, we would just roll on and make mistakes but I have got no rule or training any ... and I think I could get someone who would have experience in running a big organization and that would be beneficial but I am still in it for the long run and I still want to be in the 200 – I want to do the numbers in New Zealand and I would very much be interested in doing something overseas. To find another Scott – find another 10 Scotts, that type of person. – Denis McFadden <i>[Temporarily hold back to prepare international opportunities in a larger scale]</i></p>
EMI (ht)	<p>As I said we are focussing at the moment in Australia. So we are sort of consolidating and growing here before we go back out. So we sort of have gone international, then pull back a bit and we are getting this one re-seller (in India) up to speed. Probably in the next 2 or 3 years that will be our real growth area for us. – David Peters <i>[Retreat and Re-entry into international markets]</i></p> <p>And that people would know that I was consulting in this area and they would say “can you do this” (telco syndicated research) I can because I’ve got a partner, there are partners around us now who can do it so we can bring that in ... how are we going to solve this problem. Ok I’ll get back to you ... around and get people ... together and you know just facilitate the process as well. – David Peters <i>[Re-pursuing old opportunities]</i></p>
SKY (ht)	<p>When we first got a distributor in the US and we first went over to the American SAP User Group, we got huge interest and I think you know at the time, we just did not realise that the companies as soon as they may have been</p>

	<p>interested in your product, but as soon as they went and saw “oh ok, this is an Australian product, a little Australian company, supported out of Australia” they then just weren’t interested.We very quickly found out “well this isn’t going to – no matter how hard we try and push it and sweat over this we are not going to get anywhere”. But we have to go off the boil on the US and I mean even though it’s the Holy Grail, you know lets concentrate on what is achievable and Europe was achievable and had the right mix. In Europe is highly regional but they are open to good solutions from anywhere. – Stephen Ware</p> <p>So yes I think the best example is in the US where we were so excited and thought “oh this is going to take off” and we went over there and we very quickly found out “no”. We can leave it there. – Stephen Ware [<i>Changing direction to other opportunities when the road is blocked</i>]</p>
ANC (ht)	<p>“The Australian market is building up now quite significantly. So as whereas before our local market was 20%, it’s starting to rise up and it’s nearly becoming equal with the – that’s why I missed the main ... exports not our major thing anymore – the local market is starting to build up as well. We lost a lot of business – like September 11 had a direct impact on our business because I got really worried about importing, the ports got shut down, there was a lot of problems so they couldn’t get product in time and of course, we lost quite a few customers after that. And now because it’s building up again, we’re getting more countries – they will look at the ... we started in the United States – we are building it up but the local markets are growing now and it’s growing quite significantly because we are restructuring now, we are bringing in more people in time to you know I mean we are working on quite some significant jobs. – Victoria Zafras [<i>Renewed focus on domestic opportunities while still maintaining international opportunity development</i>]</p>
RMW (lt)	<p>Because we are in Australia the risk is our industry is so cottage that it’s not very sustainable. Now you are talking about people who are not good business operators you are dependent on poor operators to sell your product and to be honest that’s why we have gone retail to try and protect ourselves from that risk because when we look around we see the ... stores and the other people that are like ourselves that are manufacturers that have opened their own store and you can’t sell into those stores because they are your competitors. So in the last probably 5 years in Melbourne there has probably been 10 stores that have opened up and probably 8 of those are ones that we can’t sell into. And if they become stronger market players and we are just selling into the B grade stores that’s a huge risk and so that’s why we’ve gone retail to protect ourselves. – Lisa Balakas [<i>Renewed focus on domestic opportunities while still maintaining international opportunity development</i>]</p>
NUD (lt)	<p>Well it wasn’t voluntary (his resignation as a CEO). You know I had a clash about the future direction of the business with the investors....The current management team is very much on the domestic market and I think it’s really about securing their position in the domestic market and once they have done that then possibly their focus would turn to international markets. But you know my philosophy in my view is that it is a branded business and the brand works as well in the United States as it works here and so the opportunity is to licence the brand into the US market. But the power of the licencing model has been proven with the Nestle deal – Tim Pethick [<i>Permanent pull out from international markets</i>]</p>

The cross-case findings show that the international opportunity refinement process can also lead to the discovery of opportunities in new domains unthought of at the outset [i.e. EMI, NUD, RMW, ANC, and SKY]. For example, EMI discovered opportunities in online media portals during the dotcom boom, and data warehousing, in order to fulfill client requirements. NUD discovered ice cream licensing opportunities because of short-shelf life problems with their products, from market experience in Singapore and Hong Kong. RMW discovered a loose franchising opportunity (i.e. using RMW’s brand and exclusively stocking RMW products but without franchising fees) from a special request by a local retailer. ANC discovered opportunities in over 50 different industries for its odour control solutions based on their market experience in the US. SKY discovered opportunities for blackberry applications from their Spanish distributor.

This finding provides support for Proposition 5 (i.e. the feedback effects of opportunity exploitation over time) and Proposition 6 (i.e. the impact of exploitation on subsequent discovery, learning, and network ties). However, it also offers new insights regarding the

plausible patterns of interconnectedness of opportunities and the role of uncertainty in the evolution of the entrepreneurial process.

6.3.5. Theme 5: Feedback cycle between international entrepreneurial orientation (IEO) & firm resources and international opportunity discovery/development

The cross-case findings reveal that prior international experience and prior resources can play important roles in shaping a firm's proactiveness, aggressiveness and willingness to develop and discover international opportunities. However, the results suggest that *aggressiveness* does not mean being aggressive to competitors as suggested by the original IEO scale (Knight and Cavusgil, 2004; Lumpkin and Dess, 1996) but rather aggressively seeking to (1) search for and develop opportunities including by forming partnership and alliances and (2) leverage opportunities when they present themselves. This propensity to leverage contingencies or exploit unexpected discoveries is based on effectual reasoning (Sarasvathy, 2001). This will be discussed in more depth in subsequent theme.

As indicated in Table 6.6, 6.7, 6.8 and 6.9 (a, b, c, d) above, international *proactiveness* and *aggressiveness* as dimensions of IEO can be influenced by [1] prior international business or entrepreneurial experience (i.e. NKC, BSD, EMI, and NUD), [2] the nature of the industry that is international (i.e. such as biotechnology in BVA and WSR, and neo-natal screening in BSD), [3] the lack of domestic opportunities, which can force a firm to conduct proactive, aggressive search in international markets (i.e. WSR and WSS), and [4] the process of finding and being found by new ties who are international [i.e. SSW, NKC, RMW, EMI, BSD, JCS, OPO, ANC, 2SP, WSS, WSR, and NUD]. On the other hand, firms that are endowed with abundant domestic opportunities tend to be less aggressive and proactive internationally and build international interest at a much slower pace leading to delayed international market entry [i.e. SKY, JCS, OPO, and KEA]. For example, with its novel 'fixed fee' franchising concept in Australia, JCS was able to create and discover abundant opportunities in the local hairdressing market and only made their first international market entry 14 years after inception. Similarly, OPO was 'too busy' supplying the domestic market and only made their first internationalization 14 years after inception.

The cases reveal a general pattern in that firms became more aggressive and proactive to search, develop and leverage more international opportunities when international experience and firm resources grew more significantly [i.e. SKY, EMI, BSD, RMW, WSS, KEA, NUD, and OPO]. For instance, having developed substantial resources and new products for over six years in the domestic market, and following its initial foray in the US, SKY showed more proactivity and

aggression to conduct general search by participating in international conferences. WSS became more proactive and aggressive in the Middle East and East Asian markets following its success and resource development after the UK market entry. More examples are provided in Table 6.8 above.

The cross-case findings highlight the opposing views in the literature related to risk taking. Firms in the samples that have recognized and exploited international opportunities ranged from those that can be described as prudent or calculated risk takers [i.e. RMW, JCS, SSW and OPO] to those that can be described as relatively high risk takers [i.e. NKC, KEA, WSS, 2SP, ANC, NUD]. This essentially shows two types of attitude toward uncertainty. The former reflects how entrepreneurs focus on *predictable aspects of an uncertain future* in which predictions/calculations are used to reduce uncertainty while the latter the *controllable aspects of an unpredictable future* such as using affordable loss principle as a way of dealing with uncertainty (Sarasvathy, 1998, 2001, 2003, 2005). Further, in any one firm the level of risk taking can be both high and low [i.e. BVA, EMI, WSR, SKY and BSD]. This shows the bipolarity of entrepreneurs toward risks in different projects or events. BVA case is an example:

Some of the research that we do costs hundreds and thousands of dollars. Do we do it or don't we do it. You know and this is what I'm saying about doing research for the sake of it. It's a risk. You might go and spend a quarter of a million dollars on some research and you may get no return out of it. You might find – and we have been down this track – you might find that you complete it and realise that you should have never have done it. It's the nature of the animal. ... you don't find out until you finish and it's very, very hard to assess sometimes whether or not you are doing the right thing but as the saying goes I mean you can – when you go down the track like that making decisions as to whether you go to market at a certain stage or you don't. You wait. It's all risk factors. So it's – there are many, many risks involved. –
[High risk taking]

Disciplined. We are not cavalier. We don't take (business) risks for the sake of it. They have to be measured. We have to know the down side and the up side. We have to look at the outcomes whether they be negative or positive and measure those and then make a decision as to whether or not we can afford to do that and take that risk. If not, we don't –[Calculated risk taking]

The sports fashion company (KEA) showed a relatively high propensity for risk taking, in that it was involved in a number of risky opportunities in Ireland to create an international presence.

And then I could either walk away (after two consecutive failures) or look for one more go as a Joint Venture partner and I found one.....It's a hard one and you won't like this and a lot of people won't. The lesson that I learned is that if you believe in something make it happen and even though that first guy didn't do the right thing by me ... 20 people and no one wanted to take it on. So I took a risk and I knew it was a risk, but I somehow knew the risk wasn't ... but I still went for it. If I didn't go through those two – if we hadn't taken it on, we wouldn't be in the UK now. [High risk taking]

Other firms tended to be risk averse and preferred a safer approach to doing international business. For example, the digital proofing software firm (SSW) relied on partnerships and OEM such as with Fuji Film and on organic growth to reduce with risk exposure.

Well we don't really have any risks because we never borrow money. So I don't I know you are talking to the wrong person.It's (OEM) like buying that company, it became yours and they sell your products...they do everything else for you. *[Low risk taking]*

The cases suggest that all new ventures involve risk taking, it is just that some succeed and others do not and chance and contingencies that cannot be seen or planned in advance can play an important role (Taleb, 2001).

More examples of cases with different levels of risk taking are provided in Table 6.10.

Table 6.10 - Risk Taking Propensity in the International Markets

Case	Examples of quotes of willingness to accept uncertainty/risks in the international markets
WSS (lt)	<p>At any level of any business it's the CEO's drive for export or entrepreneurial mindset. You know people say I'm really brave and I'm really you know I come really stupid at times too, I just don't think you can actually put a value on anything more than the drive and passion and a part of that is almost self destruction to a degree, it's the ability to risk – to accept risk, welcome risk and understand that to grow you have actually got to make mistakes. <i>[High risk taking]</i></p> <p>I wish I could tell you. I don't know. I think that's part of a frustration and the excitement. It could fall on it's arse by Christmas time or it could be an outstanding international success and there is sort of nothing in between the 2. It will either just be a business or it will go broke or it will be really, really successful. It's not going to be half way or you know mediocre in any way shape or form. Just because of the space I'm playing in. ...It's a hard – you know I've made \$15 million out of the last business and you know I've sort of poured \$2 million of that into this and I had a mindset which is I had no salary. I've got to make a salary out of this business. ... investment ... it's a mindset you have got to have otherwise the business doesn't work. So you know the risks that I have got now is like I've got no money at all – that's the mindset I'm in. So it's very gladiatorial. It's very tough. I enjoy risk. I work better with risk. I perform better under risk. But I don't necessarily want it – after 3 goes of risk business start up, you sort of run out of puff because right now it has been really tough. <i>[High risk taking]</i></p>
BSD (ht)	<p>The development of the business – particularly during the years of the BSD 200 where we were looking to try and grow the business and develop into the BSD 300 and develop that instrument and grow that business, it was a very difficult time and I was still running my management consulting business in parallel with that probably through until about 1999, 2000 maybe 2001 and every dollar of income that I earned in the other business was thrown into this black hole called BSD and there was not a day that you didn't wonder whether you would ever see any of that money again. Literally, probably for 8 or 9 years, it was a consumer of funds and in retrospect you know <i>[High risk taking]</i></p> <p>The easiest part of the business is probably inventing and making the equipment, the hardest part is actually getting them installed and serviced, particularly overseas. And that's the most important part – well that is a most expensive part of the total process and companies will either succeed or fail based on whether or not you can keep down the amount of servicing that is necessary of the equipment overseas. US\$1,000 for a service call in the United States is the typical order of magnitude. So if you have a piece of equipment that is not performing well and you are sending somebody out a couple of times a month to go and fix it you have a serious problem. <i>[Calculated risk taking by creating product with little service requirements]</i></p>
SKY (ht)	<p>There are 2 points of view (in terms of risk taking). From a product innovation point of view, they are up there with the best I've seen. From a business point of view – it's funny, I'll sit here and we'll have a board meeting or a management meeting and I'll come up with some ideas and talk about strategy and they'll just look at me and say well it sounds good Ian, if you think it's a good idea, do it. So it's hard sometimes because sometimes you do want you know – you do need contribution and ideas or people to say “oh no that's dumb”. So they are very innovative and very open in their thinking. They are quite conservative and what I'll consciously do at different times is to <i>..[High and Low risk taking]</i></p>
WSR (ht)	<p>From that point we then invested about a million dollars building some primary processing facilities where we actually harvested the seaweed and dried the seaweed and all that sort of thing.... and we actually invested money building up our stocks before we even went to market. It sounds risky and to some extent it was <i>[High risk taking]</i></p> <p>So it's easier for us to manage a Mannatech contract than an ARC contract if you like in terms of resources. So the</p>

	<p>experience with Mannatech and ARC is that yes Mannatech you get money earlier – you get a lot of money earlier, it's easier to manage, down the track if ARC comes off, it will be a very successful contract but they are a long way down the track and it takes a lot of resources and risk – obviously greater risk to get there. So I think the experience of again of what we want to do is keep that balance in the company where we continue to pursue both nutraceuticals and pharmaceuticals. <i>[Balanced risk taking]</i></p>
EMI (ht)	<p>If you had of told me when I was 29 and started this company, you need to raise \$2,000,000 you are going to have to sell internationally and you have to build this product up, I would have said how the hell am I going to raise \$2,000,000, where am I going to find that? I've never done it before. I didn't know anything about it – I really just had an idea.... So then we had been major client implementations for a small company – multi-million dollar projects when you have got a start up to deliver them and you get paid at the end they are big risks because if you don't deliver you don't get paid. You can't pay anyone. So we have been through some pretty tough times as we are delivering some major projects internationally. When we did Hong Kong Telecom, it was our first major multi-million dollar project internationally and looking back now, there was a lot of midnight oil candles burning to get that one in and running. It was a big risk for us really. I don't think I realised how much of a risk at the time. But we lived through and it was fairly stressful. But we came out the other side with a client – profitable and all good <i>[High risk taking]</i></p> <p>So you get a better product and you don't waste any time building function and feature XYZ because the customer doesn't want it. The customer only want ABC. So we are not risk averse, but we won't risk because the nature of the data we deal with – the client data. We are fully compliant and really stringent about things like security, privacy, data protection all that sort of stuff. We will take calculated risk for new innovation though. That's really important in the space we are in mobile is always changing. So we have got a couple of interesting things on the horizon there as well <i>[Calculated risk taking]</i></p>
NKC (ht)	<p>Well when you are growing 200% per annum, you are taking massive risks. I mean for us to spend \$6million or \$9million is one decision. The decision is for the money in this business is huge compared with businesses of similar size. We are approved by the board yesterday to build another facility next door. \$3million worth of facility and another \$5million to fill it. So this is not for the faint hearted. This is expansion risk but it's a ... what would we do if we don't, then the answer is the way we want to be, we want to be a growth company. <i>[High risk taking]</i></p>
2SP (lt)	<p>We take huge risks. Opened a store in China. Risks as I said I just do what feels right and so this is a risk it doesn't matter, if I think it's going to work to me that's not a risk. We take big risks in what we are doing. We are marketing the brand in China as an Australian brand as an up-market Australian brand. So we needed something visible to say that we are an up-market Australian brand, we needed to have a store – a flagship store – somewhere so if someone in China who is interested in the range ... why is it an Australian brand and we'll say we have a store in Queen Street Woollahra, here's the website and here's the whatever. It gives what we are trying to market credibility.</p> <p>Anything ... dealing with overseas is a big risk. I'm fortunate in that I have a found a business partner whom I can trust. If I didn't have that and I was trying to open up a business in China, I would find that extremely difficult where do I start who do I go to. I think the thing that has helped me most is the fact that I have found a person who I can deal with in China who is helping me to achieve what I want to achieve and they are part of that goal as well. So it benefits them as much as it benefits me to succeed <i>[High risk taking but using partnership to reduce risks]</i></p>
JCS (lt)	<p>They are not necessarily aware of that (risk taking). I keep that pretty much – and that doesn't happen any more by the way, we used to everyday I was pushing the envelope and now we do leases for instance subject to franchisee we will sign a lease but I won't commit to it unless I've got a franchisee.... which limits the number of opportunities but coming back to that whole question of being ready to move overseas is I don't want my guys in head office being tied too much with Australian – running a salon here. For instance we don't have any company down stairs at all. If we do I would have to have more personnel here and I don't want that. I would rather them being interested in doing a whole country where they are talking to one person looking after the whole lot. <i>[Low risk taking]</i></p>
RMW (lt)	<p>We have always measured our risks and I would say we ... a low risk side. Not extremely low risk but certainly we will always nearly always take the safe option. So with currency, we base foreign exchange contracts to hedge against currency fluctuations. Wherever we can we minimise risk. We take insurance policies wherever we can. We take manufacturing in Australia because it's more a more known entity. ... a lot of financial risks. <i>[Calculated risk taking]</i></p> <p>There are no other big risks that comes to mind because we really do take a low risk. So we are not true entrepreneurial in that sense. Like if you read a definition of entrepreneurs they are risk takers. Although they might be risk takers, I would still say we are not in that category. We have grown – we have funded our growth from cash flow, so there were never borrowings. The only borrowings we have is for this building. So we have never really borrowed anything and that's because that's mostly because of risk because we don't want to be owing people money so we would curtail growth if we needed to rather than expose ourselves financially and ... also comes – it's a sexist thing to say – but maybe it also comes from being a woman in business and when we first started off, our husbands probably thought it was a bit of a hobby you know. So we kind of – we just want to prove ourselves in a very safe manner you know. <i>[Calculated risk taking]</i></p>
OPO (lt)	<p>I ... take a risk because when you want to do business ... your mind ... risk ... you make a mistake you realise you make a mistake and move on. ... it was a mistake, you lost money, forget it, move on and don't make a mistake. That's why I believe in ... I believe there are some risks, you need to be careful but if you think about ... running. ... risk because you ... chance to escape. No ... risk ... in the business but cannot think about the risk, move on. <i>[Moderate risk taking]</i></p>

The cross-case findings reveal that continuous innovation (i.e. *Innovativeness*) is an important element of IEO that sustains international opportunity development/discovery and the accumulation of more *firm resources* necessary for further internationalization. Attempts to develop an opportunity can lead to new types of problems which requires new ways of doing things or new solutions to problems, which in turn can lead to or help develop subsequent opportunities. As shown in Table 6.11, both technological and business innovation play important roles in subsequent international opportunity discovery and exploitation. The table indicates that the sources of innovation involve knowledge exchange, co-creation and co-adaptation with others such as customers, distributors, research centres, external scientists and engineers, and consultants [i.e. SSW, ANC, NKC, SKY, EMI, WSR, BSD, BVA, RMW, and JCS]. The co-adaptation and co-creation of new technologies with prior and new ties led to further internationalization and growing firm resources. For example, BSD co-developed more advanced, automatic neonatal screening instruments with Perkin Elmer Life Sciences following successes with previous semi-automatic instruments. They also had cross-licensing with a former competitor (i.e. BioSpot) to tap into new markets, which became one of their major international opportunities. More recently, BSD co-adapted its knowledge in neo-natal screening technology with Roche Diagnostics leading to the creation of opportunities in HIV screening technology thus allowing them to tap into the emerging African market. ANC continuously co-developed new odour control solutions and testing protocols with the UNSW Odour Lab and ANSTO leading to more opportunities in international markets. As large international opportunities are successfully exploited and firm resources accumulate, firms have greater potential to increase their innovative capabilities, which further enhances opportunity discovery/exploitation.

As indicated in Table 6.11, successful internationalizing firms engaged in continuous innovations in the international markets [i.e. SSW, ANC, NKC, WSR, BSD, BVA, RMW, and WSS], which was carried forward from the innovations during firm founding phase, and even prior to firm founding among some firms [i.e. SSW, NKC, BSD, and BVA]. For example, SSW's advanced printing-related softwares can be traced back to their founder's invention when he was a student which was refined during his working life. In their initial years, SSW tapped into a lot of customer feedback to refine their software and as the basis to create new technologies. The initial success increased the firm's resources which allowed them to engage in more learning and experimentation, leading to an important technological discovery called Real Dot Technology, which preserves the pattern of high resolution bitmap RIP data or CopyDot scans. In later years they invented Paper Profile Technology which sharpened and refined the reproduction by preserving the complex characters and images. These innovations further increased their capabilities to discover and create more international opportunities and develop

more resources for further internationalization. Ultimately, these inventions contributed to their successes in the US and Japanese newspaper market. Peter Skarpetis [SSW] explains:

There is you know 2 parts were important – the marketing thing, trying to find the distributors and then there is the development of the software. So the 2 of them have to work together. So the software had to kick out new features and things and as we got feedback from the field because we didn't know exactly what was needed. So as you wrote something and ... started using it for the demo, because they are more experienced in that industry, they would say it would be good if it could do this and that. So we would have to work over night really hard to get it all done, email it over the internet to the sales guy – it would take about an hour to download it to the modem and then go back the next day and show them it was done. And that was a key to our success. The first 4 or 5 years there was a very quick turn around. Anything anyone wanted, we would do. We are still very flexible. If anyone finds a bug or there is a problem we try and fix it over night and send them the piece and that's very successful stuff because we can. So both those things are important. – Peter Skarpetis [SSW]

While I was working on a software and printed something I found that I had dots appeared as the side effect. My brother said "Wow, we can do proof with dots on them now". He said "Let's call it RDT (Real Dot Technology)". When I showed the Real Dot Technology people were amazed. That was the first thing that I invented that no one else could do. That was a big milestone. – Peter Skarpetis [SSW]

An example of business innovation can be found in RMW. The firm began with innovative ways of transforming standard maternity wear into high fashion garments. This initially led to success in the United Arab Emirate (UAE) market, followed by unexpected success in the Northern American market. These successes accumulated the firm's resources and allowed them to implement an innovative stock management system that can achieve close-to-zero stock obsolete, as well as efficient and collaborative supply chain systems that allow new designs to be produced and distributed to international markets quickly. Other case examples are provided in Table 6.11. Lisa Balakas [RMW] explains:

"A lot of people in the maternity wear industry in years gone by aren't very professional, they are not very progressive in their thinking and don't really ... not very professional in their whole business. So I suppose that's why in maternity wear we stand out. I think we are like a breath of fresh air when we came into the market.... the maternity wear traditionally has been very conservative and I think potentially it's supply has been a bit behind the demand so we were a very fashionable company before it became fashionable to be fashionable. So you talk about the cliché of maternity wear is that people wish to wear on top of the tummy and frills and things and we were getting away from that. Our product is very much what you would wear – what I would wear if I was not pregnant – I will just wear the same now. I think that American producers are probably a bit slow to pick up on that and so that sort of left us a hole in the market place".

"So managing obsolete stock. In our industry fashion can be a huge cost and make a company very profitable varying to running at a loss. So that is our single biggest industry risk and I think we manage it extremely well. So even ... accountant now and they just can't believe our obsolete stock levels. You know they deal with a lot of people in our industry and basically they are all "what level do you have here that's obsolete" and we would say "nothing may be 1% of the fabric is obsolete".

The cross-case findings show that although innovation generally increases a firm's internationalization potential and capabilities, it does not absolutely enhance the tendency to internationalize. This is due to the presence of Knightian uncertainty which may push or pull a firm's international trajectory in many possible directions. For instance, EMI has generated many types of innovation in customer loyalty solutions but a global Telco downturn forced them to retreat to the domestic market before re-entering the international market. Overall, this finding supports prior research that demonstrates the relationship between innovation and international success (Knight and Cavusgil, 2004) but adds Knightian uncertainty as an important contingency factor.

Table 6.11 - Innovation in internationalizing firms

Case	Technological innovation	Business Innovation	Sources of innovation
SSW (ht)	Discovery of Real Dot Technology; Invention of Paper Profile Technology suitable for complex characters; (d) Lego engineering to create new softwares	(a) Creative use of OEM as effective marketing tools; (b) creative use of mass media and online media & blogging	Customer feedback combined with company's engineering talent
ANC (ht)	Discovery of a pattern of chemistry for different industrial applications	(a) Recombining different legislation and information on odour control solutions from different countries to create impactful product information	Customer, UNSW, ANSTO, combined with internal sources; Distributors and internal
NKC (ht)	Continuous refinement of the single profile extrusion technology that improves SO ₂ retention in wines	Leverage their technical success and image through international wine testing centres (e.g. France, AWRI)	Company engineers, wine testing labs, wineries
SKY (ht)	Continuous development of productivity and mobile applications using SAP platform including Blackberry applications	n/a	Clients and company engineers
EMI (ht)	Adaptation of loyalty management software and services to new areas such as energy, financial and banking, customer-get-customer solutions	(a) Use of global syndicated research to generate international clients; (b) Innovative models of customer and loyalty management based on one-to-one marketing principle	Clients and internal computer scientists
WSR (ht)	Ongoing R&D in a range of medical-related use of GFS and its derivative fractions.	Building "green" image by sourcing its seaweed from pristine natural wilderness	External scientists and research labs and company scientists
BSD (ht)	(a) Continuous adaptation and development of neonatal instrument to other technologies such as HIV screening and DNA collection devices; (b) ability to predict the next waves of instruments	Business model that integrates rather than competes with global firms through OEM	Distributor, external consultants and company engineers
BVA (ht)	Continuous discoveries of the new uses of bioactives from cyanobacteria for animal, agriculture, and cosmetics	Follows a partner firm's proven business model through nutraceutical route	Further R&D by company scientists
RMW (lt)	n/a	Close-to-zero obsolete stock; Efficient and collaborative supply chain; Family friendly workplace innovation	Suppliers, agents, makers, customers, and internal
WSS (lt)	None. All operations are outsourced.	Creative approach and persuasion at the CEO level	Internal

The cross-case findings reveal that with the founders acting as the decision maker and uncertainty bearer, the firms have much *autonomy* and freedom to try out new ideas, take new initiatives and challenge conventions in the international markets. As shown in Table 6.11, this element of IEO can explain the creation and exploitation of new international markets by firms without being dictated by strict policies, regimes or strategies. The exploitation of novel opportunities ranging from digital proofing, odour-control, to fashionable maternity wear

markets, may not be possible without the autonomous and independent actions of the firms and their connected others to bring forth an idea and turn it into reality.

As indicated in the findings above, there is a positive feedback cycle between IEO (i.e. proactiveness, aggressiveness, innovativeness, uncertainty coping/risk taking, and autonomy) and firm resources and international opportunity discovery/exploitation. This cycle is influenced by firm histories, the nature of the industry, tacit knowledge in international markets, the role of international others as well as Knightian uncertainty. However, the results suggest that *aggressiveness* does not mean being aggressive to competitors as suggested by the original EO scale, but rather ‘aggressively’ seeking to leverage opportunities when they present themselves. Therefore, the object of the firms aggression was not its competition but new opportunities which arose. This propensity to leverage contingencies or to exploit unexpected discoveries is based on effectual reasoning (Sarasvathy, 2001). This will be discussed in the next section. Moreover, results relating to risk taking reflect the opposing views seen previously in the literature (Brockhaus and Horowitz, 1986; Khilstrom and Laffont, 1979; Begley and Boyd, 1987; Gartner, 1988). In general, the results suggest that risk taking does not appear to differentiate between firms that are highly successful in recognizing and exploiting opportunities in international markets and those that are less successful. This suggests that trait/psychological theories of entrepreneurship, that focus on the personal attributes of individuals/firms, are not as effective as process oriented perspectives of entrepreneurship, that focus more on the role of information, capabilities and network ties (Gartner, 1988; Gartner, 1990; Shane and Venkataraman, 2000).

The results provide support for Proposition 3 (i.e. the role of IEO and firm resources on international opportunity discovery) and add new insights for model refinement in Chapter 7.

6.3.6. Theme 6: The multidimensionality of absorptive capacity

Much like the founding phase, the cross-case findings reveal that having prior knowledge, new knowledge, IEO and resources alone are not sufficient for opportunity discovery and exploitation but that this requires the ‘ability’ and willingness to see new connections, and to combine and recombine them in new ways, what may be described as an absorptive capacity. This ability is indicated in many examples of opportunity discovery and development process in Table 6.6, 6.7, 6.8 and 6.9 (a, b, c, d) above. The cases suggest that the dimension of absorptive capacity are broader than those discussed in the literature to date (Cohen and Levinthal, 1990, i.e. ability to acquire, assimilate, transform and exploit knowledge or a measure of R&D activity) and can involve other psycho-socio dimensions, as in the following.

First, it involves an attitude of openness to new possibilities suggested by the environment. The cases show that a firm can be exposed to new information, resources, people/firms intentionally or unintentionally but these may go unnoticed or ignored if there is a lack of openness to see their relationship with prior knowledge/resources in new ways and to perceive new means-ends combinations [i.e. NUD, JCS, RMW, and WSR]. The lack of openness to consider new possibilities may help explain what Austrian Economist Israel Kirzner calls ‘sheer ignorance’ (Kirzner, 1973) in the market process. In other words, ‘alertness’ (Kirzner, 1990) may require an attitude of openness to new possibilities. As indicated in Table 6.12a, JCS had a strong belief that their New Zealand master franchisor (i.e. Scott Wallace) was the only type of person who could be a successful partner in their international expansion. The Scott’s model, as the founder of JCS calls it, may have inhibited their recognizing new possibilities and opportunities that found the firm on a number of occasions. The new investor/management in NUD was not open to the idea that the Nudie brand had a potential for global licensing, which had been proven by the founder in the successful launch of Nestle Nudie ice cream. This stopped the firm from considering new possibilities and opportunities that the brand could offer. More case examples are provided in Table 6.12a.

Table 6.12a - Openness to new possibilities as a dimension of absorptive capacity

Case	Examples of quotes of openness to new possibilities as a dimension of absorptive capacity
JCS (It)	<p>UK and I had a gentleman who I asked to do due diligence on us who I asked to speak to my Master Franchisee in New Zealand which he didn’t do and I thought that was very much a part of it to find out what sort of relationship we had and so that fell away. – Denis McFadden [JCS] <i>‘Lack of openness to new possibilities’</i></p> <p>And in the case of Scott, there would be other Scotts around. Not necessarily with a lot of money – that’s not where I’m coming from. If you have a lot of money, that’s fine. But it is very much a personality and someone that we could work with. So that model I know, I don’t know any other models. – Denis McFadden [JCS] <i>‘Openness to new possibilities’</i></p>
WSR (ht)	<p>It’s interesting because Australia as you know Australians have a reluctance with pyramid selling – it’s just got a bad connotation. I was very <i>reluctant</i> dealing with the company because I just didn’t like the culture or the connotations that go along with that. But in the US, that’s just another marketing channel, everyone accepts it. Some of the biggest companies in the US are AMWAY, NUTRILITE are all multi level marketing. Something like one in three consumers buy multi-level marketing products – it’s huge. So, that firm has something like 300,000 or 400,000 people around the world selling their products. And they have a presence in the US, Canada, Australia, New Zealand, the UK, Japan, South Korea, Taiwan, they are opening up in Germany and Denmark shortly. At this point in time they can more or less purchase everything that we can produce. So it was just a nice fit for us. – JH [WSR] <i>‘Initially lacking but later more open to new possibilities’</i></p>
RMW (It)	<p>There was a girl there who was pregnant and she said this stuff is fantastic its great and the sales girl said look the people who run the company are here you know and she said “oh can I meet them”. We were out the back organising all the bags of stock and so we came out and said “hi” and she just loved everything about it and said she wanted to open a store. We thought it was a <i>joke</i> but on her return she opened a shop and we began exporting to them. – Lisa Balakas [RMW] <i>‘Openness to new possibilities’</i></p>
NUD (It)	<p>You know I had a clash with the new investors ...The current management team is very much on the domestic market...Their view is that it is a juice business and that manufacturing, distributing juice is the bread and butter of the business...But you know my philosophy in my view is that it is a branded business and the brand works as well in the United States as it works here and so the opportunity is to licence the brand into the US market. But the power of the licencing model has been proven with the Nestle deal....That happens to be a licencing deal into a new category but it could just as easily of been a new licencing deal into a new country. – Tim Pethick [NUD] <i>‘Differences in openness to new possibilities by two competing parties’</i></p>

In addition to being ‘open’, absorptive capacity involves judgment about what and which information is appropriate to absorb or believe. This is basically the process of information filtering when the firms find and/or are found by new information. The cases reveal that it is easy for individuals and firms to relinquish or misperceive an opportunity without being able to judge the trustworthiness of certain information they encounter [i.e. WSR, 2SP, EMI, and JCS]. The quality of judgment can improve through learning by doing and learning from others. As indicated in Table 6.12b, although consultants advised WSR to pursue a ‘drug route’ which was both costly and lengthy, they showed good judgment by following a US entrepreneur’s advice to pursue a ‘nutraceutical route’ instead, thereby saving the company from severe liquidity problems. 2SP’s ability to see the opportunity in China was related to the founder’s good skills in judging or feeling the ‘vibes’ that the Chinese manufacturer was a good business partner. More case examples are provided in Table 6.12b.

Table 6.12b - Judgment as a dimension of absorptive capacity

Case	Examples of quotes of having a sense of judgment as a dimension of absorptive capacity
WSR (It)	Now we were being advised all the way along by consultants and things that you will not be able to sell any product until you spend \$800,000 on clinical trials. Well we proved them wrong. – JH [WSR] I mean there is health benefits in, there is no doubt about that there is scientific basis to it, but the margins are higher, you don’t have the same cash burn to get product to market, you can launch a product in a short time and you don’t have the same regulatory requirements and all those sorts of things. So that I always remember that little bit of advice (from a successful US entrepreneur). That little bit of advice I wouldn’t have received if that XYZ contract didn’t fall over and I didn’t have to go back to the States and try and try the process again. – JH [WSR]
2SP (It)	So everything was sort of done by word – by introduction of people. Like through his work he knew of the manufacturers in China and then he met them. And I’ve always gone with people I’ve dealt with I’ve always gone with a gut feeling of you know “are they good people or not good people”. There are a few people that I’ve come across which I thought I’m not going to business with them because I just get bad vibes from them. Whereas everyone who I have dealt with and who I remain dealing with, I’ve had a good relationship with. And I believe this particular one company in China that I deal with who is our partner in China are good people. – Robert Heinrich [2SP]
EMI (ht)	In China everyone seems to be a specialist in taking IT companies into China and everyone knows somebody who is the government brother or official or something. It’s hard to know who is real....They’ll assess opportunities in the market on a paid basis. They’ll come and do translation for you, they will advise you culturally on what you should be doing. – David Peters [EMI]
ANC (ht)	So now the 3rd guy (after two consecutive but related failures) with the automobile manufacturer said look I’ll sell for you. I said look I don’t want to deal any more if people are going to – we need to have it clear cut. And since 1997 until now this South Korean has – has been the most honest businessman that I’ve dealt with in South Korea. So this 3rd guy is very honest and would tell us this and this is happening and would give us an account of what markets he could get into, he would tell us when he assigned distributors or re-sellers under him and we are still with him. – Victoria Zafras [ANC]

The cases also show that there is a limit to what individuals or firms know or can absorb and process and that the openness, judgment and creative intelligence of connected others may influence the focal individuals’ or firms’ ability to see and create new means-ends combinations (Wilkinson and Young, 2005). This leads to the notion of ‘distributed absorptive capacity’ as a capacity that lies in the existing and future new ties that may shape a focal firm’s creative intelligence. This suggests an expansion of the operationalization and units of analysis of

absorptive capacity which includes firm relations and networks and how they evolve. The presence of this dimension has been indicated in Table 6.6, 6.7, 6.8 and 6.9 (a, b, c, d) above. As shown in Table 12c, SSW relies on its partner firm's ability to perceive opportunities for them. EMI's opportunities in the UK, Singapore and Hong Kong came from the intelligence of the founder's high level contacts in the telecommunication industry. More case examples are provided in Table 6.12c.

Table 6.12c - Distributed absorptive capacity

Case	Examples of quotes of distributed absorptive capacity
BSD (ht)	Honestly these guys can we make things on an OEM basis – PerkinElmer Life Sciences. So we make a range of those for them – a range of BSD 300 and we make a range of this product which again is called the BSD 500. So those ones that you see down stairs, most of those are going to PerkinElmer Life Sciences that we will batch up for them. And they will bring together our equipment and some other equipment and the agents and the software and all the chemistry and will actually sell that to the neo-natal screening laboratories. So what the neo-natal screening laboratory now buys is a much more sophisticated integrated package than we did 10 years ago. – Allan Morrison [BSD]
BVA (ht)	You follow a certain strategy here which the company in Germany have developed themselves. But it's a method of getting our product into market without being – without having to be concerned about the regulatory framework because drugs are regulated and it can take – if you had to go down the drug route say in the States it can take you five or six years, it can cost you several hundred million dollars. This product – in Australia we call it a complimentary medicine because its based on a plant so we can fast track it into the market as a listed complimentary product without going to this phase one, phase two, phase three clinical trials and spending hundreds and millions of dollars on the thing. That's not available to you in other countries. In the States you have got a fast track for what they call GRAS substances which are GRAS means Generally Accepted As Safe. But it's very hard to get into the market with therapeutics if you want to make claims without going through this drug route. It's very hard. These people in Germany have a model which would take us into the market. We can go to market and achieve cash flow at this stage. Yes which is very fast in this industry. – Peter Johnston [BVA]
SSW (ht)	Each country has got a different culture and when you come from where we are, it's very hard to gauge who is a good dealer or not and how to present your product so that the people can sell it. Because they have these people of different needs in different countries and you have to be able to recognise it and present the product to them in a way which they can understand and see how it fits in their country. Yes it's difficult sometimes to do that. That's where the sales man (their distributor) is very good, he comes up with very unique ways of presenting the product and he's forever making folders and presentations and sample prints and all these white papers describing what the product does and how it does it and all these new things. – Peter Skarpetis [SSW] So you know that part of running the business we left to the sales man because I'm not the kind of person who can do that. I was lucky enough to find someone who was really good at that. – Peter Skarpetis [SSW]

This finding supports Proposition 4 (i.e. absorptive capacity in moderating the relationship between prior knowledge, network ties, IEO, firm resources and international opportunity discovery). However, this study provides new insights on the construct absorptive capacity including the importance of prior knowledge adaptation and experimentation with new ideas, as well as knowledge exchange, co-adaptation and co-production with existing and new ties. The differences between the conceptualization of absorptive capacity suggested in this study from prior research is summarized in Table 6.13.

Table 6.13 - The multidimensionality of absorptive capacity

Meaning	Description	Contributed by	
		This research	Prior research
Openness to new possibilities suggested by the environment	An attitude of openness to the new possibilities suggested by new ideas, knowledge, resources and people/firms	✓	-
Judgment about what to absorb or believe	A sense of judgment about what and which information to absorb or believe and filter necessary in the creation of new means-ends combinations	✓	-
Ability to perceive/make new means-ends combinations from ideas, knowledge, resources that are dispersed across people, places and time	<i>Prior conceptualization</i> <ul style="list-style-type: none"> The ability of a firm to recognize the value of new, external information, assimilate it, and apply it to commercial ends (<i>Cohen & Levinthal 1990</i>) 	-	✓
	<i>Suggested conceptualization</i> <ul style="list-style-type: none"> The ability to absorb, <u>adapt</u>, <u>experiment</u>, assimilate, transform <u>prior</u> and <u>new</u> knowledge, ideas, resources to discover, create and refine new means-end combinations 	✓	-
Distributed absorptive capacity	<i>Prior conceptualization</i> <ul style="list-style-type: none"> The ability of a student firm to develop new capabilities depend on its ability to learn from a teacher firm and its similarity in terms of knowledge bases, organizational structures and compensation policies, and dominant logics (<i>Lane and Lubatkin 1998</i>) 	-	✓
	<i>Suggested conceptualization</i> <ul style="list-style-type: none"> The absorptive capacity of a firm and/or entrepreneur depends on the ability of its <u>extended enterprise</u> and <u>new ties</u> to absorb new ideas, knowledge, and resources to perceive/create new means-ends combinations and how they <u>exchange</u>, <u>co-adapt</u>, and <u>co-produce</u> new knowledge over time 	✓	-

6.3.7. Theme 7: Bricolage in firm internationalization

Much like the founding phase, the cross-case findings show that bricolage is important in marshalling resources under conditions of resource scarcity and in dealing with Knightian uncertainty in the international opportunity exploitation process. Bricolage can include (1) creatively using existing resources and capabilities to limit capital expenditures, and (2) accessing and utilizing the resources of weak and strong ties and creatively combining and recombining them with internal resources. This is to be seen in high and low technology cases as well as novice and well endowed entrepreneurs. As indicated in Table 6.14a, the former can include operating under very tight budget [i.e. RMW, SSW and BSD], not employing any staff [WSS], developing equipment that require minimal service [BSD], multiple tasking in the organization [NKC], doing ‘lego’ engineering or recombining existing resources to create new products and resources [SSW]. Table 6.14b indicates examples of using partner firms’ sales teams and distribution networks [ANC, SSW, BVA, WSR, JCS, SKY, NKC, RMW], outsourcing [WSS], using foreign investors as source of financing [BSD] and borrowing credibility from global firms [EMI].

This offers new insights for Proposition 3, particularly in terms of how firms marshal resources in their international business activities.

Table 6.14a - Bricolage by limiting capital expenditure

Case	Examples of quotes of bricolage by limiting capital expenditures
RMW (lt)	“We compromised that with trying to keep costs down by manufacturing it ourselves. ... not afraid or shy of doing that, we have always been very cost conscious, probably from our roots where we did everything on a shoe string you know in the back of one of my physio clinics when we started and so everything was on a shoe string. Lisa and I didn’t take a wage for the first 2 years and then after that we took \$150 a week probably for the next 2 years. So that type of philosophy is still within the business and so we do things price minded manner.”- Lisa Balakas [RMW] – <i>Operating under “shoestring” budget</i>
WSS (lt)	“This business doesn’t have any employees and I wanted to stay away from organizations that required a structure that required lots of employees. I also don’t want any infrastructure. I don’t want to have to manage people. I had 150 senior project managers in my last business and it was a nightmare. And that was part of the process of evolving into a product based business was that the brand itself you know eventually this will get bought by Fosters or somebody because of the market position we have.” – Ross Bennie [WSS] – <i>Using Outsourcing model</i>
BSD (ht)	<p>“If you are going to be successful internationally you need to find – you need to develop a piece of equipment that requires minimal service. Otherwise, the cost of the servicing – the cost of overseas servicing even in the first 12 months will kill you. And after the warranty is over and your customer has to pay for that service, if that cost is exorbitant, he is not going to – you are going to lose sales. People will not buy your equipment if it’s difficult to maintain. So that’s – it seems like a pedantic conclusion, but in reality that’s the difference between success and failure” – Allan Morrison [BSD] – <i>Manufacturing equipment with minimal service requirements</i></p> <p>“Most of the people in this organization have to wear at least 2 hats every day. You know they are all doing multiple jobs every day and that’s a major issue. So you have ... and for about 2 days everybody working at about 100% but then you are still growing and over the next 6 months everybody will have to shoulder some more responsibility and then you can get to a point when you can justify another person, so we will put that person on. So you are always chasing your tail.” – Allan Morrison [BSD]</p>
SSW (ht)	<p>“At that time (during the exploration of the US market), I lived on a suitcase, had little money, and slept in and on airports and bus and the railway station” – Robert Murphy [Partner firm of SSW] – <i>Operating under tight budget</i></p> <p>“Now we have this huge base of software and millions of lines of codes that we have written, so when we want to do something new it’s very easy, we have got Lego engineering, because you have all these things that can do things and then when you want to do some new fancy feature, you actually just plug in together all these things that you have already written. But to the customer or the user, it looks like a new feature but you have just put these things together differently. It’s like if you are at home you have all the ingredients in your kitchen you can make anything using the same ingredients that you have but people think it’s something new.” – Peter Skarpetis [SSW] – <i>Relying on Lego engineering</i></p>

Table 6.14b - Network bricolage

Case	Examples of quotes of network bricolage
ANC (ht)	<p>“Never. We’ve never had sales personnel. The international market has. They (distributors) have had their own sales people.” – Victoria Zafra [ANC]</p> <p>“If there is no representation there because it’s – how can I say it – if a customer wants something you have ... selling to an individual person, there is no stock in that country. They would have to come to me and I would have to export and that would actually drain us because we don’t – like I say we keep our overheads low.” – Victoria Zafra [ANC]</p>
WSS (lt)	“This is an outsourcing contract business, we don’t own the land, we don’t own the spring, we don’t own the plant, we just sub-contract it.” – Ross Bennie [WSS]
BSD (ht)	“The US guy was travelling out here and he had dual citizenship – he was also an Australian and introduced to me by his accountant and he invested a small amount of money into the business – really just to see what would happen. And about the same time about a year later, I had met an Indian guy – an Indian businessman who became a friend of mine, he also had a small amount of shareholding in the business. Each of these guys had 10% or 15% of the business and my Indian friend has stayed in the business. Then in about 1997 we got some – we attracted the interest of 3 overseas ... some overseas people who wanted to migrate to Australia and did what was then called a business migration programme and they were looking for things to invest in. And so we had 3 of those people come into the business. But then a year later we actually did then sell some shares again to a US colleague of mine who is in a complimentary field of business. And then also after that a local surgeon here in Brisbane who I met also asked if he could invest in the company. So, those two parties each have about 20% of the business in their hands. So the structure of the business has sort of moved a little bit in time. But obviously the reason for doing that has intervened because of the need for funds to grow and/or in the case of my US – current US – shareholder and director there is a very good strategic alliance there in terms of the things he can bring to the business in terms of his knowledge about what’s happening in the market place as well” – Allan Morrison [BSD]
SSW (ht)	“So we left the early running around to the sales guy (the partner firm) who was very competent. So he would just run around and knock on doors. So you know that part of running the business we left to the sales man because I’m not the kind of person who can do that. I was lucky enough to find someone who was really good at that.” – Peter Skarpetis [SSW]
EMI (ht)	“We did partner with Hong Kong Telecom with Accenture who is one of the big 5 consulting firms and they basically sat along side us and I think one of the reasons we won the business there was that there was a bigger company sitting beside us and partnering all this and they participated in the project with us and gave Hong Kong Telecom the ... you know working with a bigger player than a small Australian company.” – David Peters [EMI]

6.3.8. Theme 8: Effectual and causal reasoning in internationalization

The cross-case findings reveal that the logic of decision making in *early stages* of internationalization is consistent with the effectual and affectual reasoning, non-predictive approaches (Sarasvathy 2001; Wiltbank et al., 2006). That is, when facing complexity and Knightian uncertainty in international markets (i.e. the unknowable prevails), boundedly rational actors leverage contingencies, act opportunistically, rely on affordable loss thinking rather than expected return, form partnerships rather than competitive analysis, and conduct experimentation. Given the nature of uncertainty, being flexible is critical and, indeed, plans can be constraining given the effort required to develop them. The cases reveal the evidence of non systematic evaluation and clear choice criteria so that feeling and emotions play more of a role than rational calculation. Leveraging contingencies are prevalent, for instance relying on those the firms has happened to meet or who found the firm (i.e. new ties), those to whom they have access (i.e. prior ties) and those who are introduced to them (i.e. prior ties' ties and new ties' ties). Although leveraging contingency has good and bad aspects, it seems that the firms did this due to the extent of unknowns and the role of emotions and feelings in the decision to act, and the way alternatives are created rather than evaluated. This cuts across the 15 cases in high and low technology sectors. The cases also reveal that the propensity for effectual and affectual reasoning in the early stages of internationalization was observed across firms operated by novice [i.e. 2SP, ANC, EMI, RMW, SSW and SKY] as well as expert entrepreneurs [i.e. BVA, BSD, JCS, KEA, NUD, NKC, WSR, OPO and WSS].

None of the firms in the early stages of internationalization waited for the most lucrative, or evaluated alternative international opportunities, but pursued the opportunities they first found, i.e. 'take the first' heuristic (Gigerenzer et al., 1999; Gigerenzer and Selten, 2001) by stopping with the first opportunity that satisfied an aspiration level or was considered good enough, i.e. satisficing heuristic (Simon, 1982) [i.e. RMW, KEA, NUD, 2SP, ANC, SKY, EMI and SSW]. Other types of fast and frugal heuristics (Todd, 2001) were also used including the heuristic that makes decisions by 'taking everything' that comes [i.e. EMI, OPO, SSW, and SKY]; recognition heuristic [i.e. WSS, BSD and NKC], i.e. when choosing between two objects, if one is recognized and the other is not, then select the former (Goldstein and Gigerenzer, 1999; Gigerenzer and Goldstein, 1996); heuristic that relies on 'taking the easy path' [i.e. SKY, JCS and BVA]. This shows that early stages of the internationalization process follows automatic, spontaneous, effortless, heuristic processing, highly socialized and contextualized type of reasoning; rather than analytic processing, laborious, slower, and deliberately controlled reasoning (see Stanovich and West, 2000; Kahneman and Tversky, 2002, 1979).

The cases reveal that effectual and affectual reasoning is not always effective and can also produce *biases* and *errors* in decision making. These biases and errors were evident throughout the 15 cases, although some firms generated more of these than others. This is evident in the ANC and KEA cases where a chain of false starts occurred when the firms signed up foreign business partners on the basis of who they happened to ‘meet first’ and then snowballed through the partners’ social and business networks. SSW made almost instantaneous decisions by signing up (nearly) any international distributors that found the firm or that they happened to meet in conferences. They later found that many of these distributors were non-performing and unreliable. SKY signed up a Hungarian IT firm as its distributor without hesitation simply because they were found by the other firm. It was clear that the distributor’s expertise was not in SKY’s core business, i.e. SAP market, however they went ahead and later realized that they made an poor decision. This is consistent with an important body of work that show how heuristics produce biases and errors (i.e. Tversky and Kahneman, 1974, 1981).

The propensity for effectual and affectual reasoning were influenced by joint interactions with prior and new ties who also exhibited a propensity for effectual and affectual reasoning. As indicated in Tables 6.6, 6.7 and 6.8 above, prior and new ties did not really make plans but interacted with the focal firms effectually and affectually in the internationalization process. These *effectual and affectual networks* are based on socio *and* economic interest, which *emerged* and was not designed or planned by the parties involved. These effectual and affectual networks, in addition to the focal firm’s propensity for effectual reasoning, may explain the dynamic and irregular patterns of internationalization shown in Table 6.6, 6.7, 6.8 and 6.9 (a, b, c, d) above. This has implications on the sequence, timing, location and mode of entry in internationalization including early internationalization, unstructured order of international market entry, non-linear patterns of location and entry mode decisions (this will be explained in the next section). Table 6.15 (a, b, c, d, e) provide examples of the dimensions of effectual and affectual reasoning in early stages of internationalization.

Table 6.15a - Leveraging contingencies

Case	Examples of quotes of leveraging contingencies
KEA (It)	“Well to be honest with you, we were so busy for the reasons that I just said. Just supplying what we could sell, it’s no good looking out there. I mean it doesn’t mean we didn’t have a vision and think “one day”, but my small success has been you know lets look after the people that we have got first. I don’t have to tell you how much it costs to get a new customer against what it does to retain an existing one. So no that was just something that I <i>never even dreamed of and just kept working on because they came to us.</i> ” – Mick Erwin
WSS (It)	“They (Austrade) can facilitate a lot of contacts...it wasn’t the guy I was supposed to meet (Taiwanese 7 Eleven Head Buyer), but what the hell you know, <i>he was there, I was there let’s do a deal</i> ” – Ross Bennie
EMI (ht)	“Well I would like to say I picked them but we didn’t have frame of reference you try to go for everything and you win some and you lose some you know. So we were just <i>pushing hard to try and win every opportunity we could</i> ” – David Peters
NUD (It)	“And so the whole fuss was really in terms of our international push was to find a manufacturing partner or licence the brand and Hong Kong and Singapore were just sort of <i>opportunistic incidentals</i> really” – Tim Pethick
RMW (It)	“It often just depends on <i>what comes first</i> and how the relationship was established” – Lisa Balakas
JCS (It)	He wasn’t a monk or anything, he was a lay person but he very much loves that life of the yoga and the discipline of yoga and stuff. And I met him at a what was called a retreat or an intensive and we got chatting and that’s how it happened really. It was fate and I knew that he had the skills of people skills...That he had this little bit commercial real estate back ground and that certainly something which is important. As I said to you before, we are not in the hair business, we seem to be in the real estate business trying to find sites to match up with people. So that’s how I met Scott. <i>Very much prompted by the style of man he was</i> – Dennis McFadden
OPO (It)	“Well in business we never say no (to opportunities)” – Antonio Cerqueira

Table 6.15b - Being spontaneous and flexible

Case	Examples of quotes of being spontaneous and flexible
SSW (ht)	“ <i>It’s an instant thing</i> but there isn’t any driving logic behind it, there is only boldness or not boldness. So it’s hard to quantify this. It’s like being a computer person you have all this data and the answer just pop up in your head bit it’s all based on logic. So there isn’t any greed or business decisions behind it, it’s one that makes sense” – Peter Skarpetis
WSR (ht)	When I first went to the US 3 years ago to try and market our product, I met with a consultant in California who started off as a medical doctor and then he got into health food and dietary supplements and things, he was about 38 years of age and he well I’m guessing is probably worth about \$20-\$30 million dollars and he was very enlightening. He said to me that “Paul whatever you do, just remember, there is more money in dietary supplements and nutritional supplements in the US than there is in high end bio-technology, just always remember that. – JH – <i>Being flexible to switch from drug to nutraceutical route</i> ”
ANC (ht)	We weren’t following a strategy based on salesman 101 this is how you got to approach them” – Victoria Zafras
EMI (ht)	It’s very difficult to go and say you know these are the criteria and put them into google and you find the reseller you want to work with. This one in India came through one of the sales guys who has worked with them in a previous life and sold through them into Sri Lanka and sold them some multi-million dollar Telco systems. He knows the Chairman, he knows them well, he made the introduction and they are getting on alright. So really that looks like a really good relationship. And that’s come through personal referral and contacts. So we just keep our eyes and ears open. – David Peters In business case anything to death so if you analyse it too much, you’ll never do it and once you have started a company there are opportunities that come just because you have started. I have often thought about starting a company – it wasn’t until I actually started that when the opportunities would come. – David Peters

Table 6.15c - Affordable loss principle rather than expected return

Case	Examples of quotes of affordable loss principle than expected return
RMW (It)	“So see the big picture. ... include ... have the losses because we probably never would have because we are so risk averse, often we ... you know 2 years of no profit, I don’t think we could have done that. But certainly on the smaller scale, don’t be afraid to <i>make a small loss to fulfil your promise</i> because otherwise you have got no future there....But in the beginning you couldn’t say to that customer “oh sorry the freight is going to be too much”. Because they are not paying for the freight we pay the freight.” – Lisa Balakas
BSD (ht)	“It was a very difficult time and I was still running my management consulting business in parallel with that probably through until about 1999, 2000 maybe 2001 and every dollar of income that I earned in the other business was <i>thrown into this black hole</i> called BSD and there was not a day that you didn’t wonder whether you would ever see any of that money again. Literally, probably for 8 or 9 years, it was a consumer of funds and in retrospect you know” – Allan Morrison
SKY (ht)	“We won Star Hub in Singapore which was an implementation in Singapore. That required at least 20 trips on the plane up and back and again we didn’t make any money of that software implementation – we put the software in there, ran a pilot for them and it was probably \$350,000 worth of work and we had spent – definitely spent - \$350,000 to win it and to implement it and to get it up and running. But we had another reference site which was good.” – David Peters

BVA (ht)	Some of the research that we do costs hundreds and thousands of dollars. Do we do it or don't we do it. You might go and spend a quarter of a million dollars on some research and you <i>may get no return out of it</i> . You might find – and we have been down this track – you might find that you complete it and realise that you should have never have done it. It's the nature of the animal. ... you don't find out until you finish and it's very, very hard to assess sometimes whether or not you are doing the right thing but as the saying goes I mean you can – when you go down the track like that making decisions as to whether you go to market at a certain stage or you don't. – Peter Johnston
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Table 6.15d - Partnership and alliances rather than competitive analysis

Case	Examples of quotes of the role of partnership and alliances
SKY (ht)	<p>“We were basically just dealing with them for East Central Europe and they basically saw the potential and have opened the UK subsidiary mostly in part based on potential for our software. So we just <i>took the easy path</i> basically. Rather than find someone else, we were pursuing several people, we thought well why would be bother.” Ian Lowles</p> <p>“The better the network, the better. I mean you can't open doors into like SAP markets without knowing people. Again you may have the best idea in the world but you are not going to sell it unless you know you have got the networks to do that and that was key to us and then you know with Ian (the CEO) coming on board added a totally new dimension for Sky.” – Stephen Ware</p>
BSD (ht)	“And our piece of equipment will talk to the equipment that is put out by PerkinElmer or somebody else. So that's the way in which in we have come into this strategic alliance.” – Allan Morrison
RMW (lt)	Their role is important I mean they can have a lot to do with your success and your growth also because you put a lot of trust in them to sell your brand and also to do the right thing by you because if another label was to come up and offer them a better commission or something, they might put your brand to the back seat and push someone else's product. So it's very important to have good agents. – Lisa Balakas
WSS (lt)	I think that's the other thing that most exporters or organizations fail to recognise is the ability make contacts, how to make them and how to develop relationships which is why you know we are looking at all these other products is because we have developed very long and deep relationships even though for instance Sainsbury doesn't born anything yet, I talk to him once a week. – Ross Bennie

Table 6.15e - The role of emotions and feelings in decision making

Case	Examples of quotes of the role of emotions and feelings in decision making
2SP (lt)	“I just thought this just happened, I didn't sit down and plan it...I think my main business sort of thing is that I just go with a <i>gut feeling</i> ... if something feels right well then lets do it but if it doesn't feel right then don't do it, that sort of whether it's making a deal or designing or manufacturing a certain style or whether it means working with someone you know like a business partner or whatever, that's just sort of the way I operate.” – Rob Heinrich
ANC (ht)	It was not a business decision (of entering the New Zealand market) – it was not a big market but a good source of income. It was more of <i>emotional ties</i> with the 77-year old engineer” – Victoria Zafras
JCS (lt)	And in the case of Scott, there would be other Scotts around. Not necessarily with a lot of money – that's not where I'm coming from. If you have a lot of money, that's fine. But it is very much a personality and someone that we could work with. I can get on the phone to that guy and have a <i>heart to heart relationship</i> , good talk to him. He's very amiable. He is not pliable but you know he looks to us for advice and doesn't go off too much – well he doesn't go off at all. He always checks with us. So that model I know, I don't know any other models.” – Dennis McFadden
WSS (lt)	“You know people say I'm really brave and I'm really you know I come really stupid at times too, I just don't think you can actually put a value on anything more than <i>the drive and passion</i> and a part of that is almost self destruction to a degree, it's the ability to risk – to accept risk, welcome risk and understand that to grow you have actually got to make mistakes and I've made so many mistakes in all my businesses – fortunately none of them too fatal but to learn from them and not be discouraged and actually welcome the fact that you have you know you've fucked up ok great, ok I'll learn from that and I won't do it again.” – Ross Bennie
NUD (lt)	“My personal view is that people need to be very careful of formal market research...my experience is that one of the great advantages of entrepreneurial businesses have is that they can operate far more quickly, flexibly, react to market conditions I guess more nimbly than a large organization can...to do that you need to <i>rely to a large extent on intuition</i> ...I am not a great believer in business plans for start ups” – Tim Pethick

Over time, as firms learnt more about what they did not know, experience directed their attention to certain issues, goals and options; their preferences were better defined; their resources and network ties were further developed and opportunities more refined (i.e. known unknowns develop); and the nature of decision making increasingly followed causal reasoning and rational planning [i.e. EMI, SKY, OPO and BSD]. In this context, firms tend to establish and use clearer criteria in opportunity evaluation, opportunity costs become an issue, less profitable/potential opportunities are pruned in favour of more attractive alternatives, it becomes easier to predict the market, and professional managers and CEOs are hired to further refine opportunities. Professional managers have important roles to play in the transition to causal reasoning [i.e. OPO and EMI], supporting prior research of the differences between managers and entrepreneurs (Busenitz and Barney, 1997; Smith et al., 1988). Firms also became more ‘selective’ in terms of who they plan co-exploit opportunities with, i.e. terminating relationships with non-performing and unreliable partners; and developing relationship with more attractive partners. This turns the firm networks and relationships from those based on social and economic ties into ones of economic and calculative ties [i.e. EMI, SKY, OPO, BSD and BVA]. Systematic experimentation was not carried out at the outset due to Knightian uncertainty but became more prevalent at the later stages of growth when problems, opportunities, goals and options became clearer.

For example, SKY progressively relied on rational planning after early market experience in Asia, Europe and the US, particularly after a CEO was hired to plan the firm’s expansion. OPO made plans to develop larger opportunities in the US and China at the later stages when a CEO and professional managers were hired. BSD progressively focused on large opportunities with global firms such as Perkin Elmer, Whatman and Roche. The founder of BSD explains how they were able to forecast market preferences (i.e. relying on the logic of prediction) for neonatal screening and HIV testing instruments after many years of learning in the international markets. Allan Morrison [BSD] explains:

“One of the strategies that we have in the business as we were talking about earlier is to attempt to forecast – to look ahead at the market place and see what’s happening and the way in which the market trends are emerging to try to predict the sort of equipment that will be useful in the market place and that will be valuable in the market place.....Because we are specialised in this field of dried sample handling, our objective is to try and forecast what they want at least 2 years before they know they want it. And that has worked for us for the last 10 years and I think it’s working for us still”.

More examples of causal reasoning and rational planning in the later stages of internationalization are provided in Table 6.16a.

In a number of cases [i.e. ANC, WSS, NKC, RMW, WSR, SSW, and JCS], firms increasingly became more ‘selective’ with regards to opportunities, preferring more attractive opportunities, but still relied on shortcuts and heuristics in the decision making process. This ‘*quasi-causal*’ reasoning reflects the way that firms respond to new contingencies and opportunities, and interact effectually and affectually with their network of stakeholders while simultaneously finding and exploiting the more refined and lucrative opportunities. This is nicely illustrated in the SSW case, who began to search for more OEM partners after its success in developing OEM opportunities with Fuji Japan. While the firm did not conduct rational planning they became more selective in terms of the opportunities they pursued, simultaneously leveraging contingencies whenever appropriate. EMI increasingly relies on causal reasoning, using systematic evaluation and criteria for opportunity and partner selection while still following effectuation processes. David Peters [EMI] explains:

“It’s very difficult to go and say you know these are the criteria and put them into google and you find the reseller you want to work with. This one in India came through one of the sales guys who has worked with them in a previous life and sold through them into Sri Lanka and sold them some multi-million dollar Telco systems. He knows the Chairman, he knows them well, he made the introduction and they are getting on alright. So really that looks like a really good relationship. And that’s come through personal referral and contacts. So we just keep our eyes and ears open.”

More examples are provided in Table 6.16b. The ‘*quasi causal*’ reasoning also turns firm networks and relationships from socio-economic ties in the early stages of internationalization towards more calculative or economic ties in the later stages. This is well illustrated in ANC case, who terminated a number of non-performing distributors in New Zealand and Fiji who were personal friends, as well as its Malaysian distributor, and progressively focused on developing calculative ties with its South Korean and UK distributors. NKC terminated its non-performing distributors in France and Italy in the later stages and became increasingly results-driven. Brian Dolling [NKC] explains:

“No I don’t think they did try. I think they just said yes we are trying very hard but in the end they didn’t sell anywhere near enough so we had to say well I’m sorry we have to make a change. We made the change and the new guy is selling 10 times what they were selling. So selecting the right agents is a big problem.”

One firm [i.e. KEA] showed a consistent propensity for effectual and affectual reasoning through to the later stages of internationalization. This may reflect the role of routines, habits and inertia in decision making, in other words, the role of new contingencies and possibilities and the influence of effectual and affectual networks that continuously found the firm and that the firm found. Two firms [i.e. 2SP and NUD] were only at the early phase of

internationalization so no inferences can be made about their mode of reasoning at the later stages.

The cases also suggested that firms can learn from others about criteria and factors in assessing opportunities, just as opportunities can be discovered through and created with them. For example, the opportunity assessment leading to the second OEM brand in SSW came from its distributor Fuji Japan. Similar events occurred in WSR, whose assessment of opportunities in the pharmaceutical application of its seaweed extract came from a new tie, i.e. the Canadian pharmaceutical company.

Table 6.16a - Systematic opportunity evaluation and rational planning

Case	Examples of quotes of systematic opportunity evaluation and planning
EMI (ht)	<p>“We have got 4 or 5 <i>partner criteria that we evaluate against</i>. It’s a combination with desk research. So now we sign a Teaming Agreement on an opportunity by opportunity basis. So say you are sitting in China and we have got a relationship and they say “I’m going to take you into China Telecom”, we say “alright”, assuming I’ve sussed you out that you are a good company to work with, we will sign that Teaming Agreement with China Telecom and with a 6-month period around it and I say “yes, that’s yours go for it, if you get them, then we will write you in to the contract and you will get your commission which will be a percentage of whatever the value of the contract is, if after 6 months you haven’t done anything, then that lapses – so it’s open again”. So on a country by country and case by case basis, we’ll engage and then based on the results we will engage more deeply. So that is essentially the model that we are using.” – David Peters</p> <p>“We will be conducting some strategic planning to determine what the correct strategy should be....I know it is not realistic to try and do everything” – David Peters</p>
RMW (lt)	<p>“Yes I think after our entry into the United States and we became a quite serious exporter so from that time everything was different. Every time you enter a market now it’s <i>much more calculated and a lot more research is done</i>” – Lisa Balakas</p>
OPO (lt)	<p>“We have a financial controller he has a system to do the calls, he has got a system ... franchisees, when they send it back the form, we see the form to see if it is enough to call him for interview, we call them and the financial controller has a few meetings and ... he ... do it and the guy has checked his background ... he thinks he is a good franchisee, he will pass to operations and to do the training and to me and the CEO, Jeff Fisher. And we do it together. We have 2, 4 or 5 people all together to interview the franchisee and between ourselves, us to have to choose the franchisee ... whether he is good or not.” – Antonio Cerqueira</p>
SKY (ht)	<p>“So it was really I suppose the biggest thing was that it was a learning curve. Came back, re-thought our business plan and were patient enough to say “right ok we’ll keep that going but you know we really need another 2 years to consolidate ourselves and get a proper structure....I think you know so our 2nd foray is sort of going into Europe but we’ve got – you know we have got <i>a lot more structure and a lot more thinking</i> behind what we are doing here. We knew to do this properly we need to people over there, we need to get the investment to fund that. So that’s happening right now.” – Stephen Ware</p>

Table 6.16b Opportunity costs and opportunity selection

Case	Examples of quotes of the role of opportunity costs and opportunity selection
SSW (ht)	<p>He (the CEO of partner firm) goes and visits them, he checks out their operations and talks to some of their customers, looks at their engineers, see how good the support infrastructure is and if they look like they are intelligent enough and can handle it, then we sign them on. <i>We no longer sign people on just to sign them on.</i> We no longer have the need for cash flow – we are doing quite well so we can be very selective now because in the past we found a lot of the distributors that we signed had no support infrastructure so as soon as a customer had a problem they couldn’t help them.” – Peter Skarpetis</p> <p>“We are becoming <i>very selective</i> because of the lessons from past distributors” – Peter Skarpetis</p>
WSR (ht)	<p>“In terms of our philosophy and our strategy as to where the company goes, what I want to do is have for every one of these contracts with say Enzyme Bioventura which is like selling nutritional supplements or nutritional supplement ingredients, I want to have a pharmaceutical contract in place. It’s almost like diversifying your portfolio if you like. One gives you the cash flow and the income and it’s always going to happen and the other one is more speculative which if it falls over, you are not going to be too disadvantaged but at the same time if you hit the jackpot, then you hit the jackpot. So there is a slight balancing portfolio if you like”. – JH</p>
SKY (ht)	<p>“You have got to be <i>very careful not to commit yourself to any one company</i>.....They (HostLogic) were not in our business – they were in the hosting systems.” – Stephen Ware</p>
EMI	<p>“So with sales and with small companies – I see it all the time you know an opportunity comes up which is way out of</p>

(ht)	left field and because there is \$10.50 ... associated or \$1,000 or whatever the number is, companies get diverted and they spend 2 weeks on that. Well you only get 50 weeks in a year – 48 weeks if you take holidays, so 2 weeks that's 5% of your year gone chasing something that is not in line with where you want to go. So there is a real balance because you have <i>got to have focus</i> on what you are good at and where you are going and you also can't ignore opportunities and what we are doing now is we have a <i>very clear focus</i> on what we do and over the years we look at the full picture of that industry and say there are a few other things around us that we don't do but that company does and that company does and that company does." – David Peters
BSD (ht)	I think then there is the question of obviously the use of trade shows and being very, <i>very careful about what trade shows you go to</i> . And if you can go to the right trade show and have the right approach in terms of strategy of who you want to meet, define your targets so and say well we want to meet this guy and we want to convince him that our equipment is what he wants to buy. Before we go we have a bit of a strategy as to who we are specifically going to try and target and what we specifically are going to try and do. If you can do that and do that successfully, then you have got a big chance of success. – Allan Morrison

The influence of effectual reasoning can be seen in the geographical distribution of international markets that were entered in the early stages of internationalization. They tend to be random and appear to defy the logic of psychic distance. As indicated in Table 6.7 above, the *location* of the early stages of international market entry was primarily influenced by [1] the location of prior ties in foreign markets (i.e. BVA, SSW, JCS, and EMI), [2] the location of the new ties that found the focal firms (i.e. ANC, NUD, WSR, KEA, 2SP, SKY, OPO, and RMW), [3] and reliance on fast and frugal heuristics (i.e. BSD prefer the US due to the recognition of the US as a leading market for neonatal screening and biotechnology; NKC prefer France and Italy because of their dominance in the wine markets; WSS prefer the UK market due to its familiarity with Australia). This provides more support for the Network Perspective than the Uppsala Model in terms of the location of internationalization. Below are selected quotes regarding the sources of influence on each firm's location of internationalization in the early stages.

"The scientist who discovered this thing [who was the co-founder], he has been involved with a number of other projects and had done some business overseas [including Germany] and he introduced us to the German people." – Peter Johnston [BVA] (*The influence of the location of prior ties in internationalization*)

"Someone from Dubai visited Australia who is an Australian citizen who is now living in Dubai came back to Australia on a holiday and saw our product and was pregnant and wanted to open her store. So that was a very personal way to begin business, an export business... so we supply – we continue to supply to Dubai through that relationship that was established about 6 years ago" – Lisa Balakas [RMW] (*The influence of the location of new ties in internationalization*)

"It was easy. We said we need to be best friends with the top 20 winemakers in every wine-making country of the world. We knew what our target market would be – to the wineries" – Brian Dolling [NKC] (*The influence of heuristic in internationalization*)

Table 6.8 indicates that prior and new ties also play important roles in determining the firm's subsequent location and the sequence of internationalization. This is observed across the 15 cases in high and low technology sectors. The table also indicates that in the later stages of internationalization, a number of firms conducted more intensive and systematic opportunity

search and development in countries where they could pursue more lucrative opportunities, i.e. towards more causal reasoning [i.e. WSS, SKY, OPO, BSD, and NKC]. This includes more intensive development and refinement of opportunities in the lucrative East Asia and Middle East's mineral water markets [i.e. WSS]; major SAP market in the US [i.e. SKY]; major fast food markets in the US and China [i.e. OPO]. This supports the Eclectic Paradigm's Locational (L) Advantages in explaining the location of internationalization; while providing further support for the Network Perspective. The following examples nicely illustrate how the choice of location of internationalization in the later stages is based on the reasoning to optimize opportunities:

"We are now at the stage where we are expanding into Europe and that's why we are raising investment for is to actually get our people over there. Our market is 99% off shore – the potential, so in Europe and the USA are the big markets for our product. So, as Ian mentioned we found distributors in Europe and we have distributors running in Asia for some time now successfully and we are looking at the USA after that". – Stephen Ware [SKY]

"You know realistically at a global level, you know the global water business is about a 40 billion dollar a year business. We believe we can probably grab this business in the next 3 – 5 years to about a 50 million dollar turnover conservatively. You know it just depends on the big volume markets like Japan and Taiwan and the Middle East. The UK is not that big a market from a volume perspective but it's quite strategic. Let alone the US which is also very competitive we see the Asian, Middle East markets as being a, they are highly profitable – a lot more profitable than anywhere else and b, the Australian story seems to work a lot better over there as well. So that's where we see our real revenue stream's coming from" – Ross Bennie [WSS]

As indicated in Table 6.17, the *mode of entry* in the early stages of internationalization is influenced by effectual and affectual reasoning and bricolage thinking and interactions with the firm's effectual and affectual networks. In the early stages, firms dealt with Knightian uncertainty, ill-defined goals, options and preferences by using modes that offer some degree of control, i.e. the logic of control rather than prediction, such as partnership and alliances (e.g. distributorship) [i.e. NKC, SSW, ANC, BSD, SKY, RMW, 2SP, WSS, and NUD] and which conserve resources, such as exporting [i.e. NUD, KEA, RMW, and BSD]. None of the firms in the cases used greenfield or foreign direct investment in the early stages of internationalization. Table 6.17 shows that a firm's decision on mode of entry was based on [1] co-evaluation and co-adaptation with existing and new ties [i.e. 2SP, RMW, SKY, WSR and BSD], [2] fit with the nature of opportunity, e.g. projects for service business [i.e. EMI and BSD] and [3] network bricolage, i.e. tapping others' existing distribution networks [i.e. NKC, SSW, BVA, RMW and 2SP], and [4] extension of existing business models as an 'easier' and more familiar way to internationalize, e.g. franchising model [i.e. JCS and OPO]. This cuts across the high and low technology cases. Formal analysis of modes of entry can be time consuming and use up more resources for some firms so they tend to begin with modes that are simpler and easy to understand or do. This is demonstrated in ANC and 2SP case. When asked why other modes,

apart from distributorship (such as licensing) were not used, the founder of ANC said: “*No. That’s too complicated*”. NKC used distributorship because the founder was familiar with the mode in prior businesses and believed that distributorship was more effective than other modes. 2SP’s choices for retail partnership and franchising modes were based on suggestions made by the Chinese partner on whom 2SP relied for their knowledge of the local market. Rob Heinrich [2SP] explains:

“The Chinese company approached us and said you should open a store in China and do you want to be a partner in it.....To use franchise? Our Chinese partner suggested it that it would be a good way of getting the product out there because she is convinced it will sell so well which is a low cost, no initial outlay for us except for (confidential)... It’s good for her because she manufactures the goods”.

As indicated in Table 6.17, a number of firms switched to higher-control/return/risk mode in their important markets at the later stages of internationalization, such as foreign direct investment based on the refinements of prior opportunities [i.e. NKC and ANC]. Other firms continued using cooperative modes but opportunities and business partners were more carefully selected [i.e. SKY, RMW, JCS, ANC, EMI, and SKY] and/or upgraded to cooperative mode with a higher degree of control/return/risk, such as Original Equipment Manufacturer (OEM) [i.e. SSW and BSD]. However, firms also used new types of entry modes, regardless of their degree of control/return/risk, to suit new circumstances and shifting conditions as they co-adapted and co-produced new opportunities with existing and new ties [i.e. BSD, WSR, EMI, SSW, KEA, 2SP]. This is nicely illustrated in BSD case. Although BSD increasingly focused on OEM mode, the firm co-created new cross-licensing opportunities with new ties while still using distributorship and exporting as main modes. These explain the regular and irregular changes of entry modes over time. Table 6.17 also indicates that, as existing opportunities are maintained (and terminated) over time and new contingencies leveraged, firms had *multiple* opportunities and modes of entry at any one time [i.e. NKC, SSW, ANC, EMI, BSD, WSR, RMW and KEA]. Therefore, there is compelling evidence that shows that effectual reasoning influences the use of multiple modes of entry.

Table 6.17 - The Dynamics of Mode of Entry Over Time

Case	Entry mode in <u>early stages</u> of internationalization & Reasons for using particular mode	Entry mode in <u>later stages</u> of internationalization & Reasons for using particular mode
NKC (ht)	(1) <i>Distributorship</i> [tapping existing wine distribution networks worldwide; familiarity with distributorship from previous venture experience]	(1) <i>Foreign Direct Investment</i> [fulfilling the growing demand in the US and European market and for faster time to delivery] (2) <i>Distributorship</i> [maintaining existing distributorship; requests by new distributors]
SSW (ht)	(1) <i>Distributorship</i> [tapping the pre-existing Fuji and Dupont distribution networks; requests by new distributors]	(1) <i>OEM</i> [fulfilling large distributors' desire to create new brands for new market segments; take advantage of the resources of the OEM partners] (2) <i>Distributorship</i> [maintaining existing distributorship; requests by new distributors]
ANC (ht)	(1) <i>Distributorship</i> [easy, not complicated, avoid carrying stocks; requests by new distributors]	(1) <i>Quasi-FDI</i> , i.e. ANC Korea [fulfilling growing business and relationships with the Korean partner] (2) <i>Distributorship</i> [maintaining existing distributors; requests by new distributors]
EMI (ht)	(1) <i>Consulting</i> [fit with the nature of opportunity, i.e. syndicated research] (2) <i>Project</i> [fit with the nature of opportunity, i.e. short term software implementation]	(1) <i>Reseller/Distributorship</i> [learning from experience that local resellers are needed to provide good service] (2) <i>Joint Venture</i> [wanting to re-pursue the syndicated research but has limited time/manpower] (3) <i>Project</i> [learning that project offers more revenues than consulting and take up less time to travel]
BSD (ht)	(1) <i>Exporting</i> [target markets are hospitals and labs] (2) <i>Distributorship</i> [requests by new distributors]	(1) <i>OEM</i> [fulfilling large distributors' desire to cover different market segments; to collaborate not compete] (2) <i>Cross-licensing</i> [opportunity to create new technology by exchanging and adapting to others' technology] (3) <i>Distributorship</i> [maintaining existing distributors; requests by new distributors] (4) <i>Exporting</i> [target markets are hospitals and labs]
WSR (ht)	(1) <i>Licensing</i> [fulfilling the US global distributor's desire to be an exclusive buyer of the firm's seaweed extract for a long term]	(1) <i>Product development contract</i> [fulfilling a special requests for a 15 year contract with a pharma company] (2) <i>Licensing</i> [maintaining the licensing business]
SKY (ht)	(1) <i>Reseller/Distributorship</i> [request by a new distributors; building reference site in Asia]	(1) <i>Reseller/Distributorship</i> [requests by new distributors; maintaining existing distributors]
BVA (ht)	(1) <i>Licensing</i> [easing the process of sending the ingredients and for the licensee to re-hydrate into creams under the firm's formulations]	(a) <i>Licensing</i> [maintaining ongoing licensing business]
RMW (lt)	(1) <i>Exporting</i> [requests by interested importers] (2) <i>Agent/Distributorship</i> [tapping existing fashion distribution networks in the Northern America] (3) <i>Direct Selling</i> [approaching wholesalers and retailers who are not active in certain countries]	(1) <i>Exporting</i> [requests by interested importers; maintaining existing export clients] (2) <i>Agent/Distributorship</i> [maintaining existing agents; requests by new distributors] (3) <i>Direct Selling</i> [directly approaching retailers because wholesalers blocked their way]
2SP	(1) <i>Retail partnership</i> [suggested by the Chinese manufacturing partner]	(1) <i>Retail partnership</i> [maintaining partnership business] (2) <i>Franchising</i> [suggested by the Chinese partner to expand the business in the whole China]
KEA (lt)	(1) <i>Exporting</i> [requests by the Japanese client; easy to do]	(1) <i>Licensing</i> [selling the KEA brand and using local manufacturing expertise; rising manufacturing costs in Australia] (2) <i>Sponsorship</i> [fit with the purpose of supplying to elite sports institute]
WSS (lt)	(1) <i>Distributorship</i> [large distributors such as Harvey Nichols or Tesco can move products quickly; too expensive to justify manpower costs on the ground]	(1) <i>Distributorship</i> [large distributors can move products quickly; not enough product line to justify manpower costs on the ground; requests by manufacturers to follow the firm's established distributorship path]
JCS (lt)	(1) <i>Master Franchising</i> [extending the existing domestic franchising business]	(1) <i>Master Franchising</i> [maintaining existing business]
OPO (lt)	(1) <i>Master Franchising</i> [extending the existing domestic franchising business]	(1) <i>Master Franchising</i> [extending the existing domestic franchising business]
NUD (lt)	(1) <i>Exporting</i> [requests by clients] (2) <i>Distributorship</i> [tapping the expertise and network of an existing Singaporean distributor]	n/a [the firm retreated from international markets; global licensing was found to be the most effective but new management was more interested in the domestic market]

Prior research has investigated the evolution of firm networks and showed contrasting findings regarding early and later stages of the evolution (see Coviello, 2006; Larson and Starr, 1993; Hite and Hesterly, 2001). This study reveals that the *mode of reasoning* plays an important role in the evolution of firm networks in the international markets. The findings support prior research that network interactions are based on socio-economic ties in the early stages of the evolution or internationalization (Larson and Starr, 1993) due to the propensity for effectual and affectual reasoning. This can increasingly shift towards more calculative or economic ties in the later stages (Hite and Hesterly, 2001) due to the progression towards more causal and ‘quasi-causal’ reasoning, and remain as socio-economic ties when effectual and affectual reasoning is still dominant.

Overall, this study highlights firms’ propensity for effectual and affectual reasoning and the influence of effectual and affectual networks on *the timing, location, sequence and entry mode* in the early stages of internationalization. More importantly, it reveals how preference for effectual and affectual as well as causal reasoning can co-exist simultaneously (i.e. quasi-causal reasoning) in the later stages of internationalization. There is also evidence that firms had a consistent propensity for effectual reasoning. These suggest that although there is a gradual transition towards more causal reasoning, this is not absolute but varies among firms due to the role of routines, habits, inertia, and firm contexts and situations. This may influence a firm’s choice of location, mode of entry, timing and sequence of further international market entry. Table 6.18 summarizes two clusters of firms in relation to their propensity for effectual vs. causal reasoning over time. These findings offer new insights and a new proposition for model refinement in Chapter 7.

Table 6.18 - Dynamics of mode of reasoning in internationalization

Dynamics of mode of reasoning	Relevant cases
[1] Consistently follow effectual and affectual reasoning from early to later stages of internationalization	KEA, NUD, 2SP
[2] Rely on effectual and affectual reasoning in the early stages of internationalization and increasingly follow causal and rational planning or become more ‘selective’ but still rely on heuristics (i.e. quasi-causal reasoning) as goals and options become clearer, and opportunities are more refined.	ANC, WSS, NKC, RMW, BSD, WSR, SSW, JCS, OPO, EMI, SKY, BVA
[3] Rely on causal reasoning only	None

6.3.9. Theme 9: Timing of internationalization and born global as a classification error

As described in Chapter 5, this study purposefully sampled and compared firms that made international market entries at an early vs. later stage in their life cycle. The cross-case findings reveal that internationalization tends to occur at a very late stage [i.e. KEA, JCS, OPO, and SKY] if international contacts did not exist and domestic opportunities did not force a deliberate search internationally. They reiterate the critical role of networks in internationalization. When domestic opportunities were abundant, firms were apathetic to look overseas. For example, Mick Erwin [KEA] says: *“well to be honest with you, we were so busy for the reasons I just said. Just supplying what we could sell, it’s not good looking out there.”* This firm made its first international market entry after 10 years of growth in the domestic market. OPO experienced exponential growth for 14 years in the domestic market and only began their first international master franchising through a discovery made by the weak ties of one of its franchisee’s brothers. Over a period of 14 years JCS grew into the largest hairdressing chain in the southern hemisphere and only began their first international master franchising through the discovery of an acquaintance in a yoga retreat.

The cases show that early internationalization [i.e. less than 6 years since inception; following Zahra et al’s (2000) definition] is primarily driven by the presence of relations and network ties, i.e. the process of finding and being found by prior and new ties who are international at the early stages of firm life cycle [i.e. RMW, ANC, BVA, SSW, NUD, 2SP, and EMI]. There is evidence of deliberate but general search for international opportunities through engagement in international activities and information search, such as conferences and tradeshowes [i.e. NKC and BSD]. This was due to the international nature of the opportunity [i.e. neonatal screening technology in BSD and wine industry in NKC]. In one case, deliberate and aggressive search was driven by the pressure for survival given the lack of domestic opportunities [i.e. mineral water in WSS case].

As indicated in Table 6.4, 6.7, 6.8, 6.9 (a, b, c, d) above, opportunity development is a continuous process as one opportunity stimulates and begets other opportunities through learning, exposure to new information, resources and new network ties. Table 6.19 indicates that the ongoing development/refinement process can lead to the creation of new ventures which appears to be ‘born global’ but the prior knowledge, resources, and network ties have been accumulated from prior development under different legal entities. Moreover, there can be substantial variation in the length and patterns of the gestation process as suggested by prior research (Reynolds and Miller, 1992). It is also not uncommon for smaller firms to create more than one legal entity for various reasons (see Table 6.4 above). Therefore ‘new’ ventures are not really new, except in a legal entity sense, because prior knowledge is retained and adapted; prior

relationships, contacts and energies may be brought forward; resources of prior ties can be accessed and utilized. Such ‘new’ firms appear to have the ability to make leaps to global markets instantly but a closer inspection of their history reveals that prior opportunity development process in the current venture common to the firms are still relevant.

Secondly, as part of the ongoing opportunity development process, firms often discover or are discovered by prior and new ties and become part of their ongoing opportunity development and these others may already have established knowledge, resources and networks. Therefore, relations and networks and how they develop over time play a key role in shaping the opportunities that are created or recognized, and in who becomes involved in their development and exploitation. This drives the birth of born global or international new ventures (INVs) with high growth rate [i.e. BSD, SSW, NKC, ANC, BVA, RMW, and WSS]. As shown among these firms, lucrative opportunities are not created overnight but involve the creative identification and recombination of knowledge that has accumulated over time from prior ventures or experience and/or well established sources and is spread across people and firms. In essence, firms are easily misunderstood as being born global or INV simply for reasons of misclassification and/or an artifact of the researcher’s vantage point and research methodologies that tend to ignore the role of the focal firm’s histories and their connected others. This is illustrated in Table 19, which shows the apparent ‘born globals’ that have a far longer actual gestation period and the role of networks in the process. This supports the view: *Natura non facit saltum* – nature does not make leaps (Marshall, 1920; Darwin, 1859).

An extensive literature review of the internationalization literature reveals that the speculation about born global firms as a classification error is not really new having been voiced earlier by a few scholars. Madsen and Servais (1997) suggested that born globals may grow in a way which may be in accordance with evolutionary thinking and that the history of the founder, the firm and their pre-export behaviour may matter (see also Wiedersheim-Paul et al., 1978). Madsen and Servais (1997) argued that many basic assumptions and the dynamic processes (state and change aspects) underlying the internationalization processes of born globals are not necessarily different from what is outlined in the original Uppsala Model. They concluded that “in many instances it may be doubtful whether a born global can be considered a new company” (p. 573) and that “when studying a born global firm, time perspective should be extended beyond its birth” (p. 573). Although they made a strong theoretical reasoning of this issue, to date few studies of the born global or INV phenomenon has adequately incorporated ‘time’ and ‘dynamic’ processes as key research dimensions (see Coviello and Jones, 2004) and extended the study of internationalization to the pre-founding stage. This has left their speculation unanswered. In their seminal piece, Oviatt and McDougall (1994) highlighted the role of age of

firm when they internationalize in their definition of INVs. Yet they also noted the difficulty in defining the exact starting time of a new venture's existence because some ventures go through a long period of gestation before they are officially launched. As shown in this study, this 'gestation' issue apparently holds a key explanation for the born global phenomenon. This also suggests that the 'learning advantages of newness' hypothesis (Autio et al., 2000) may need to be researched more thoroughly. The study shows that a falsification of the 'rings in the water' logic is not necessarily the same thing as a falsification of the reasoning behind the Uppsala Model.

This study supports Madsen and Servais' (1997) argument that network approach and an evolutionary approach provide promising theoretical avenues to understand the internationalization processes. In particular, each firm cannot be analysed separately but its state and change aspects (of market knowledge and commitment) must be understood in an interorganizational setting. Coviello (2006) is among the few who more recently provides evidence of the role of prior ties developed in firm conception in the internationalization phase of INVs. This supports Madsen and Servais' (1997) speculation and is consistent with the findings in this thesis.

Table 6.19 - Born Global as a Classification Error

Case	Gestation period [prior knowledge, resources and opportunity development]	Others' opportunity development, knowledge and resources	Current venture known as born global
WSR (ht)	<ol style="list-style-type: none"> 1. Southern Seaweed Pty Ltd (1993), exported seaweed as food product to Japan but could not compete with local seaweed. 2. Sold by the founder to his accountant (Mr. AH) and Water Algae Pty Ltd replaced the original firm (since 1993). The new firm ran at the corner of his Chartered Accountancy practice 3. After many years of information search and supplying local restaurants (1993-1998), a biochemist was hired to investigate the biomedical properties of the seaweed. 5. Three sister companies were built (2002) with different purposes, for production, marketing, and R&D. 6. The first commercialization in the US market (2003) but not successful. 	<ol style="list-style-type: none"> 4. Borrowed the expertise and lab facilities of the biochemist's international science networks (NZ and US) and successfully devised a method to extract the core molecule and piloted a trial on human against herpes simplex virus 9. Discovered by a professor and became part of a global US firm's global distribution networks (multi-million dollar licensing) [2004] 10. Discovered by a Canadian pharmaceutical firm and became part of their opportunity development (multi-million dollar contract) [2004] 	<ol style="list-style-type: none"> 7. The son of the new owner joined as CEO and consolidated all firms into one called WSR (2003). 8. Intensive search in Northern America and Japan but failed. 11. From a loss making to a multi-million dollar company and currently developing new opportunities (100% international revenues)
BVA (ht)	<ol style="list-style-type: none"> 1. Formed a business consultancy in NZ (1976); purchased a large finance company and sold (1985); had a construction company (1970s) and export agency (1990s); family entrepreneurial heritage (great grandfather founded the seed of Glaxo; grandfather co-founded large petroleum business (AMPOL, Europa Oil) 	<ol style="list-style-type: none"> 2. A NZ scientist discovered a bio-active (1998) from cyanobacteria after decades of R&D 4. Introduced to a large German nutraceutical company by the Scientist and became part of the German firm's opportunity development, tapping their experience, resources and networks 	<ol style="list-style-type: none"> 3. Co-founded BVA (2001) with the scientist who discovered him 2 years earlier 5. Commercialization within only 3 years after inception – very fast in the standard of biotech industry (100% international revenues)
WSS (lt)	<ol style="list-style-type: none"> 1. Founded Australian Cabling Company (1990), a large cabling contractor in Australia. Clients: South East Asia. Sold \$8 Million (1995) 2. Founded IT&T Services (1995), a large 	<ol style="list-style-type: none"> 4. Became part of Tesco's opportunity development and networks in the UK; leading to others such as Harvey Nichols and Sainsbury 	<ol style="list-style-type: none"> 3. Founded WSS (2001). Lack of domestic opportunity led to aggressive push internationally.

	technology project management in Australia. Clients: Europe, Asia, Africa, US, South Pacific. Sold \$15 Million (2000)	5. Became part of opportunity development of 7-Eleven (Taiwan), Mitsubishi (Japan), Middle East, Fosters and other beverage groups	6. WSS was dissolved and replaced with Southern Cross Exports Pty Ltd (2006) [90% international revenues]
SSW (ht)	<ol style="list-style-type: none"> 1. Founded SSW (1989) while working. Developed customized software but it was dormant after servicing one client. Remained as an employee. 2. Revived SSW (1994), developed and sold many advanced printing software developed during his university days and working life. 	<ol style="list-style-type: none"> 3. Connected to Robert Murphy, a veteran marketer in graphic arts (1996), collaboration leading to the world's first PostRIP digital proofing software 4. Partnership with Robert (1996), became part of and accessed Robert's extensive networks across the US and Europe; leading to opportunities with Fuji and DuPont networks 5. Introduced by first distributor (Fuji Canada) to other Fuji offices in Europe 6. Discovered by and became part of New York Times' opportunity development; was referred to other US media such as Wall Street Journal and Chicago Tribune (500% growth in 1999) 8. Became part of Fuji Japan opportunity development (500% growth in 2005), accessed Fuji's resources and networks 	<ol style="list-style-type: none"> 7. Discoveries of new technologies for digital proofing, e.g. Real Dot Technology, Paper Profile Technology, Lego engineering 9. Multi-million dollar company (99% international revenues)
RMW (lt)	<ol style="list-style-type: none"> 1. Started RMW (1996), began supplying maternity wear to domestic markets for a few years 2. RMW formally established in 1998 	<ol style="list-style-type: none"> 3. Discovered by a Dubai lady (1999) while organizing stocks in a department store, became part of the lady's opportunity development 4. Discovered by and became part of a Texas agent's opportunity development, who then brought his agent friends from LA, New York, Atlanta and Canada to co-exploit the opportunity (vertical growth in 2001) 	5. Opportunities stimulated more opportunities throughout Asia, Europe and US leading to a \$7 Million annual business with exports to over 15 countries
ANC (ht)	<ol style="list-style-type: none"> 1. Experimenting with novel odour control solutions (1989); active information search for R&D 2. Founded Anosmia Technologies Pty Ltd (1991) 	<ol style="list-style-type: none"> 3. Accessed and used the expertise and resources of UNSW Odour Lab and ANSTO to create scientifically proven solutions (1991) 4. Discovered by a successful US entrepreneur and became part of his opportunity development, resources and networks in the US (vertical growth 1992) 6. Discovered by many international others and became part of their opportunity development (Taiwan, Korea, Malaysia, UK, Phillipine etc) 	<ol style="list-style-type: none"> 5. ANC was founded (1994), as a marketing arm while Anotec became its R&D arm; to avoid others who tried to take over the company 7. Opportunities bred more opportunities leading to 60% international revenue
NKC (ht)	<ol style="list-style-type: none"> 1. Founded Brushes for Industries Pty Ltd (1973), the largest industrial brushmaker in the Southern Hemisphere; sold in 1987; experienced using profile extrusion 2. Formed Associated Fibres Pty Ltd (1985), manufactured brushes using profile extrusion; founded and operated luxury boat business (1984-1988); owned family manufacturing business in plastic extrusion 	<ol style="list-style-type: none"> 3. Experimented with corks using profile extrusion method (1996), accessing resources and knowledge of chemical companies, local winemaker, nine colleagues (incl. owner of Wolf Blass and ex CEO of Orlando Wines) 5. Discovered by and became part of Casella Wine's opportunity development (largest Australian wine exporting to the US) 8. Relied on established supply chain networks of wine cork suppliers in many countries 9. Attracted multi-million dollar private equity fund (2000) 	<ol style="list-style-type: none"> 4. Founded NKC (1998), backed by experience and wealth, colleagues, profile extrusion knowledge 6. Participated in tradeshow; aggressive push internationally 7. Opportunities stimulated more opportunities 10. Fast growth led to 2 FDI in US and Europe (2005); 50% international revenues

6.4. Conclusion

This section highlights a number of important findings in the cross-case analysis and their implications for research in internationalization and entrepreneurship. The overall findings or themes in this study are summarized in Table 6.20. First, this study clarifies the nature of the entrepreneurial processes involved in firm founding and early stages of internationalization, which do not follow an orderly sequential processes or ‘stages’ of discovery-evaluation-exploitation (Shane and Venkataraman, 2000; Oviatt and McDougall, 2005). The processes are inextricably linked, interrelated – a ‘complex and chaotic’ process (Aldrich and Ruef, 2006). *Discovery* is influenced by knowledge already possessed; knowledge of prior ties that can be accessed and utilized; serendipity such as encountering and/or being found by new and prior ties; as well as deliberate search which can lead to discovery of things that the searcher did not start out looking for. *Exploitation* is a broad set of activities that involve processes of opportunity development, refinement and experimentation as well as search as an active, creative process of opportunity formulation. While prior research downplays the role of deliberate search in the entrepreneurial discovery (Shane, 2000), this study shows otherwise because search can lead to unexpected discovery.

Figure 6.2 summarizes the dynamics of the entrepreneurship process that apply to firm founding and internationalization. The study reveals that in the face of Knightian uncertainty, lack of clear goals, options and preferences, boundedly rational agents or firms begin the entrepreneurial process with an initial discovery and proceed with further refinement and active development/exploitation to figure out if there is real and substantial opportunity or not. This cycle shapes subsequent patterns of refinement as firms and their network of stakeholders make greater commitments or change course. This is a more general process of groping forward and shows a lack of distinction between different types of opportunities, i.e. discovery, creation and enactment. Evaluation as a systematic and independent act may not exist, particularly in the firm founding and early stages of internationalization, since it is a matter of refining opportunities to the point of action and formulating a viable alternative rather than evaluating some prespecified or consideration set of alternatives. This is influenced by effectual and affectual reasoning, which will be discussed next. In the later stages of internationalization, when known unknowns develop due to the development of knowledge, resources and network ties, goals, options and preferences are better defined and, in certain cases where entrepreneurs relinquish control to professional managers, systematic opportunity evaluation plays increasing roles. As shown in the right-hand side of the diagram in Figure 6.2, there is a feedback effect in that what a firm discovers and exploits over time may influence how they evaluate future opportunities (systematically) and vice versa.

The study shows that entrepreneurial process is history and path dependent. Actors can begin the process with the means available at hand (i.e. who they are, what they know, whom they know, and bricolage) and/or the initial opportunity discovered. Prior knowledge can be adapted as appropriate and prior ties' knowledge and resources can be accessed and utilized. Through deliberate search and opportunity development, firms find and are found by new ties who bring in new knowledge, resources and commitment as new stakeholders. In the process of recombining scattered information, resources and network ties, firms rely on their absorptive capacity to 'filter' reliable information, resources and ties in order to 'see' new means-ends combinations. Over time, opportunities become clearer and a firm's commitment along with their network of stakeholders further develops. This patch-by-patch development begins from the firm founding and continues throughout the internationalization phase. Over time, the opportunity space becomes more refined as the result of learning by doing, interactions with, and parallel search and development by, the networks of stakeholders. This is illustrated in Figure 6.3 and poses challenges to the somewhat linear view built in the initial model and suggests various types of model refinement as discussed in Chapter 7.

Figure 6.2 – The Dynamic Process of Entrepreneurship Over Time

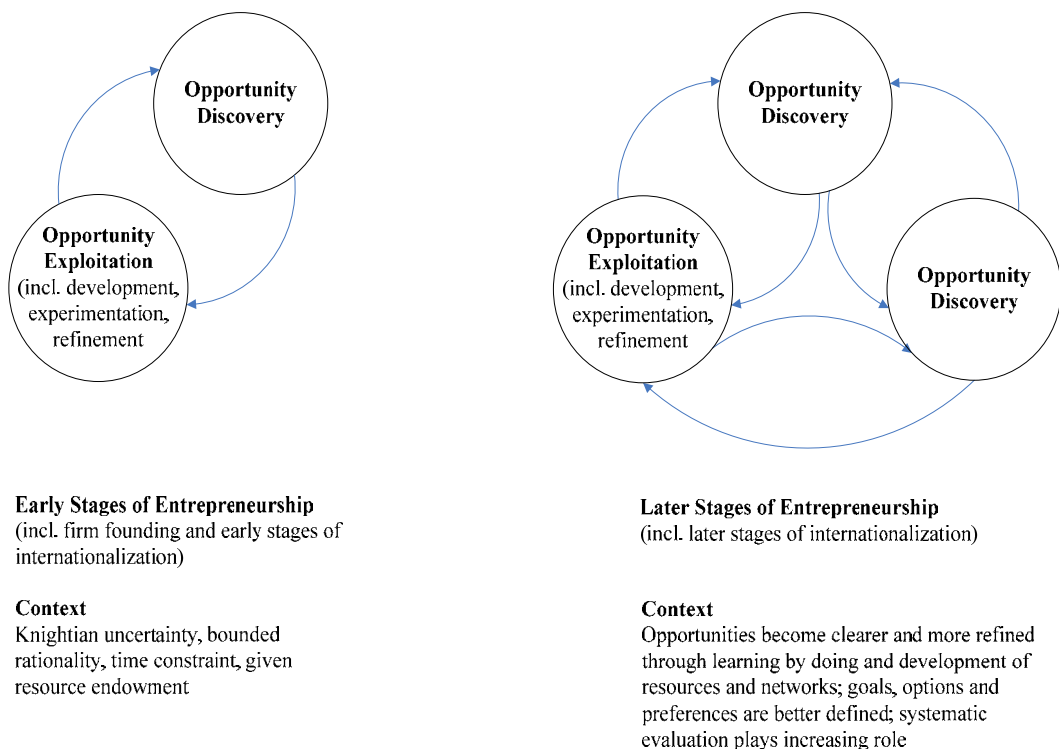
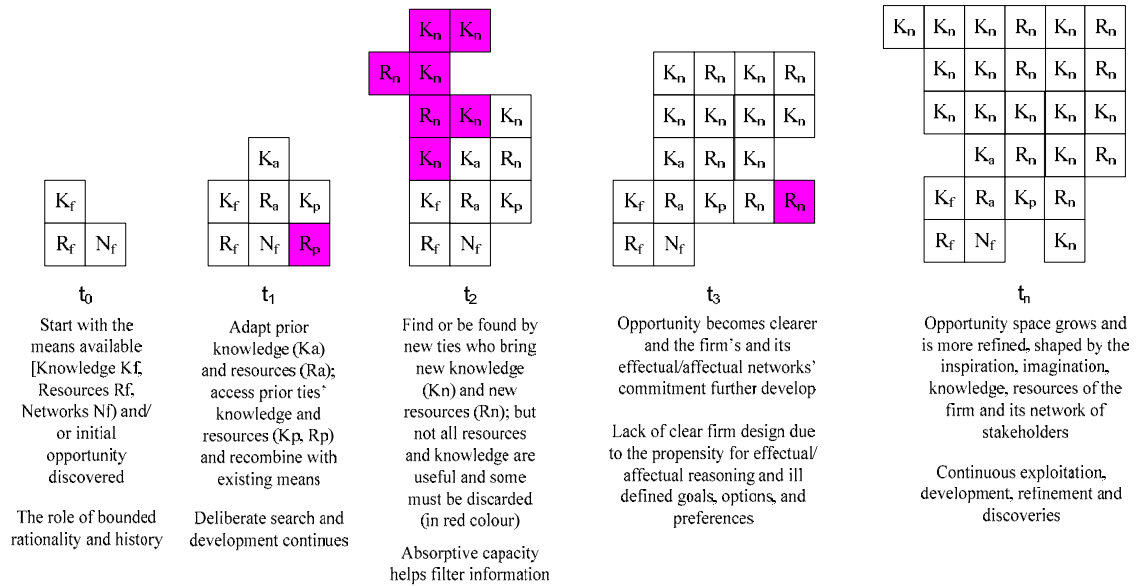


Figure 6.3 – The dynamics of opportunity space

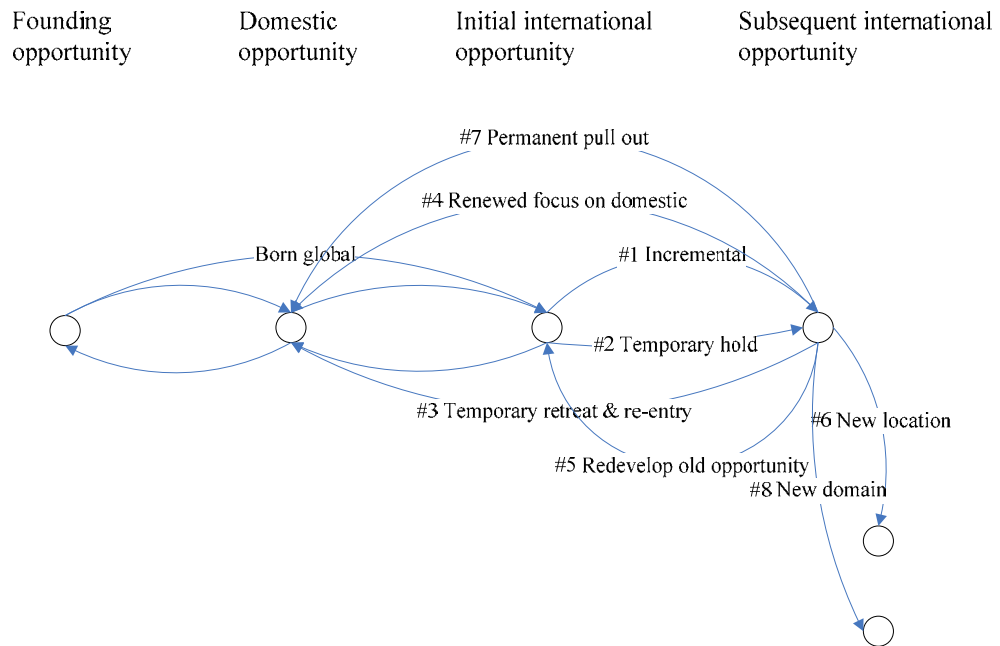


Second, the study reveals the patterns of interconnectedness of opportunities over time as the development or discovery of one can lead to others in a way that cannot be seen in advance. This depends on the firm's exposure to new information, problems, resources, new ties experiential learning and propensity for effectual and affectual reasoning. This is consistent with the role of feedback effects and path dependency discussed in the model (Chapter 4). As indicated in Figure 6.4, the patterns of interconnectedness of opportunities include founding and international opportunities, interactions between domestic and international opportunities, and among international opportunities. These patterns are partly shaped by uncertainty which can push or pull the patterns in many plausible directions.

Figure 6.4 summarizes eight plausible patterns of interconnectedness of opportunities found in this study. This includes: [1] gradual increase in international involvement as suggested by the Uppsala/Process Model, [2] temporary holdback in international markets to prepare the development of international opportunities in a larger scale, [3] temporary retreat to domestic market and re-entry in light of new international opportunities, [4] renewed focus on domestic opportunities while maintaining international opportunity development, [5] re-pursuit of old international opportunities, [6] change in direction to other countries due to lack of opportunities in specific location or country markets, [7] permanent pull out from the international markets, and [8] discovery of opportunities in new domains not thought-of at the outset. It is possible that other plausible patterns of interconnectedness of opportunities exist but did not appear in this study. But this shows that the gradual, linear patterns suggested by the Uppsala/Process Model is only one type of other plausible patterns of internationalization. This

study makes an important contribution in revealing the nature of ‘interlinkages’ of opportunities as part of a more general process of entrepreneurship, which helps account for the irregular, non-linear patterns of internationalization reported in the literature.

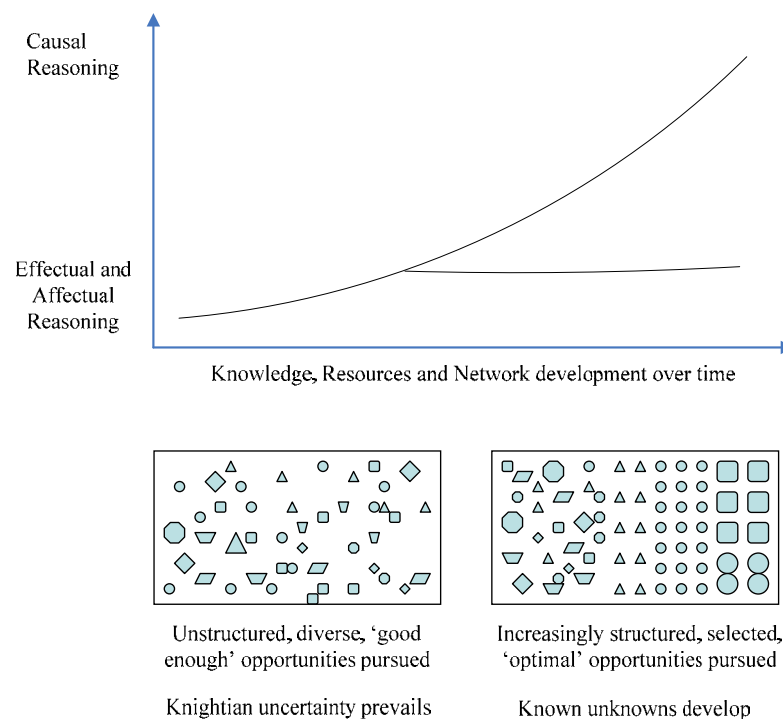
Figure 6.4 – Patterns of interconnectedness of opportunities over time



Third, this study reveals the evolutionary pattern of mode of reasoning in international entrepreneurial activities. The logic of decision making in the *early stages* of internationalization is consistent with effectual and affectual reasoning, non-predictive approaches (Sarasvathy 2001; Wiltbank et al., 2006). That is, when facing the complexity and Knightian uncertainty in the international markets (i.e. the unknowable prevails), boundedly rational actors leverage contingencies, act opportunistically, rely on affordable loss thinking rather than expected returns, form partnerships and alliances rather than competitive or systematic analysis, rely on fast and frugal heuristics, and on bricolage, to limit unnecessary use of resources. Emotions and feelings play more of a role than rational calculation in the face of ill-defined goals, options and preferences, limited knowledge and computational abilities. The propensity for effectual and affectual reasoning is influenced by joint interactions with prior and new ties who also exhibit the propensity for effectual and affectual reasoning. These effectual and affectual networks do not really make plans but interact with the focal firms effectually in the internationalization process. This is illustrated in Figure 6.5, where the graph begins from the bottom left hand corner. Therefore, the location, sequence and timing of internationalization

in its early stages are open-ended and are influenced by how firms leverage contingencies arising out of their prior ties as well as new ties that they find and/or that find them. The mode of entry is influenced by co-evaluation and co-adaptation with existing and new ties, fit with the nature of opportunity (e.g. project-based for service business), bricolage thinking (e.g. exporting and/or tapping others' existing distribution and marketing networks), and preference for a simplistic, not 'complicated' mode (e.g. exporting/distributorship than licensing to avoid complex legal matters). The acts of leveraging contingencies also tend to lead to the pursuit of multiple opportunities and use of multiple modes of entry at any one time to adapt to varying context and situations. This explains the lack of orderly, complex and chaotic entrepreneurial processes in Figure 6.2 and 6.3; and the patterns of interconnectedness of opportunities in Figure 6.4 above.

Figure 6.5 – Dynamics of mode of reasoning in internationalization



Over time as firms learn more about what they did not know including their goals, options and preferences; their resources and network ties further develop and opportunities are more refined (i.e. known unknowns develop), the nature of decision making increasingly follows causal reasoning, rational planning and systematic evaluation. At this stage, firms have growing choices of location and mode of entry to select, sequence and timing of entry to plan, and opportunities to further refine and develop and/or terminate. It becomes more feasible to conduct deliberate search and development in location or country markets that can present more

attractive opportunities and to use higher-control mode such as Foreign Direct Investment and OEM (original equipment manufacturer) at this stage. While firms may not have a strategy (so-called ‘strategy absence’ - Inkpen and Choudhury, 1995) in the early stages of internationalization, they already have more choices and options in the later stages which they can select and integrate to form a strategy (Rumelt et al., 1991). This leads to network interactions that are increasingly based on calculative and economic ties. This is shown in Figure 6.5, where the graph gradually ascends towards the top right hand corner.

Firms can also become more ‘selective’ in terms of what and which opportunities they pursue, and have a growing propensity for more lucrative opportunities while not fully relying on either causal or effectual reasoning. Rather, they combine effectual and affectual with causal and rational reasoning, i.e. ‘quasi-causal’ reasoning. This reflects the way that firms respond to new contingencies and interact with their effectual and affectual networks in parallel with exploiting the more refined opportunities based on better defined goals, options and preferences. This is shown in Figure 6.5, where the graph branches out into two directions. There are also firms that showed consistent propensity for effectual reasoning towards the later stages of internationalization. This is shown in Figure 6.5, on the lower bound of the graph in the right hand corner. This reflects that the transition from effectual to causal reasoning is not absolute but is shaped and intervened by routines, habits, inertia and firm contexts and situations.

Research in internationalization has shown the presence of rational and, at times, irrational approaches to internationalization but there is scant attention as to why such patterns occur. By delineating the mode of reasoning in firm internationalization (i.e. effectual vs. quasi causal vs. causal reasoning) and how this logic may gradually shift over time in relation to different types of uncertainty (i.e. the unknowable vs. known unknowns), this study explains why reactive, unplanned, accidental internationalization occurs in particular contexts, while active and planned internationalization tends to occur in other contexts. Prior research demonstrates that the salient influences in internationalization are often more social than economic and that the phenomena are lacking rhyme or reason (Ellis and Pecotich, 2001; Simmonds and Smith, 1968; Welch and Weidersheim-Paul, 1980). Social influences only offer a partial explanation of the phenomena and, as this study reveals, the logic of effectual and affectual reasoning can enrich our understanding of how and why internationalization can lack ‘rhyme’ or reason. This offers a suggestion for model refinement in Chapter 7.

This study offers strong support for the Network Perspective of internationalization (Bell, 1995; Coviello and Munro, 1995, 1999; Loane and Bell, 2006; Welch and Luostarinen, 1993;

Johanson and Mattsson, 1988, 1992) throughout early to later stages of internationalization. The patterns of referrals and introductions, piggy-backing, client followership, vendor followership and inward-outward connections exist in the study, as does the influence of networks and relations in the timing, mode of entry and choice of international markets (Arenius, 2005; Coviello and Martin, 1999; Chetty and Agndal, 2007). The study also shows that not only do network ties enable the opportunity recognition and exploitation process, they also inhibit it. More importantly, this study complements prior network-based research by injecting the *mode of reasoning* that enhances the understanding of the underlying mechanism of internationalization (i.e. affectual, effectual, non-predictive approaches vs. causal, predictive approaches). The study clarifies the *process* of Network Perspective of internationalization. That is, it offers a point of view in that firms access, find, be found, and be introduced to by prior and new ties and co-adapt, co-produce and co-refine international opportunities with their network of stakeholders.

This study has implications for the Uppsala/Process Model (Johanson and Vahlne, 1977, 1990, 2006). The study shows that gradual international market involvement is only one type of other plausible patterns of internationalization, as can be seen in Figure 6.4 above. The Uppsala/Process Model's assumption of knowledge-commitment cycle has conceptual and empirical validity. However this cycle also means that each time knowledge grows and different problems and network ties are encountered, firms may discover, be discovered and exploit new opportunities or re-pursue old opportunities in many different directions that cannot be seen in advance as they rely on effectual reasoning. This is also partly influenced by uncertainty which can push or pull the firm in many plausible directions. This study also concludes that the location and speed of international market entry do not really depend on 'psychic distance' as is suggested (see Arenius, 2005; Johanson and Vahlne, 1977; Johanson and Wiedersheim-Paul, 1975) but is influenced by the availability of prior ties in foreign markets, the timing that new ties found the focal firms, and a firm's tendency to leverage contingencies and make use of any and all means at hand. Therefore, this study complements the Uppsala/Process Model by demonstrating that internationalization dynamics can be better explained by clarifying the mode of reasoning, the nature of uncertainty or unknowns, and the interconnectedness of opportunities over time.

This study reveals a lack of rational and systematic Coasian analysis of internalization vs. externalization advantages and choice of location of internationalization as is suggested by the Eclectic Paradigm (Dunning, 1977, 1980, 1993), particularly in the early stages of internationalization. The decision to internalize and choose particular locations only tends to occur in the later stages of internationalization when firms have developed sufficient alternative

opportunities, knowledge, network ties and resources, and their goals, options and preferences are better defined (i.e. known unknowns develop). Ownership (O) or firm-specific advantages somehow exist in the early stages of internationalization (by adapting prior knowledge and prior resources), but a lack of these advantages can be supplemented by O advantages of other firms/individuals involved in the opportunity development process. These can be strong and weak ties and/or new ties O advantages that can be accessed, co-adapted, and co-developed. This provides empirical support for the resource-based view of interconnected firms (Lavie, 2006). The study shows that O advantages in terms of a focal firm's own resource endowment, as suggested in the Eclectic Paradigm, emerge in the later stages of internationalization.

Therefore, this study reveals that each mainstream theory of internationalization has its own conceptual and empirical validity but tends to explain and predict different phases and logic of firm internationalization. While Network Perspective offers strong explanatory power in the early to later stages of internationalization, the Eclectic Paradigm is more relevant/useful in the later stages of internationalization. Although the manifestations of the Uppsala Model (i.e. stages or 'rings in the water' development) is not an adequate framework, it offers valid theoretical reasoning in terms of the evolutionary process affecting internationalization.

The study also shows that born globals may be a classification error. 'New' international ventures are not really new, except in a legal entity sense because prior knowledge is retained and adapted; prior relationships, contacts and energies may be brought forward, and the resources of connected others can be accessed and used. Moreover, 'new' ventures often discover or are discovered by others and become part of others' ongoing opportunity development. These others may already have established resources, knowledge, distribution networks and customers. The lucrative international opportunities that born globals exploit or discover are not created overnight but involve the creative recombination of pre-existing knowledge that has accumulated over time from prior ventures or experience and/or well established sources, and is scattered across people and firms. This supports the view that Nature does not make leaps (Marshall, 1920; Darwin, 1859) and is consistent with prior research (Madsen and Servais, 1997). This sparks speculation on the real meaning of born globals (Oviatt and McDougall, 1994; McDougall et al., 1994), i.e. whether *all* born globals are truly 'born' globals, and suggests further re-examination of the boundaries of the 'learning advantages of newness' thesis (Autio et al., 2000).

The overall findings or themes from this study and how they relate to the initial model (Chapter 4) and prior research are reiterated in Table 6.20.

Table 6.20 - Summary of major themes and findings

No	Major themes and link with the initial model & propositions	Prior research
1	<p>Entrepreneurial process associated with the firm founding and early stages of internationalization lacks an orderly sequential processes or distinction between the 'stages' of discovery-evaluation-exploitation. The process is inextricably linked and interrelated, chaotic, open-ended. There is a lack of systematic or independent evaluation of alternative opportunities during the founding and early stages of internationalization, since it is a matter of refining opportunities to the point of action and formulating a more viable alternative than evaluating them. When known unknowns and firm resources, knowledge and network ties develop in the later stages of internationalization, systematic evaluation plays increasing role.</p> <p>There is no sharp distinction between types of opportunity (discovery vs. creative vs. enactment), rather they are all part of a more general process of groping forward and involve creative mental act to see things in new ways and perceive new means-ends combinations.</p> <p><i>[New insights for model refinement in Chapter 7]</i></p>	<p>Supported Spence & Crick (2006), Aldrich & Ruef (2006), Aldrich & Martinez (2001); but not Oviatt & McDougall (2005), Shane (2000); Shane & Venkataraman (2000) and Choi & Shepherd (2004)</p> <p>Reconciled various views, i.e. Kirzner (1997), Alvarez (2005), Sarasvathy (2001), Gartner et al (2003)</p>
2	<p>Opportunity discovery/exploitation is generally related to the information and knowledge already possessed, although the process can be shaped by knowledge of prior ties that can be accessed and utilized; serendipity such as encountering new ties and/or the actions of new ties who, acting on their own knowledge and new information, found the focal firm; and deliberate search for new information.</p> <p><i>[Support for Proposition 1a, 1b, 2a, 2b, and 2c in Chapter 4]</i></p>	<p>Supported Shane (2000), Ellis and Pecotich (2001), Loane & Bell (2006), Mort & Weerawardena (2006), Coviello & Munro (1995), Birley (1985), Elfring & Hulsink (2003)</p>
3	<p>Deliberate search can play an important role in entrepreneurial activities in that it can lead to discovery of things that the searcher/firm did not start out looking for. This is partly influenced by the role of prior and new ties. Moreover, deliberate search is not simply about seeking and finding known unknowns but is an active, creative process of opportunity formulation and negotiation.</p> <p><i>[New insights for model refinement in Chapter 7]</i></p>	<p>Supported Knight (1921); Indirect support for 'creation' (Sarasvathy, 2001)</p>
4	<p>Opportunities are interconnected over time as the consequence of firm's exposure to new information, problems, resources, people/firms, experiential learning, and the propensity for effectual and affectual reasoning. The patterns of interconnectedness include founding and international opportunity; domestic and international opportunity; international and international opportunity. While international opportunity development can lead to increasing commitment to international markets it can also lead to changes in direction to other opportunities. This is due to the interlinkages of opportunities as well as Knightian uncertainty such as punctuated evolution which can push or pull the patterns towards many plausible directions across the home and foreign markets.</p> <p><i>[Support for Proposition 5 and 6 in Chapter 4; as well as new insights for model refinement in Chapter 7]</i></p>	<p>Indirectly supported Knight & Cavusgil (2004), McDougall et al (1994), Benito & Welch (1994), Petersen & Welch (2002)</p> <p>Supported Holcombe (2003)</p>
5	<p>There is a positive feedback cycle between international entrepreneurial orientation (IEO) [i.e. proactiveness, aggressiveness, innovativeness, uncertainty/risk taking, autonomy] and firm resources; and international opportunity discovery/exploitation. This is influenced by firm histories, the nature of industry, the role of international ties and Knightian uncertainty. Aggressiveness does not mean being aggressive to competitors but rather 'aggressively' seeking to leverage opportunities when they present themselves. Risk taking does not appear to differentiate between firms that are highly successful in recognizing and exploiting opportunities in international markets and those that are less successful.</p> <p><i>[New insights for model refinement in Chapter 7]</i></p>	<p>Indirect support for Johanson & Vahlne (1990), Ellis & Pecotich (2001)</p>
6	<p>Having prior knowledge, new knowledge, IEO and resources alone is not sufficient for opportunity discovery/exploitation but this requires the 'ability' and willingness to see their relationships in new ways. Absorptive capacity involves a number of psycho-socio dimensions including (1) an openness to the new possibilities suggested by the environment; (2) judgment about what information</p>	<p>Complemented and expanded the meaning of absorptive capacity (Cohen & Levinthal (1990; Zahra & George</p>

	<p>is appropriate to absorb or believe; (3) ability to see new means-ends combinations from information, knowledge, and resources scattered across people/firms, places and time; and (4) the role of prior and new ties as extended minds and sources of knowledge (i.e. distributed absorptive capacity).</p> <p><i>[New insights for Proposition 4 in Chapter 4 and for model refinement in Chapter 7]</i></p>	2002; Lane & Lubatkin (1998)
7	<p>Bricolage is an important way of dealing with Knightian uncertainty and scarcity of resources in firm founding and internationalization processes. This includes keeping existing sources of income while venturing into new business/international markets; creatively using existing resources and capabilities; and accessing and utilizing the resources of strong and weak ties and creatively combine them with internal resources.</p> <p><i>[New insights for Proposition 3 in Chapter 4 and for model refinement in Chapter 7]</i></p>	Supported and complemented prior research (Baker et al 2003; Garud & Karnoe 2003), Baker & Nelson 2005)
8	<p>The logic of decision making in the early stages of internationalization is consistent with effectual and affectual reasoning. That is, when facing complexity and uncertainty in the international markets (i.e. unknown unknowns prevail), boundedly rational agents/firms leverage contingencies, rely on affordable loss thinking, form partnerships and alliances rather than competitive analysis, rely on fast and frugal heuristics and on entrepreneurial bricolage. This reasoning is usually effective but can also lead to biases and errors in decision making.</p> <p>Over time, as firms learn more about what they did not know including their goals, options, preferences; their resources and network ties further develop and opportunities are more refined (i.e. known unknowns develop), the nature of decision making increasingly follows causal reasoning and rational planning. The transition of mode of reasoning is not absolute or deterministic but varies among firms due to the role of routines, habits and inertia and can include those that combine effectual and causal reasoning simultaneously, i.e. ‘quasi-causal’ reasoning as well as those that tend to maintain effectual reasoning. The mode of reasoning used influences firm’s timing, location, sequence and mode of entry.</p> <p>Therefore, the nature of unknowns is an important contingency that influences the patterns of firm decision making and behaviour over time.</p> <p><i>[New insights and proposition for the model refinement in Chapter 7]</i></p>	Supported Sarasvathy (2001), Wiltbank et al (2006), Simon (1957), Inkpen & Choudhury (1995), Stanovich & West (2000), Kahneman & Tversky (1979, 2002), Tversky & Kahneman (1974, 1981), Todd (2001), Gigerenzer et al (1999), Busenitz and Barney (1997), Smith et al (1988)
9	<p>Born global may be a classification error. Not all born globals are truly ‘born’ globals. ‘New’ ventures are not really new, except in a legal entity sense, because prior knowledge is retained and adapted; prior relationships, contacts, energies may be brought forward; resources of prior ties can be accessed and utilized; and firms discover or are discovered by prior and new ties and become part of their ongoing opportunity development who may have well developed resources, knowledge and network ties. Lucrative international opportunities are not created overnight but involve the creative identification and recombination of pre-existing knowledge that has accumulated over time from prior ventures or experience and/or well established sources and which is spread across people and firms.</p> <p><i>[New insights and proposition for the model refinement in Chapter 7]</i></p>	Not supported Oviatt & McDougall (1994, 2005); McDougall et al (1994); Autio et al (2000)

6.5. Summary

The objective of this chapter was to further examine the initial model and propositions suggested in Chapter 4. Within and cross-case analysis were conducted and a number of important themes emerged, which supported, complemented and offered new insights into prior research in internationalization and entrepreneurship. These findings have important implications for the initial model and propositions (Chapter 4) and were discussed and utilized to develop a refined model and propositions, as presented in the next chapter (Chapter 7).

7. EXTENDED DISCUSSION, REFINED MODEL AND IMPLICATIONS

7.1. Overview

The purpose of this chapter is to review and revise the initial model and propositions (Chapter 4) based on the findings from the main study (Chapter 6). The chapter begins by reiterating the initial propositions and considering what the findings mean for each of them, and is followed by refined propositions and a modified model. The chapter ends with a discussion of the implications of the modified model on the existing theories and models.

7.2. A general discussion on model and propositions

Prior knowledge, relations and networks: Proposition 1a, 1b, 2a, 2b, 2c

Initial Propositions

- P1a: Prior knowledge influences the likelihood and kind of international opportunity discovery
- P1b: Prior knowledge includes the knowledge of others in a firm's network that it knows about and can use.
- P2a: The social and business networks in which a firm is embedded influences the nature and likelihood of international opportunity discovery.
- P2b: Weak ties play a role in bridging the structural holes and providing access to new knowledge and ideas critical to opportunity discovery
- P2c: Strong ties are the means by which potentially useful new knowledge acquired by other firms in a business network is passed on to others to use.

Discussion

Findings from the main study showed strong support for propositions 1 and 2. International opportunity recognition, discovery, creation or enactment comes from combining and recombining prior knowledge and newly encountered knowledge in new ways. Prior knowledge is scattered unevenly across people/firms, places and time due to the different activities each is involved in, their particular history and experience, who they interact with and their training. Through interacting with others, directly and indirectly, knowledge and ideas are generated and passed around, communicated and shared among people and firms. Through this people and firms gain access to new types of information and ideas that otherwise they would not know about and this provides the basis for identifying, creating and developing new types of opportunities. This is a general process of groping forward or muddling through (Lindblom,

1959) with the means available at hand (i.e. who they are, what they know, who they know) and involves increasing commitment of efforts, resources and time.

For example, the founder of BVA had prior entrepreneurial and managerial experience in accounting/finance but not in biotechnology. Through a chance encounter with a New Zealand scientist he was exposed to new information about bioactives but, at that time, did not see the global opportunity they represented. It was two years later, after the founder's relocation to Queensland, Australia's biotechnology centre, that the opportunity was discovered and exploited. The firm's first international opportunity was discovered in Germany through a weak tie (i.e. a German nutraceutical firm) known to the co-founder. In the SSW case, prior experience in computer science facilitated the discovery and exploitation of opportunities in printing software but the focus was the domestic market only. Through a referral made by a client, the founder was found by a veteran marketer in graphic arts, leading to the co-discovery and co-creation of global opportunities in digital proofing software for the graphic arts industry. This was followed by further discoveries of international opportunities through the veteran marketer's prior contacts in the Northern American market. In the JCS case, the founder had prior entrepreneurial experience in hairdressing but had no ideas about franchising. It was through a request made by its staff that the firm discovered an opportunity for franchising. A few years later, through a chance encounter with a New Zealander in a yoga retreat, the firm discovered its first international franchising opportunity and made many other opportunity discoveries.

A firm's own knowledge is combined, recombined, adapted and changed as a result of interactions with others. Together, the relations and networks in which a firm operates act as an extended or collective mind that co-produces opportunities and (who can recognize or discover them) through the way knowledge and ideas flow within the network. This is an important mechanism by which new types of knowledge are produced, which was not fully appreciated and reflected in the initial propositions. For example, in the BSD case, the co-adaptation of neonatal blood screening expertise with HIV screening expertise between BSD (Australia) and Roche (a global firm) led to the discovery of new international opportunities in the emerging African market. In the ANC case, following the user and distributor feedbacks in the US market, chemistry knowledge for odour-control was adapted and led to the discovery and exploitation of international opportunities in over 50 new industries, which were not originally intended.

The results show how interactions taking place in social and business networks affects who meets who and who gets introduced to whom. Such encounters can become important tipping

points shaping the pattern of development of a firm and its internationalization in significant ways, either at the time they start or later on as they provide access to key knowledge resources or further contacts. The role of both strong and weak ties in the passing on of valuable information and ideas is highlighted in the results. Strong ties are the means by which ideas valuable to others in a network are recognised and passed on, whereas weak ties are more likely to be the original source of new ideas and information entering a network in the first place. Examples of the role played by weak ties include the Texas agent in the RMW case who introduced an Australian firm to a network of other distributors in Northern America; the professor at a research institute in the WSR case who introduced an Australian firm to key players in the US; the Chinese biotech company in the BSD case who linked an Australian firm to Chinese customers; and the government, i.e. Austrade, in the WSS case who introduced an Australian firm to a Taiwanese retail group. Examples of the role played by strong ties include the referrals made by the social contacts in Fuji Film offices (SSW case), the pattern maker friend and Chinese garment manufacturer (2SP case), the brother of the founder in Ireland (KEA case), good friends who became high level executives in Hong Kong Telecom, and T-Mobile UK (EMI) who provided important ideas and information leading to the discovery of further international opportunities by the firms in the respective cases. This supports prior research on the role of networks in internationalization (Johanson and Mattson, 1988; Coviello, 2006; Ellis and Pecotich, 2001; Loane and Bell, 2006; Bell, 1995; Coviello and Munro, 1995).

Relations and networks do not always confer advantage in opportunity recognition and exploitation. They can also limit, distort and blind firms, stopping them from seeing some types of opportunities or by blocking their access to key resources needed for exploiting them. Examples include the resistance posed by the UK maternity stores (RMW case) and the embeddedness in an architectural firm of Thompson Adsett's network (Case #8 in the exploratory research in Chapter 3). Therefore, the findings enrich the propositions on the role of networks as 'facilitators' as well as 'inhibitors' in international opportunity recognition.

Valuable new knowledge can come from deliberate search by firms looking for particular types of information (i.e. known unknowns), but such search can also produce unexpected results, revealing valuable information and ideas that the searchers were completely unaware of and were not seeking (i.e. the unknowable or so-called Knightian uncertainty). For example, in the ANC case, seeking for a pump supplier in Taiwan led to the unexpected discovery of a distributorship opportunity in Taiwan which further, again unexpectedly, led to opportunities in South Korea and more discoveries in South Korea (ANC case). In the 2SP case, seeking a garment manufacturer during the firm founding phase led to the unexpected discovery of a retail partnership opportunity in Guangzhou which further, again unexpectedly, led to franchising

opportunities in Greater China. In the KEA case, seeking opportunities with the UK Institute of Sports led to the discovery of the Scottish Institute of Sports, whose CEO happened to be an Australian (KEA case), and to new types of opportunities. This challenges prior research in entrepreneurship that downplays the role of deliberate search in the entrepreneurial process (see Shane, 2000). Deliberate search is important but not because we find out what we wanted to know, but because it causes people and firms to find out things that they did not know – things whose relevance and existence they were unaware of (i.e. the unknowable).

The actions of others who may be actively and deliberately searching also plays an important role in the discovery of opportunities by the focal firm. For example, in the case of WSR, the firm's discovery of opportunities in Canada was the result of active search conducted by a Canadian pharmaceutical company. In the case of WSS, the firm's discovery of opportunities to distribute new types of consumer goods to overseas markets was the result of approaches made by various consumer goods companies from Australia seeking to follow the firm's path to international markets.

Deliberate search may not be simply about seeking and finding known unknowns but is an active, creative process of opportunity formulation and negotiation. Being 'persistent', being around, and waiting for the information to diffuse in a network and for people to follow up were critical in the refinement and development process. For example, the creation of distributorships with large British department stores, Taiwanese 7-Eleven networks, Japanese Lawson convenience stores networks and a large Middle Eastern non-alcoholic group (WSS case) was a result of continuous persuasion and relationship development, as was the distributorship with Perkin Elmer Life Sciences (BSD case), and a large project with Hong Kong Telecom (EMI case).

As a firm's knowledge evolves and develops in the international markets, so does their ability to see new types of opportunities. Over time, the firm's opportunity space grows, which can cross the international and domestic contexts as well as leading to the founding of new firms in both international and domestic markets. Therefore, the refined propositions are stated as:

Refined Propositions

- P1: Prior knowledge is distributed unevenly across people/firms, places and time and embedded in the network of which a firm is a part of that can be accessed, exchanged, co-adapted, and co-created which influence the nature and likelihood of international opportunity discovery.
- P2a: New information necessary in international opportunity discovery can be encountered without deliberate search as a result of interactions, observation and commitment with others including strong and weak ties and from the action of others who may be actively searching, facilitating new coordination between connected actors, introducing and or, at times, blocking disconnected others.
- P2b: Deliberate search is about looking for the known unknowns but this can result in unexpected and unintended new information being discovered which influences the nature and likelihood of international opportunity recognition.
- P2c: Deliberate search involves an active, creative process of opportunity formulation and negotiation whose results may take some time to come to fruition.

International entrepreneurial orientation (IEO) and resources: Proposition 3

Initial Proposition

- P3: The international entrepreneurial orientation of a firm, in particular its international interests and motivation, and its resources, influence the likelihood of international opportunity discovery.

Discussion

The findings were consistent with the initial proposition that IEO and firm resources are two important factors that influence the likelihood of international opportunity recognition and development. More importantly, the findings have several implications for the proposition. First, the study offers support as well as clarifications of the IEO construct (Lumpkin and Dess, 1996; Knight and Cavusgil, 2004). The *innovativeness* dimension, that measures the R&D and innovation, creation of new products/services, changes to the product/services, was found to play an important role in the discovery, creation and development of international opportunities. This study found that both technological and business innovation are equally important in sustaining the firm's continuous opportunity recognition in international markets. In many cases, the innovation has a prior history and is awaiting someone to discover its new means-ends combinations. More importantly, the innovation does not occur in isolation but rather

involves knowledge exchange, co-creation, co-adaptation and co-development with prior and new network ties.

For example, the founder of BSD discovered a global niche opportunity from a novel neonatal screening instrument through his relations with a number of university professors. Based on initial feedback from end-users the technology was further refined, by relying on the professors' many decades of scientific knowledge and the founder's own entrepreneurial experience. The firm's participation in many international conferences led to further discovery of international opportunities in the US, Europe and Asia. This was related to the firm's own R&D and launch of new technologies and new versions of blood screening related instruments. The firm also co-developed more advanced, automatic neonatal screening instruments with Perkin Elmer Life Sciences and had cross-licensing with a former competitor, which led to the discovery of new international markets. More recently, the firm co-adapted its knowledge and technology in neonatal screening technology with Roche Diagnostics leading to the creation of opportunities in HIV screening technology and this allows them to tap into the emerging African market. This also supports the relationship between innovation with firm performance in international markets (see Knight and Cavusgil, 2004).

The *proactiveness* dimension, that measures a firm's tendency to initiate actions and precede others with new products/services or ways of doing things, was also found to play a key role in the firms' international opportunity recognition. The findings suggest that firms are more proactive in international markets when they have more international experience, knowledge and resources, which allow them to deliberately search for and develop international opportunities and build partnerships/alliances. This supports the Kirznerian view (Kirzner, 1997) that deliberate/systematic search is possible when the searcher knows what is missing and where to find it. The results suggest other factors that influence a firm's proactiveness, including the international nature of the industry and the availability of domestic opportunities. This dimension is closely related to the *aggressiveness* dimension. However, unlike the original measures of aggressiveness, the findings reveal that aggressiveness does not mean being aggressive to competitors (see Knight and Cavusgil, 2004; Lumpkin and Dess, 1996) but rather aggressively seeking to leverage opportunities when they present themselves. This propensity to leverage contingencies or exploit unexpected discoveries is based on effectual reasoning (Sarasvathy, 2001). This will be discussed in the next proposition. Aggressiveness is also influenced by prior international business/entrepreneurial experience, the nature of the industry that is international, the availability of domestic opportunities and the process of finding and being found by prior and new ties who are international. For example, WSS was proactive and aggressive in international markets due to the founder's extensive international experience and

knowledge and a lack of domestic opportunities. Once the firm successfully searched and developed international opportunities in the UK and the tacit experience and resources accumulated, the firm became more proactive and aggressive in the Middle Eastern and East Asian markets. In its subsequent development, the firm leveraged many opportunities that discovered them (i.e. Australian consumer goods company wanting to follow the firm's path to international markets), leading to the discovery and exploitation of opportunities to become a global trading company.

The *risk taking* dimension that measures a firm's propensity for risk taking and bold postures, was found to be an important factor that influences a firm's ability to see new means-ends combinations in international markets. However, results relating to risk taking reflect the opposing views seen previously in the literature (Brockhaus and Horowitz, 1986; Khilstrom and Laffont, 1979; Begley and Boyd, 1987; Gartner, 1988). The results suggest that risk taking does not appear to differentiate between firms that are highly successful in recognizing and exploiting international opportunities and those that are less successful. Success or not depends on many factors and contingencies that cannot be known in advance - all new ventures necessarily involve risk taking and not all succeed (Taleb, 2001). Highly internationalized firms ranged from those that can be described as prudent or calculated risk takers to relatively high risk takers. Furthermore, in any one firm the level of risk taking can be both high and low. This suggests that trait/psychological theories of entrepreneurship, that focus on the attributes of individuals/firms, are not as effective as process oriented perspectives of entrepreneurship that focus more on the role of information, capabilities and network ties (Gartner, 1988, 1990; Shane and Venkataraman, 2000). The presence of specific network ties was also found to influence focal firms' risk taking propensity as it help them cope with uncertainty in international markets. Moderate to strong positive attitudes to risk-taking helps opportunity recognition. However, there is evidence that extreme risk-aversion would cause a blind-spot that prevents the entrepreneur/firm from cognitively contemplating or formulating international opportunities (e.g. Case #6 in the exploratory study in Chapter 3). Another example includes the hairdressing franchise firm in the JCS case that discovered its first international opportunity in New Zealand. Although many further international opportunities discovered the firm, these have not been leveraged due to the firm's relatively low risk taking propensity.

The *autonomy* dimension, that measures the freedom to bring forth an idea and to be flexible, was found to play a key role in the firm's ability to recognize international opportunities. Throughout the cases in the exploratory study (Chapter 3) and the main study (Chapter 6), the firms strategic directions are controlled by the founders who are also the primary decision makers and uncertainty bearers. All firms in the cases have a good deal of freedom to try out

new ideas, take new initiatives and challenge conventions in international markets. These founders are not dictated by strict policies, regimes or strategies formulated by any higher authorities. This allows the firms to discover new opportunities and take any necessary approach to exploit them. For example, the digital proofing software firm in the SSW case has full autonomy of its novel ideas in printing software and turned its small domestic operations into an international firm by cooperating with a veteran marketer in the graphic arts industry. The firm operates by focusing on software development while allowing the marketer, who has extensive networks in the graphic arts industry, to be its international distributor. This flexibility also allows the software firm to continuously discover and create new technologies (e.g. suitable for complex characters and sharpen the printing reproduction) while the distributor firm continues to find unconventional ways of marketing the products to new country markets (e.g. OEM with Fuji Film, distributorship with Fuji and DuPont's network of distributors, and participation in online community of graphic arts firms).

In general, the findings reveal the role of others as important triggers of IEO (i.e. innovativeness, proactiveness, aggressiveness, risk taking and autonomy) and as resource extensions leading to interest and motivation to internationalize. This conveys a shift from viewing IEO as the property of an isolated firm to one that is distributed across firms, and whose interactions and relations can shape a focal firm's IEO. In addition, prior business or work involvement in the international markets, the international nature of the industry and/or the availability of domestic opportunities, play important roles in influencing firms' interests and motivation to internationalize.

Secondly, borrowing and utilizing the resources of others (i.e. *bricolage* through networks) as well as creatively using internal resources and capabilities to limit capital expenditures, are important ways of dealing with resource scarcity and uncertainty that influence the likelihood of internationalization. This offers support for the entrepreneurial bricolage (Baker and Nelson, 2005) and the resource-based view of interconnected firms (see Lavie, 2006). Examples of bricolage in international markets include operating under a very tight budget, not employing any staff until subsequent development, developing products that require minimal service, multiple tasking in organization, doing 'lego' engineering; as well as relying and accessing partner firms' sales teams and distribution networks to shift costs to other firms, outsourcing of operations, sourcing financing from external investors and borrowing credibility from the global firms.

Finally, IEO is self reinforcing; depending on international successes and failures and how the firm and its extended resources accumulate. There is a cyclical feedback between IEO and firm resources and international opportunity recognition, creation and enactment, rather than a one-way causation. A typical example of this can be found in the case of NUD where, after the factory fire that destroyed their assets, the firm's top management was replaced by new investors who injected a new interest into developing the domestic market instead. The telco slowdown caused a lack of international opportunities and reduced EMI's interest to pursue international opportunities and whose interest re-emerged following its domestic networks who internationalized and introduced new foreign agent and its resource accumulation from domestic opportunity pursuit for a number of years. Or the continued international success in developing the global synthetic wine corks markets that led to increasing IEO and firm resources and the NKC's foreign direct investment in the US and Europe. The findings clarify the role and sources of IEO and resource bricolage that mainstream theories of internationalization have largely ignored. The refined propositions are stated as:

Refined Propositions

- P3a: The international entrepreneurial orientation of a firm is a characteristic of a focal firm and shaped by its prior international experience and knowledge, interaction and relations with others, the international nature of the industry and/or availability of domestic opportunities which influence the likelihood of international opportunity discovery.
- P3b: Bricolage through networks, or borrowing and using resources and capabilities of others, as well as creatively using internal resources, are important ways of dealing with resource scarcity and uncertainty that influence the likelihood of international opportunity discovery.
- P3c: There is a cyclical feedback between IEO and firm resources and international opportunity discovery.

Absorptive capacity: Proposition 4

Initial Proposition

P4: Absorptive capacity, the ability and willingness of a firm to accept international risks and uncertainties, moderates the relationship between (a) prior knowledge, (b) network ties, (c) nature of the firm and the international opportunity discovery.

Discussion

The findings support the initial proposition that absorptive capacity moderates the relationship between prior knowledge, network ties, IEO, firm resources, and the international opportunity recognition/creation/enactment. Prior knowledge, new knowledge from network ties, IEO, and firm resources alone is not sufficient for opportunity recognition which requires the ability to see their relationship in new ways, and to adapt and experiment to perceive new means-ends combinations (i.e. absorptive capacity). For example, the biotechnology firm in WSR had personnel with expertise in biotechnology and was exposed to a large US nutraceutical firm by a research professor at a research institute where they did clinical trials. Despite the presence of prior knowledge, prior and new ties, the opportunity for licensing seaweed extracts to the US firm would not be discovered without their ability to formulate these new means-ends combinations. When the firm was contacted by a Canadian pharmaceutical firm to produce pharmaceutical grade seaweed molecules it was their ability to combine the new and prior knowledge, and their internal resources, that allowed them to see the means-ends relationships in new ways.

The results clarify the absorptive capacity construct and offer additional ways of operationalizing the construct that has been defined as the ability to acquire, assimilate, transform and exploit knowledge or a measure of R&D activity (Cohen and Levinthal, 1990). In other words, absorptive capacity involves other psycho-socio dimension, as the following:

First, it involves an attitude of *openness* to new possibilities suggested by the environment. Firms may be exposed to new stimuli such as new information, resources, people/firms, intentionally or unintentionally but these may go unnoticed or ignored if there is a lack of openness to consider new possibilities in the means-ends relationships. The lack of openness to consider new possibilities may help explain what Kirzner calls ‘sheer ignorance’ (Kirzner, 1973) in the market process. In other words, Kirznerian ‘alertness’ may require an attitude of openness to new possibilities. For example, the hairdressing franchise firm in the JCS case had convictions that their New Zealand master franchisor was the only type of person who could be a successful partner in their international expansion (i.e. so-called Scott’s Model). Later, the

firm was approached by a number of firms and individuals from various countries which unfortunately did not fit the Scott's Model. Due to their unwillingness to consider new possibilities, the firm did not see a single international opportunity for a long period of time.

Second, absorptive capacity involves a sense of *judgment* about what information is appropriate to absorb and believe. This is a process of information filtering when the firms find or are found by new information, resources, people/firms. The findings suggest that it is easy for individuals and firms to let go of or misperceive an opportunity without the ability to judge the trustworthiness of various information they encounter. However, the quality of judgment can improve through learning by doing and learning from others. For example, the firm in the WSR case was advised by consultants to pursue a 'drug route' (which is costly and lengthy) but they showed good judgment and followed a US entrepreneur's advice to pursue a 'nutraceutical route' instead. Eventually this was a very viable option that paved the way for the firm's success in the global nutraceutical industry. The children's fashion company in the 2SP case was able to judge the trustworthiness of market information supplied by the Chinese manufacturer and felt the 'vibes' that the manufacturer was a good business partner. These played key roles in their ability to recognize international opportunities.

Third, the findings suggest the limitations of what individuals or firms know or can absorb and process and that the openness, judgment and creative intelligence of connected others may influence the focal individuals'/firms' ability to see and create new means-ends combinations. This leads to the notion of '*distributed absorptive capacity*', as a capacity that lies in others, in the network of relations not in the actors themselves, that may shape a focal firm's creative intelligence. For example, the biotechnology firm in the BVA case was able to recognize the global opportunity of the non-drug route (i.e. nutraceutical) because of knowledge and ideas from the German nutraceutical company, who already knew how to get into the market without the costly and lengthy drug route. The digital proofing software firm in the SSW case was able to discover new OEM opportunities in Japan due to its OEM partner's (i.e. Fuji Film) launch of a new branding concept.

The results show that analysis in entrepreneurship cannot be separated into single firms or individuals as has been suggested in the literature. Nor can it be measured only in terms of R&D or patent citation (Cohen and Levinthal, 1990). As shown in the preceding discussions, internationalization is an innovative activity produced via relations and networks and is consistent with the view of collective intelligence as the origin of innovation and wealth (Beinhocker, 2006; Wilkinson and Young, 2005; Hargadon, 2003). This clarifies the importance and meaning of absorptive capacity in opportunity discovery, creation, enactment or refinement,

which receives scant attention in the mainstream theories of internationalization. The refined proposition below is different from the initial proposition in that it expands the construct of absorptive capacity that includes psycho-socio dimensions. The refined proposition is restated as:

Refined Propositions

- P4a: Absorptive capacity, or the openness, judgment, willingness and ability of a firm to see means and ends in new ways, moderates the relationship between (a) prior knowledge, (b) network ties, (c) firm resources, (d) international entrepreneurial orientation and the international opportunity discovery, creation or enactment.
- P4b: The absorptive capacity of network ties and relations (i.e. distributed absorptive capacity) shape the nature and likelihood of a focal firm's international opportunity discovery, creation or enactment.

The nature of decision making in internationalization (an implied proposition)

The nature and evolution of decision making emerged as an important factor that influences the internationalization process, which was not fully appreciated in the initial model and propositions. The logic of decision making in the early stages of internationalization is consistent with *affectual and effectual reasoning or non-predictive approach* (Sarasvathy, 2001; Wiltbank et al., 2006; Ambler and Styles, 2000). That is, when facing the complexity and uncertainty in the international markets (i.e. Knightian uncertainty prevails), boundedly rational agents/firms leverage contingencies, rely on affordable loss thinking, form partnership and alliances rather than competitive analysis (Sarasvathy, 2001), rely on fast and frugal heuristics (Simon, 1997; Gigerenzer et al., 1999; Gigerenzer and Selten, 2001; Goldstein and Gigerenzer, 1999; Gigerenzer and Goldstein, 1996), and on entrepreneurial bricolage (Baker and Nelson, 2005). Evaluation is not a sharp decision point as it is a matter of developing opportunities to the point of action/exploitation. In this process, emotions and feelings play a role more than the rational calculation or systematic evaluation of alternative opportunities. Alternative effects are discovered, created and refined rather than chosen, supporting the notion of 'strategy absence' (Inkpen and Choudhury, 1995) and is consistent with prior research (Coviello and Martin, 1999; Ellis and Pecotich, 2001; Simmonds and Smith, 1968). The propensity for effectual and affectual reasoning is influenced by joint interactions with prior and new ties who may also exhibit the propensity for effectual and affectual reasoning. The results show that this reasoning can be effective in dealing with uncertainty but can also lead to biases and errors in decision making in international markets.

Effectual and affectual reasoning has implications for the firms' timing and location of internationalization, the dynamics of entry mode, the number of opportunities exploited, and number of modes of entry used at any point in time. The findings suggest that the *location* of the early stages of international market entry is primarily influenced by the location of prior ties in foreign markets, the location of new ties that found the focal firms, as well as decision heuristics. This provides support for the Network Perspective in explaining the location of internationalization (Johanson and Mattsson, 1988; Coviello and Martin, 1999; Crick and Jones, 2000; Harris and Wheeler, 2005). This reasoning also influences the *timing* of internationalization, since firms do not wait for the most optimal opportunities (which they cannot know in advance) or evaluate alternative opportunities but decide to pursue the opportunities they first find and do not leave the window of opportunity open for too long. This automatic, spontaneous, effortless, heuristic processing, highly socialized and contextualized type of reasoning rather than analytic processing, effortful, deliberately controlled reasoning (Stanovich and West, 2000; Kahneman and Tversky, 2002, 1979) triggers early and accelerated internationalization.

Mode of entry in the early stages of internationalization is influenced more by the logic of control than prediction, entrepreneurial bricolage, co-evaluation/co-adaptation with network ties, and extension of prior business models for simplicity and familiarity reasons. Therefore, cooperative modes and contractual modes such as partnerships, alliances, distributorships, exporting and licensing are commonly used. Effectual and affectual reasoning also leads to the pursuit of multiple international opportunities at any one time and to multiple entry modes as firms adapt to opportunities in varying contexts and situations.

Over time, firms learn more about what they did not know, experience direct attention to some issues, and goals, options and preferences are better defined. Moreover, resources and network ties further develop and opportunities become more refined (i.e. known unknowns develop) and the nature of decision making increasingly follows *causal reasoning*, *rational planning* or *predictive approach* (Sarasvathy, 2001; Ansoff, 1979; Porter, 1980; Schoemaker, 2002). As problems and opportunities become clearer and more refined, firms have clearer choice criteria in opportunity evaluation, opportunity costs become an issue, less profitable/potential opportunities are pruned in favour of more ideal alternatives, and predictive strategies become possible. While firms may not have a strategy or a so-called 'strategy absence' (Inkpen and Choudhury, 1995) in the early stages of internationalization, they already have more choices and options in the later stages which they can select and integrate that makes the set a strategy (see Rumelt et al., 1991).

The propensity for causal reasoning at the later stages of internationalization influences a firm's location, mode of entry, and number of opportunities exploited. The findings suggest that many firms at the later stages of internationalization conduct deliberate/systematic opportunity search and development in country markets where they can pursue more attractive opportunities based on more developed knowledge of international markets. This not only impacts on the choice of *location* but also the *sequence* of international market entry. This is consistent with the Eclectic Paradigm's Locational (L) Advantages in explaining and predicting the pattern and location of internationalization. Although the location of subsequent international market entry for many firms in the sample is still influenced by network ties, the choice of location becomes more selective at the later stages, based on the network ties that present more potential opportunities. This reveals the transformation from socio *and* economic ties towards more economic and calculative ties and is consistent with prior research (Hite and Hesterley, 2001). This provides further support for the Network Perspective in explaining the location of subsequent internationalization.

This reasoning also influences the *timing* of internationalization as the decision to enter may become less spontaneous but somewhat slower because it involves more systematic and careful evaluation of alternatives. This analytic processing, effortful, deliberately controlled reasoning (Stanovich and West, 2000; Kahneman and Tversky, 2002, 1979) play increasing roles because firms pursue more lucrative opportunities and are exposed to higher risks. The propensity for causal reasoning lead to the choice of a higher-control/return/risk *entry mode* such as foreign direct investment, or cooperative modes but with higher-control/return/risk mode such as OEM partnership. This is consistent with the Internalization (I) logic in the Eclectic Paradigm. This reasoning also influences the number of opportunities exploited as firms focus on fewer but more lucrative international opportunities.

The findings reveal that the transition of mode of reasoning is not absolute or deterministic but varies among firms due to the role of routines, habits and transition of leadership from entrepreneurs to professional managers. It can include a combination of effectual and causal reasoning simultaneously, i.e. 'quasi-causal' reasoning; as well as consistent reliance on effectual reasoning.

In summary, this study shows that the nature of uncertainty is an important contingency that influences the patterns of firm decision making and behaviour in international markets over time. When Knightian uncertainty (the unknowable) prevails, including the early stages of internationalization, the nature of decision making is influenced by effectual and affectual

reasoning and non-predictive approaches. When known unknowns develop over time, the nature of decision making increasingly follows causal reasoning and rational planning.

The example can be seen in the evolution of decision making in the following cases. In the SKY case, the firm initially relied on effectual reasoning in its market entry to Malaysia and the US. The distributor and client in the two countries were found at a conference and through a prior ties' tie, respectively. The decision to enter these markets and the choice of entry mode were not subject to systematic analysis or followed strategic planning. Although these attempts were not highly successful, they offered tacit experience and helped refine the firm's objectives, preferences and alternatives. A few years after the initial entry, the firm developed formal strategy and planning to enter international markets by hiring a new CEO with extensive international experience in the IT industry. They also conducted extensive business planning and capital raising. At the time of data collection, the firm was in the middle of executing a grand expansion plan to Europe. In the BVA case, the initial market entry to Germany was based on effectual reasoning, by accessing the co-founder's prior network ties with a German nutraceutical firm. No rational, systematic planning was conducted and they followed the strategy that had proven effective for the German company. The mode of entry, i.e. licensing, was used as it is the easiest way of handling the logistics of the dried bioactive powder. The timing of entry was early, based on a spontaneous decision to internationalize in order to accumulate resources for further R&D. As the resources and knowledge accumulated, the firm conducted more formal international market entry planning and targeted large biotechnology firms as partners. In the BSD case, following many years of tacit experience and network tie development in international markets, the firm increasingly relied on a predictive approach to create the next wave of technology for neonatal screening and HIV testing.

In the EMI case, the firm exclusively relied on effectual reasoning in the initial years. Its initial location of international market entry (i.e. France, UK) was influenced by the prior international networks of the founder and another firm member. The initial decision for international market entry was fast and led to early internationalization. There was no systematic planning or analysis of the mode of entry, and the firm almost always leveraged any opportunities found. In later years, the firm relied on strategic planning, systematic opportunity evaluation using established criteria, and created a proper board of directors and considered opportunity costs. But they also simultaneously relied on effectual reasoning (i.e. quasi causal) such as from personal contacts and referrals to enter the Indian and South African market. In the KEA case, the firm showed a consistent propensity for effectual and affectual reasoning through to the later stages of internationalization. International opportunities were exploited based on those they happen to find, for instance finding them in international tennis tournaments, through

serendipitous encounters and network ties' ties in Ireland, and the gradual network development with various UK sport institutes.

Consequently, there is an evolution of the nature of decision making throughout a firm's trajectory which depends on the nature of uncertainty (i.e. the unknowable/Knightian uncertainty to known unknowns). This highlights the importance of the nature of uncertainty as a moderating factor that shapes the pattern of decision making. It also describes the connection between each theory of internationalization that has explained different parts of the overall phenomena, for example the causal reasoning at the later stages of internationalization can explain the logic of the Eclectic Paradigm and Uppsala Model, while the effectual reasoning explains the logic of the Network Perspective. This leads to the next proposition:

New Proposition

- P5: The nature of uncertainty is an important contingency that shapes the pattern of decision making. When Knightian uncertainty prevails, the decisions to act will be influenced by effectual and affectual reasoning. Over time, when known unknowns develop, causal reasoning and rational planning play increasing role.

Path dependency and cyclical feedback in internationalization: Proposition 5 & 6

Initial Propositions

- P5: The pattern of international opportunity refinement, development, and exploitation is path and history dependent. Earlier acts produce feedback effects that shape future acts in important ways, leading back to further refinement of identified opportunities and/or the identification of new opportunities as well as to subsequent internationalization acts and decisions.
- P6: The act of refining and developing international opportunities leads to learning by doing, further search with possibly unexpected results, further opportunity refinement and development, and the development and depletion of resources and network ties.

Discussion

The findings are consistent with the initial propositions. However, the nature of uncertainty and an evolutionary process of internationalization emerged as important factors in firm internationalization, which was not fully appreciated in the initial model and propositions. The outcomes of the exploitation in the form of refinement have additional multi-dimensional

feedback effects on the development and depletion of the firm's resources and network ties, and on its attitude and interests in the international markets (its international entrepreneurial orientation). There is a co-evolution between a firm and its extended or network enterprise and the paths of internationalization of firms are a function of their history and characteristics as well as the international activities taking place in other parts of the networks in which they operate.

Learning in international markets is multifaceted and multidirectional: opportunities feed off each other and may develop progressively or morph in direction to other opportunities. This clarifies the initial model by revealing the interconnectedness of opportunities over time, between founding and international opportunities, interactions between domestic and international opportunities, and among international opportunities. The presence of Knightian uncertainty means that, in addition to these patterns, refinement can also lead to decreasing commitment leading to de-internationalization as a firm retreats from opportunities that turn out not to be viable. The firm may temporarily hold back to prepare the development of international opportunities on a larger scale, or retreat to re-entering international markets in light of new opportunities, the redevelopment of old opportunities in light of new information, a selective development and termination of opportunities, or the discovery of opportunities in new domains unthought of at the outset. Uncertainties arising from the unpredictable actions of others and/or force majeure still leave room for surprises, miscalculations and mistakes which cannot be known in advance.

Over time, creative effectuation processes, experimentation with new opportunities, new ways of doing things and business partners, generate tacit knowledge and alternatives. As choices and opportunities are more refined (i.e. known unknowns develop), causal reasoning plays an increasing role. The rationale of interconnectedness of opportunities, nature and evolution of uncertainty, as well as the nature and evolution of decision making, offer an explanation of the diversity of firm behaviour that is not well explained by mainstream theories of internationalization.

Finally, the findings suggest that international opportunity development is an evolutionary process, supporting the Uppsala Model. New ventures may not necessarily be 'new', except in a legal entity sense, as they can be an extension of prior opportunity development and refinement in which prior knowledge and resources can be adapted. Prior relationships, contacts and energies can be brought forward, resources and knowledge of connected others accessed and firms can find or be found by new ties, becoming part of the other's ongoing opportunity development and these others may already have established resources, knowledge and network

ties. This provides an explanation for the appearance of 'born global' that may have a far longer actual gestation period, which appears to be missing from the explanation and prediction of mainstream theories.

For example, in the RMW case, the firm started as a supplier to maternity wear stores in the domestic market in 1996. Some two years later, the firm was legally established. In 1999, the firm was discovered by an opportunity in Dubai (UAE) while the founders were organizing stocks in a Western Australian department store. This led to an initial interest to pursue international markets. One of the staff sent product catalogues to US fashion agents and one of these inadvertently reached a prominent agent in Texas. The agent saw the value of the new product and involved other agents from Los Angeles, New York, Atlanta and Canada to co-exploit the opportunity. The firm was included in the agents' ongoing opportunity development where knowledge of the US market, resources and network ties have accumulated over a long time. The firm became born global and derived about 45% of its revenues from international markets.

In the SSW case, the original software for sophisticated colour printing had already been invented many years earlier when the founder was still a university student. The firm was revived in 1994 after the founder accumulated significant work experience in a company that developed printing technology. Through a referral, the founder was introduced to a veteran marketer in the graphic arts industry who had extensive networks with the distributors of Fuji Film and DuPont in the Northern America, Europe and Australia. This chance encounter led to the co-development of opportunities in a novel digital proofing software, by combining the prior knowledge of both individuals leading to a partnership and the establishment of a new firm as the international distributor in 1996. The distributor then tapped into his extensive networks globally and was included in the opportunity development of Fuji Film. One Fuji Film office introduced the firm to other Fuji offices in other countries and, in 1999, the firm was discovered by the New York Times, who then referred it to new opportunities with the Wall Street Journal and Chicago Tribune. This led to 500% growth in that year. As a part of Fuji Film's ongoing opportunity development, the firm accessed Fuji's resources and distribution networks. When Fuji Film spun off a new brand to market the software to different segments in 2005, this led to another 500% growth in SSW. The firm appears to be born global, but the role of history and prior opportunity development of both founders was critical. Equally critical, is the role of others with established resources, knowledge and networks who include the focal firm as part of their opportunity development. The refined propositions are stated as:

Refined Propositions

- P6: The pattern of international opportunity refinement, development, and exploitation is path and history dependent. Earlier acts produce feedback effects that shape future acts, resources and network ties in important ways, leading back to further refinement of identified opportunities and/or the identification of new opportunities leading to increasing commitment or changing directions due to uncertainty.
- P7: The formation of born globals follows an evolutionary path, which involves the creative identification and recombination of knowledge, resources and network ties that have accumulated over time from prior histories and established sources that is spread across people/firms, places and time.

Table 7.1 provides a summary of the refined propositions.

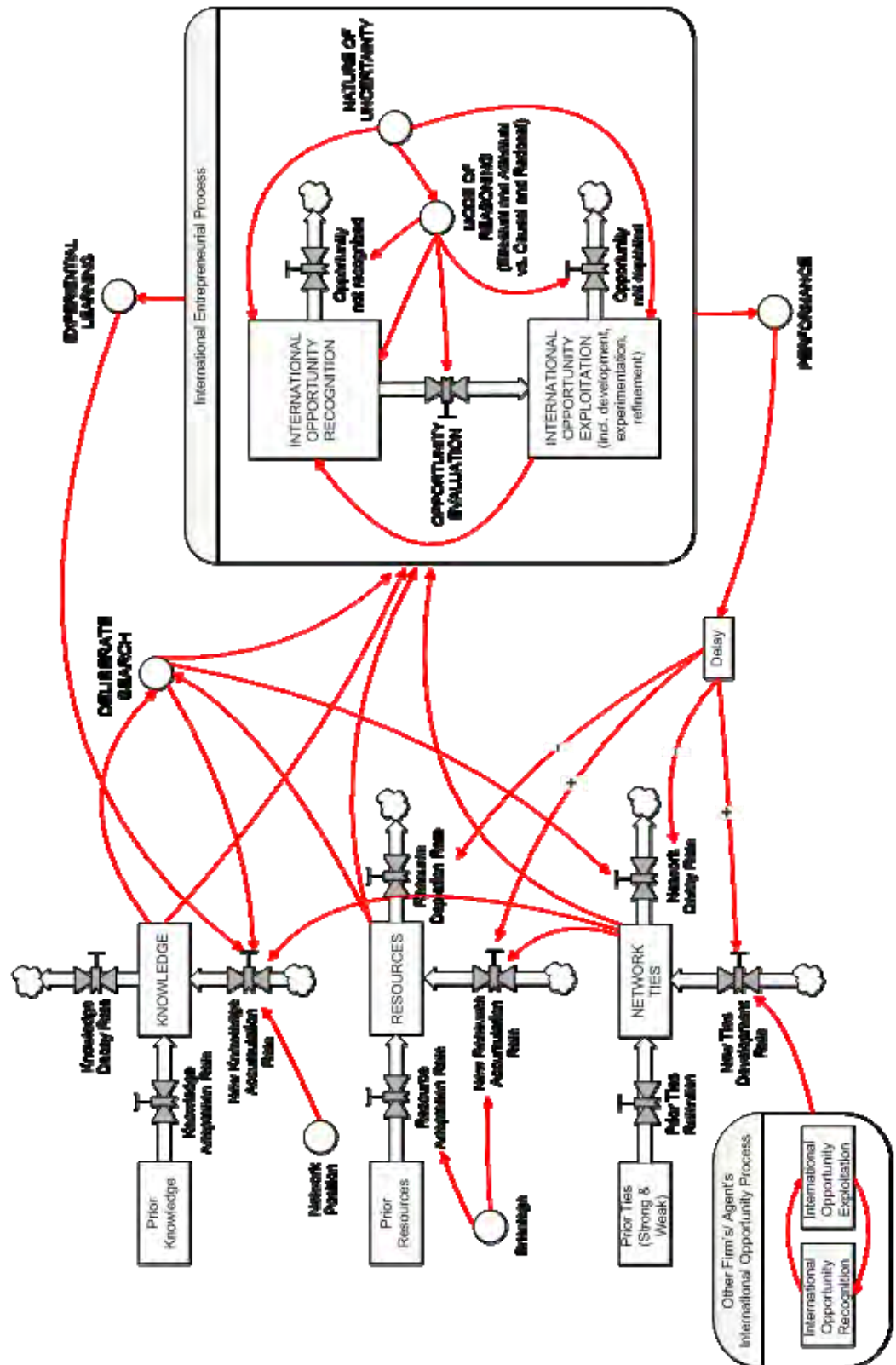
Table 7.1 - Summary of refined propositions

- P1: Prior knowledge is distributed unevenly across people/firms, places and time and embedded in the network of which a firm is a part of that can be accessed, exchanged, co-adapted, and co-created which influence the nature and likelihood of international opportunity discovery.
- P2a: New information necessary in international opportunity discovery can be encountered without deliberate search as a result of interactions, observation and commitment with others including strong and weak ties and from the action of others who may be actively searching, facilitating new coordination between connected actors, introducing and or, at times, blocking disconnected others.
- P2b: Deliberate search is about looking for the known unknowns but this can result in unexpected and unintended new information being discovered which influences the nature and likelihood of international opportunity discovery.
- P2c: Deliberate search involves an active, creative process of opportunity formulation and negotiation whose results may take some time to come to fruition.
- P3a: The international entrepreneurial orientation of a firm is a characteristic of a focal firm and shaped by its prior international experience and knowledge, interaction and relations with others, the international nature of the industry and/or availability of domestic opportunities which influence the likelihood of international opportunity discovery.
- P3b: Bricolage through networks, or borrowing and using resources and capabilities of others, as well as creatively using internal resources are important ways of dealing with resource scarcity and uncertainty that influence the likelihood of international opportunity discovery.
- P3c: There is a cyclical feedback between IEO and firm resources and international opportunity discovery.
- P4a: Absorptive capacity, or the openness, judgment, willingness and ability of a firm to see means and ends in new ways, moderates the relationship between (a) prior knowledge, (b) network ties, (c) firm resources, (d) international entrepreneurial orientation and the international opportunity discovery, creation or enactment.
- P4b: The absorptive capacity of network ties and relations (i.e. distributed absorptive capacity) shape the nature and likelihood of a focal firm's international opportunity recognition, creation or enactment.
- P5: The nature of uncertainty is an important contingency that shapes the pattern of decision making. When Knightian uncertainty prevails, the decisions to act will be influenced by effectual and affectual reasoning. Over time, when known unknowns develop, causal reasoning and rational planning play increasing role.
- P6: The pattern of international opportunity refinement, development, and exploitation is path and history dependent. Earlier acts produce feedback effects that shape future acts, resources and network ties in important ways, leading back to further refinement of identified opportunities and/or the identification of new opportunities leading to increasing commitment or changing directions due to uncertainty.
- P7: The formation of born globals follows an evolutionary path, which involves the creative identification and recombination of knowledge, resources and network ties that have accumulated over time from prior histories and established sources that is spread across people/firms, places and time.

7.3. A refined model of internationalization as an entrepreneurial process

The refined model views internationalization as an entrepreneurial process, as the process of recognizing, developing and refining opportunities in the international markets under conditions of Knightian uncertainty where the future outcomes are unknown and unknowable. The entire process depends on a firm's starting conditions including its prior history and learning as well as those of other economic agents directly and indirectly connected to the firm, which both enable and constrain its ability and willingness to recognize and exploit international opportunities and to cope with uncertain outcomes. It involves an ongoing process of discovery, active learning and further discovery in which earlier acts of recognition, development and refinement shape subsequent acts in a history dependent manner. The process involves many actors connected over time and space that co-evolve together with the environment, as actors recognize and exploit opportunities and act and respond to each other's actions. Two interconnected sub-processes may be distinguished (a) a creative recognition process and, (b) an exploitation and commitment process as summarized in Figure 7.1. The nature of uncertainty is an important contingency that shapes the pattern of decision making, from entrepreneurial/effectual reasoning to managerial/causal reasoning as firms learn more about opportunities and problems over time, as knowledge about opportunities is refined, confirmed and adapted (i.e. known unknowns develop) and firms have a clearer choice criteria in the internationalization process. The following section discusses the central feature of the model.

Figure 7.1 – A general model of internationalization as an entrepreneurial process



International opportunity discovery

Opportunity discovery, development and refinement is really part of the overall exploitation process as firms learn more about an idea they may have, act on it, change it, and commit resources to it. Opportunity discovery is a creative cognitive act in identifying new means-end relationships by recombining ideas, knowledge, resources scattered among people/firms, places and time in new ways, that add value. “Seeing” such new combinations involves judgments or beliefs about possible futures that are possible in a world of Knightian uncertainty. Thus it is a matter of subjective personal beliefs rather than a rational calculation and prediction of alternatives, unless the opportunity involves only a minor change in established markets. The entrepreneurial process can begin with initial discovery and is followed by further refinement as well as exploitation which involves searching, developing and experimenting in order to determine if there is real and substantial opportunity or not. This cycle shapes subsequent patterns of refinement as firms and their network of stakeholders make greater commitment or change course. It is a process of groping forward or muddling through as known unknowns gradually develop.

All firms have different histories, i.e. experience, prior knowledge, network ties, orientations and resources, which endow them with different capabilities and willingness to see different kinds of opportunities and to act on them. Prior knowledge is not only about what a firm knows but also about what it knows others know in its network, especially that which it can access or use. Prior knowledge is distributed unevenly across economic agents because of history and circumstances. New additions to an actor’s knowledge can come about in various ways as it acts and interacts with others. New information can be encountered without deliberate search as a result of interactions, observation and commitments with others including strong and weak ties, and from the action of others who may be actively searching. The character of prior knowledge is critical, for this shapes productive combination and recombination of knowledge leading to new insights and discoveries that are possible. But no one knows in advance what prior knowledge is relevant.

Deliberate search is about looking for the known unknowns but this can result in unexpected and unintended new information being discovered. Internet and garbage cans (i.e. places where people/firms congregate) such as conferences can facilitate information search and being found by others, but having the necessary knowledge ingredients does not automatically create opportunity – just like baking a cake, one has to be willing and able to recombine the ingredients to produce a new opportunity “cake”. This is an active cognitive and emotional act.

In assembling/creating an opportunity, missing pieces of information become apparent, new known unknowns result in further search with maybe further unexpected results. While the entrepreneurship research describes opportunities as discovery vs. creative vs. enactment (Kirzner, 1997; Alvarez, 2005; Sarasvathy et al., 2003), the cases reveal no sharp distinction among types of opportunities. All involve a creative mental act to see things in new ways and to perceive new means-ends combinations, and are all part of a more general process of groping forward. Discovery suggests an opportunity pre-exists but this is only true in the sense that productive recombinations of knowledge are potentially available given current knowledge. One cannot combine existing knowhow with yet to be invented technologies. But we have no way of knowing how many such potential opportunities may exist at any time, what percentage are found and what stops others from being found.

International opportunity exploitation

Opportunity recognition and deliberate search can both be part of the initial phase of internationalization. Opportunity development and refinement follows, through the actions involved in identifying and constructing resources and additional information, and in recruiting others to become involved as collaborators or customers. Opportunity development and evaluation tend to fade into each other as firms evaluate the viability of opportunities through attempts at exploitation – learning and evaluating by doing and seeing. Decisions to act are based on cognitive and affective reasoning. Emotion and feelings play a role because entrepreneurship is dealing with an unknowable future about which subjective judgments are formed. Opportunities are developed and refined until they reach a point where they become actionable to make further progress. Learning by doing and trying something to see if it works is effectuation but it is also experimentation, however systematic experimentation based on prior theories of the market and the future are not done (at least to begin with) because of Knightian uncertainty.

Firms tend to rely on whatever simple means they have at hand rather than the most appropriate and effective methods including what they know and have, who they are and whom they know (Sarasvathy, 2001). Furthermore, they co-develop resources and opportunities with [a] others who discover or make a decision for them, [b] whom they discover, and [c] whom they can persuade and obtain commitment from. All firms have their initial conditions, and this involves starting with what they have and know and working with it until they learn more and have more. As a result contractual mode (e.g. exporting, licensing) and cooperative mode (e.g. distributorship, alliances) are prevalent in the early stages of internationalization and it is not uncommon that the mode depends on the creativity, judgment and requirements of others. The process is creative and entrepreneurial in character as the firm does not know all that is required

to exploit an opportunity when it begins, or all potentially relevant partners - it still faces Knightian uncertainty.

The opportunity development/refinement process leads to learning by doing and further search with possibly additional unexpected results as the firm interacts with others, including actual and potential customers, suppliers, competitors and complementors and observes the consequence of their own and others' actions. The firm may discover opportunities that it did not start out looking for and be discovered by others as part of an opportunity being developed and refined by them. Such unexpected discoveries may be facilitated by weak ties that bridge structural holes to international markets, or the weak ties of connected others passed on to those with whom they have strong ties, i.e. strangers who play a 'tertius iungens' role (Obstfeld, 2005) by uniting their connected others to co-exploit opportunities or simply pass them on to others they know. The firm may also stumble and pursue opportunities that turn out to be misguided but from which learning still occurs – all of which enhances its subsequent absorptive capacity and its ability to better differentiate among potential opportunities.

Discoveries during the refinement process may occur in various forms of Schumpeterian innovation from new product, new market, new supply, new ways of organizing, to new processes – that can cross domestic and international markets and lead to the creation of new firms by any parties involved. Over time, as opportunities and subsequent actions by a firm and others results in new resources, recombinations of resources and knowledge, a history is built which cannot be known or planned in advance. The outcomes of the exploitation in the form of refinement and international market entry have additional multi-dimensional feedback effects on the development and depletion of the firm's resources and network ties, and on its attitude and interests in the international markets (its international entrepreneurial orientation).

What and how a firm exploits an opportunity and the way they move into and out of domestic and international markets, affects what it can see in the future, what new types of information may come its way, and the resources it has or can access or know about. The opportunities accessed, developed and exploited, its network ties, and the opportunities exploited by others offer future potential sources of ideas, knowledge and resources which can be recombined, refined, and exploited as future opportunities.

The linearity and non-linearity of international opportunity development

Opportunity development and refinement can involve an incremental process of increasing commitment as reflected in the Uppsala/Stages Model of international market development or it can involve periods of punctuated evolution as new markets and type of opportunities come into focus. Depending on what is learnt and found along the way, firms may develop different abilities to and willingness to cope with the uncertainties and outcomes that eventuate. Seemingly insignificant events and decisions can lead a firm down one path and away from others that it may never become aware of. Events, contacts, decisions and opportunities in the past can re-emerge later and play an important role in shaping the direction of the firm in international markets. Thus the course of refinement may not always lead to a progressive commitment to international markets as in the Uppsala/Stages Model but also to [a] decreasing commitment leading to de-internationalization as a firm pulls back from opportunities that turn out to be not viable, [b] temporarily hold back to prepare for the development of international opportunities on a larger scale, [c] retreating to re-entering to international markets in light of new opportunities, [d] selective development and termination of opportunities, and [e] re-development of old opportunities in light of new information and circumstances. These processes go on in parallel among firms that may be or become connected, influencing each other's pattern of development as they become interdependent.

The evolution of mode of reasoning in internationalization

Over time, knowledge about opportunities is revised, confirmed and adapted, alternative opportunities are created and recognized, and new means and ends can be known and formulated. A firm's procedural knowledge and know-how, its skills and abilities in responding to and evaluating actual opportunities and knowing where to look, develop, as well as the content of its knowledge. As opportunities become more precisely formulated and targeted, new types of problems emerge calling for different types of expertise and resources including professional management and more disciplined planning and evaluation methods. This results in a transition from effectual reasoning more to causal reasoning involving strategizing and use of technologies of rationality (March, 2006). This varies by firm and circumstances including their resources, motivations, experience, inertia and whether the founder(s) fully relinquish control to professional managers and CEOs. The nature of the markets and industries, their turbulence and complexity also matters. Effectuation, experimentation and learning by doing are sources of variation due to the way knowledge gets recombined. The way firms try new things, run into opportunities by chance and because of opportunities they create or discover, lead to knowledge flows around networks that affect what is seen by whom, and where and how it is acted on. Over time, viable ideas and opportunities, behaviour and business partners, are selected based on performance, learning and imitation, as are retention and reproduction.

Feedback mechanism in international opportunity development

The process of opportunity development/refinement continues and contingencies and feedback effects shape the pattern of development over time leading to patterns of opportunity development that are path dependent, in which history matters. Sometimes the cases suggest that similar types of outcomes are likely to have occurred no matter where or how a firm began to see and exploit a particular type of opportunities. This may be because the nature of the market and customers, in hindsight, are clear. While the order of exploitation and refinement of an opportunity could depend on particular contingencies the final outcomes are predestined in some way. For example, the hospital and the neonatal screening technology (BSD case) eventually had to find its way into the main hospitals in the developed world. But not all paths are possible and the exploration of the space of possibilities is history and path dependent. There is no reason to believe that optimal solutions and outcomes eventually arise for a particular firm or for firms and networks in general (although firms may “perceive” the presence of optimal outcomes based on technologies of rationality in use) and the most efficient discovery and exploitation paths cannot be known in advance.

There is a constant co-evolution of firms, networks and environments as actors discover and exploit opportunities and act and respond to each others’ acts of discovery and exploitation. In this way the waves of creative destruction and innovation described by Schumpeter take place and the economy and business change and evolve. A proliferation of opportunities arises over time or, as Holcombe (2003) described it, as one entrepreneurial act stimulates, enables, and begets others for one firm or person or another, but not all, potential opportunities are discovered and acted on. We have no way of knowing what percentage of potential opportunities are discovered, although work in evolutionary modeling gives some insights about this. The heterogeneous starting conditions and history of different firms, relations and networks, means they do not all see the same opportunities or exploit them the same way: business is a massively parallel system for processing opportunities that guarantees that many different types of opportunities are seen and acted on, but not all or even necessarily the best ones.

7.4. Implications for existing theories and models

The refined model offers a more dynamic, process oriented view of firm internationalization that explains how the international involvement of a firm develops and evolves over time. It helps address the processual gaps in the current theories as well as clarifying some of the ambiguities in light of the recent progress in international business, including born globals. Broadly speaking, existing theories of internationalization predominantly leave the issue of ‘opportunity’ and ‘seeing’ the opportunity at the periphery of their argument. But this is where the strength of an entrepreneurship lens lies. Moreover, the concept of ‘seeing’ is related to the concept of ‘thinking, refining and developing’ opportunities – which also appears to be lacking in these theories/models.

Johanson and Vahlne (1977, 1990) repeatedly used the word “opportunity” in their discussion of internationalization but did not provide an explanation as to why or how an opportunity is recognized. Some 25 years later they recognized this when they note that, “the opportunity side of the internationalization process is not very well developed in our earlier papers” (Johanson and Vahlne 2006, p.167), and went on to emphasize the importance of opportunity in the Uppsala/Process model. Despite its long historical development and recent update, the Uppsala School still seems to pay little attention to the nature of decision making and the nature of uncertainty that may influence the pattern of development of internationalization of a firm.

Similarly, proponents of the Network Perspective of internationalization have acknowledged the role of opportunities arising from social and business networks, however the process of recognizing/creating the opportunities and the nature of decision making that may account for this unsystematic and “messy” behaviour receive scant attention in their model (see Ellis and Pecotich, 2001; Johanson and Mattsson, 1992; Jones, 1999; Bell, 1995).

The Eclectic Paradigm (Dunning, 1977, 1980, 1988, 1993) implies that Location (L) and Ownership (O) of specific resources are sources of international entrepreneurial opportunities. It assumes that firms are in a position to systematically and rationally analyze the international production factors to determine the choice of country markets, which firm specific resources to deploy and whether to internalize or externalize in international market entry. This Paradigm is closely related to the Pull Theory that asserts that firm internationalization often reflects Factor, Market, Efficiency and Technology seeking behaviour (Dunning, 1989). These are basically opportunity seeking behaviours. However, this Paradigm seems to portray a hyper-rational characterization of firm decision making in international markets. Moreover, under what conditions and why firms can make systematic, rational economic calculation in

internationalization has received somewhat limited attention. In other words, the nature and evolution of decision making and how it relates to the nature of uncertainty in influencing the patterns of international market development over time is, to some extent, lacking in this Paradigm.

The rise of International Entrepreneurship as a distinct field has seen a renewed interest in the role of opportunity, networks and resources in the literature to explain the emergence of international new ventures or so-called born globals (see Oviatt and McDougall 1994, 2004; Coviello 2006). As shown in the findings (Chapter 6) and reiterated in a separate section below, the notion of born global may be problematic and scholars may need to re-consider the meaning of born global. Each of the mainstream theories will be discussed in connection with the refined model below.

7.4.1. Implications for The Uppsala/Process Theory

The Uppsala/Process Model does not clearly explain where opportunities come from (Johanson and Vahlne 1977, 1990, 1992, 2006; Johanson and Wiedersheim-Paul, 1975). Neither do other related stages related models (see Cavusgil, 1984) or incremental ‘innovation adoption’ model (Andersen, 1993; Reid, 1981; Lee and Brasch, 1978). From an entrepreneurial lens, internationalization can be seen as a process of formulating, discovering, searching and refining international opportunities out of knowledge and resources that are scattered unevenly across people/firms, places and time. The earlier acts of recognition and refinement shape subsequent acts in a history dependent manner but the process may be marked by punctuated evolution as new markets and type of opportunities come into focus which cannot be known in advance. This mechanism offers a more refined understanding of how the Uppsala/Process Model works.

Second, Knightian uncertainty is a conceptual cornerstone in entrepreneurship but is not at the core of the Uppsala Model’s attention, as is the case with the Network Perspective and Eclectic Paradigm. Entrepreneurship literature makes a distinction between *risks* (known distribution and unknown draws, that parallel the mathematical notion of classical probability and statistical probability) and *uncertainty* (non-existent distribution whose probability is unclassifiable, or the so-called unknowable) (Knight, 1921; Sarasvathy, 2001; Wiltbank et al., 2006) and recognizes the nonteleological open-endedness, creative and non determined nature of economic processes (Buchanan and Vanberg, 1991). Uncertainty prevails due to the interactions of the system involved and the many possible futures that are possible, including force majeure, unexpected actions of others, or encountering unexpected failures and successes. Unexpected problems encountered during the exploration of domestic opportunities could

adversely impact the exploration of international opportunities and vice versa. The complex interactions of members of the economic system and non linearities mean that tipping points exist and that the systems are highly sensitive to starting conditions. For this reason, patterns of international opportunity development are path dependent but do not necessarily lead to increasing involvement over time in the international markets as in the Uppsala Model. The manifest of 'ring in the water' model is inadequate but it offers valid theoretical reasoning in terms of the evolutionary process of internationalization.

Third, the complexity of the problems facing a firm, especially in the early stages of internationalization, means they cannot and do not seek optimal or carefully worked out plans and strategies, instead they tend to leverage contingencies (Sarasvathy, 2001), act opportunistically and accept an opportunity as long as it is "good enough" (Simon, 1957). Fast and frugal heuristics are preferred over systematic analysis. Emotion and feelings underlie commitments to partner and ally rather than a rational calculus. The role of creativity, requirements and judgment of others directly and indirectly connected to the firms are critical in influencing the kinds of mode of exploitation. How and whether firms evaluate opportunities such as effectual reasoning and satisficing principle are critical and this complements the Uppsala Model.

Fourth, the Uppsala Model assumes a linear process of development. From an entrepreneurial lens, opportunity development and refinement may spark, create and proliferate new types of opportunities. This may result in many forms of Schumpeterian innovation and moves into new country markets as well as formation of new ventures and firms by any parties involved. More than one type of mode of exploitation may be used to pursue the new opportunities as firms respond to many opportunities they encountered rather than resulting from a careful evaluation of alternative modes. Certain opportunities may be terminated or further developed in favour of others, while old opportunities may be re-developed. This is what happens when firms act entrepreneurially – it is messy and appears to be lacking in rhyme or reason (Ellis and Pecotich, 2001).

Fifth, over time, there can be a shift from entrepreneurial/effectual reasoning to managerial/causal reasoning as firms learn more about opportunities and the problems involved, as they generate alternatives and choices, and founders relinquish their control to professional managers. Despite its limitations, the theoretical reasoning of the Uppsala Model in terms of the evolutionary process in internationalization is basically correct. That is, opportunities, knowledge, resources and commitment grow gradually through the action and

feedback processes but may not develop instantly as suggested by the born global phenomena or theory of international new ventures (this will be discussed in the next section).

7.4.2. Implications for the Network Perspective of Internationalization

The refined model is consistent with the Network Perspective in that a picture emerges of an extended or network enterprise not an isolated firm in international markets (Johanson and Mattsson, 1992; Axelson and Easton, 1992; Loane and Bell, 2006; Coviello, 2006; Johanson and Vahlne, 2003). The boundary of the firm includes the resources, knowledge and know-how of connected others that together allow a firm to see more, create more, do more and respond in different ways than an inspiration of an individual firm would suggest (Wilkinson and Young, 2005). The role of weak ties, structural holes and referrals in the proliferation of opportunities in the refined model is consistent with the Network Perspective.

The refined model complements the Network Perspective by highlighting the (1) importance of the mode of reasoning in influencing the decision making process in internationalization and (2) three views of market process from influential theories of the entrepreneur (Kirznerian, Schumpeterian and Knightian). Effectual and affectual reasoning can help clarify the logic behind the unusual, messy and non-linear patterns of network-driven internationalization such as client followership (Bell, 1995), inward-outward connections (Welch and Luostarinen, 1993), accessing prior networks, discovery through the actions of new networks (Ellis and Pecotich, 2001; Coviello and Martin, 1999; Simmonds and Smith, 1968), as well as the role of referrals. The causal reasoning may also explain how and why firms become more selective in pursuing business partners and clients as well as terminating distributors, complementors and partners in the later stages of internationalization. This is common when firm's opportunities, goals, preferences and options are more refined, resources and knowledge further develop and new types of problems call for disciplined planning and formal evaluation methods. This also helps explain the transition from social and economic ties to more economic and calculative ties towards the later stages of internationalization (see Hite and Hesterley, 2001).

The Kirznerian view of market as discovery process, Schumpeterian view of market as creative process, and Knightian view of market as uncertainty bearing process in the refined model also complement the Network Perspective in explaining firm internationalization. That is, the role of prior knowledge in recognizing opportunities, creating new means-ends combinations including recombining scattered information and network ties in new ways, and the nature of uncertainty, can offer a more refined understanding of how the Network Perspective works.

7.4.3. Implications for the Eclectic Paradigm

The Eclectic Paradigm advanced by Dunning (1977, 1980, 1988, 1993) and the Pull Theory by Cantwell (1989) can be seen through an entrepreneurial lens as the pursuit of factor, market, technology or efficiency related opportunities. The Paradigm, when linked to the refined model, predicts the type of behaviour exhibited by firms at the later stages of opportunity development and refinement in which decision making involves a) a given goal to be achieved or a decision to be made (usually well structured and specific), b) a set of alternative means or causes, c) constraints on possible means, d) criteria for selecting between the means (usually maximization of expected return in terms of predetermined goal) [see Sarasvathy, 2001, p.249]. This follows so-called *causal reasoning*, systematic opportunity search and formal management practices including the consideration of opportunity costs, systematic evaluation of opportunities, long-term strategic planning, cost control, forecasting and competitive analysis.

However, the refined model is different from the Eclectic Paradigm in a number of ways. It explains the evolutionary trajectory and history of firms in the international markets and what happens to the seemingly ‘illogical/irrational’ opportunity recognition, evaluation and exploitation process at the early stages as firms shift towards more systematic and rational economic decision making processes (or causation) at much later stages. The refined model explains how the decision in terms of choice of mode of entry is more co-produced with network ties and others rather than one-sided decision making particularly at the early stages and only tends to shift to the logic of Internalization (Buckley and Casson, 1976; Rugman, 1981) at the later stages of internationalization.

Knightian uncertainty is a conceptual cornerstone in the refined model and explains the existence of many possible turning points and the role and importance of unexpected results in the early stages of internationalization. The refined model complements the Eclectic Paradigm in accommodating the role that uncertainty and lack of hyper-rationality can play in the opportunity development and experimentation of large multinational firms. For example, the “Honda Effect” (see Mintzberg, 1996) shows how Honda’s 50cc motorcycle, initially thought to be wholly unsuitable for the US market, resulted in unexpected success that redefined US motorcycle industry. From an economic perspective, it might not have been a sound decision for Honda to launch its product in the US but experimentation, fine tuning and a creative refinement of the opportunity, which is not the focus of the Paradigm, has a lot to say about Honda’s success. The Paradigm best predicts the behaviour of firms with rational economic decision making and planning in the later opportunity development and exploitation phases, such as among large enterprises or highly experienced international firms. While the behaviour

at the early stages of internationalization or among smaller, younger firms is better explained in terms of effectuation. The refined model integrates these two aspects into one model.

7.4.4. Implications for the Theory of International New Ventures (Born Global)

Oviatt and McDougall (1994, 2004) laid down an important theoretical foundation for research into international entrepreneurship (IE). Their Theory of International New Ventures (INV) describes four necessary and sufficient elements of INVs – internalization of some transactions, alternative governance structures, foreign location advantage, and unique resources. Two of these elements are derived from the economics theory or Eclectic Paradigm (L and I Advantages). The Theory of INV, however, pays scant attention as to where such advantages (i.e. resources, networks, prior knowledge etc) come from, particularly among internationalizing smaller and young firms that clearly have much shorter gestation periods than multinational firms. The Theory of INV and its definition of INV (Oviatt and McDougall 1994, 2004) does not give much emphasis to the role of ‘opportunity’ and the mechanism that underlies its recognition, evaluation or development. In a review of a decade of the Theory of INV, Zahra (2005) called for a careful study about how and what INVs learn once they go abroad since learning is a source of their competitive advantage. A critically important question left unasked by Zahra is what these firms’ prior learning, prior opportunity development, prior relations and networks, prior resources and histories were. Research in IE has flourished for over a decade and the attribution of the role of prior experience and prior networks seems to go in parallel with the idea that ‘history matters’ although the field could greatly benefit from exploring *how* it matters, as others have suggested (Jones and Khanna, 2006).

The refined model argues that opportunity development/refinement is an ongoing process and a current venture under investigation could be an extension of prior opportunity development by a different legal entity/entities. Artifacts of prior opportunity development and refinements such as prior knowledge, resources and network ties play a role in the later affairs of firms that only come into existence legally some time later. New ventures are not necessarily ‘new’ and may have knowledge, resources and network ties, orientations and absorptive capacity based on the actions and experience of those involved and the firms that preceded a focal firm’s establishment. Also firms are discovered by other entities and are included as part of their ongoing international opportunity development/refinement processes. These other entities may already have well-developed knowledge, resources, network ties and the capabilities to instantly link the new ventures to distant markets. The lucrative opportunities that new ventures find or rather create may not be an instant creation but a result of the combination of high quality knowledge and resources that have accumulated over time from prior ventures and/or

well-developed sources that become recombined and activated through a new venture and the networks it operates in.

Findings from this study and the refined model ask us to carefully re-consider the meaning of born global and its spurious labelling, and question whether nature really does make leaps, as Alfred Marshall (1920) and Charles Darwin (1859, 1990) have argued in their *Principles of Economics* and *Origin of Species* respectively. It appears that not all born globals are truly 'born' globals. As this thesis brought history (back) into international business, the repeated appearance and disappearance of 'new' international firms described by scholars (see Jones and Khanna, 2006) seem really natural and is well supported by the cases in the main study.

7.4.5. Implications for Jones and Coviello's Time-Based Model

Jones and Coviello (2005) were among the first to stress a time-based process of entrepreneurial behaviour in international markets. Their model features the centrality of the dimensions of time and behaviour as manifested in the fingerprint pattern and profile of decisions, processes and activities of firms as they become more international. In this regard, their model has much in common with the refined model presented in this thesis. But there are significant differences.

In Jones and Coviello's (J&C) discussion of the fingerprint pattern and profile of decisions, processes and activities, the meaning of "decisions" was somewhat unclear, i.e. what type of decisions, why and how a particular nature of decisions prevail, and how the decisions may evolve over time. The refined model involves interactions between exploratory creative effectuation type processes shaped by network contexts and the co-existence and development of more rational planning processes. For instance, in the early stages the role of opportunity evaluation is minimum and rather fades into opportunity development, while at the latter stages, it becomes systematic and an independent activity. The refined model also adds the nature of uncertainty facing a firm as it relates to the nature of decision making. The effectuation processes/reasoning may be more prevalent in the early stages of internationalization when firms face Knightian uncertainty due to the lack of knowledge and resources, and where firm's goals, preferences, and options are not clear or nonexistent. The causation processes/reasoning emerges in the later stages of internationalization when opportunities become more precisely formulated and targeted, knowledge and resources develop, and new types of problems call for different types of expertise and resources including professional management and more disciplined planning and evaluation methods. *Therefore, the refined model extends the J&C Model by highlighting the nature of uncertainty as an*

important contingency that influences the patterns of firm decision making and behaviour in international markets over time.

Behaviour is viewed as a “firm’s strategic response” (p.295) by Jones and Coviello but the cases reveal little evidence of strategy formulation particularly at the early stages of internationalization. Rather, it is more like the notion of ‘strategy absence’ (Inkpen and Choudhury, 1995) especially in the early and transitional phase in a firm’s life cycle: more about creating opportunities/alternatives that can be chosen, not choosing among alternatives a la Simon (1957); more about discovery, learning by doing and reactive processes in which emotions and feelings rather than rational strategic analysis is more pronounced. This also relates to the critical role of others directly and indirectly connected to the focal firm who, as shown in the case studies here, often find/discover the focal firm, take initiatives on behalf of a focal firm and include a focal firm as part of their ongoing opportunity development.

Lastly, the role of ‘starting conditions’ receive somewhat scant attention in the J&C Model. The refined model extends J&C Model by emphasizing the role of prior knowledge, network ties, resources, international entrepreneurial orientation and absorptive capacity that result from prior history and experiences. These contextual dimensions shape what will be imported, adapted, brought forward and re-used in subsequent acts and impacts on a firm’s and its connected others’ ability to see and be seen by international opportunities. The refined model goes beyond the simple observation that ‘history matters’ to actually exploring how and why it matters. It brings history (back) into international business, as others have suggested (Jones and Khanna, 2006).

7.5. Summary

This chapter advances a refined model of internationalization as a form of entrepreneurial act in which the firm is not seen as an isolated actor creating and exploiting opportunities but part of an extended enterprise which collectively knows more and can do more and which, through their actions and interactions over time, reproduces and extends itself and co-creates and recognizes, co-develops and co-exploits opportunities both domestic and international.

The basis of opportunities created is not a simple function of the characteristics of one firm but of the larger network in which it operates and the characteristics of these connected others and the patterns of interactions within and between firms in the network. The way the network evolves determines the way knowledge and resources and acts are combined and recombined and evolve over time. While managers prefer a model in which they are in command of their international adventures and destiny, in reality they have much less control than they would like.

The refined model addresses many deficiencies in prior research and models that tend to ignore the temporal processes involved which can account for the different types of patterns of change taking place over time in a firm's international business, as well as various types of puzzles and anomalies that otherwise cannot be well explained. It shows how history matters and how it is co-produced from the ongoing interactions taking place between people and firms and other organizations over time.

By using an entrepreneurial lens, the model offers a new perspective necessary to answer a basic research question in this thesis, i.e. what factors and processes affect the way a firm's pattern of internationalization changes over time? By drawing on systematic analysis of in-depth case histories of firm development and internationalization and existing theories of international business entrepreneurship, the thesis helps resolve some of the discrepancies among the predictions of theories/models of internationalization and enriches our understanding of the underlying mechanisms involved.

8. CONCLUSION

8.1. Overview

The purpose of this final chapter is to summarize the key findings and implications of the research that was the subject of this thesis. This chapter includes the following sections: a review of the research objective; conclusions of the study; theoretical contributions of the study; managerial and policy implications; limitations; and finally, future research directions.

8.2 Research objective

The key objective of this study was to develop a more dynamic, process based model of internationalization that better explains *the factors and processes that affect the way a firm's pattern of internationalization changes over time*. By utilizing the discovery-evaluation-exploitation framework from entrepreneurship research, the study reconceptualized internationalization as an entrepreneurial process: as the process of discovery, evaluation and exploitation of opportunity in international markets. The conceptualization served as an organizing framework for drawing relevant variables.

To achieve this objective, the research was carried out in two phases – exploratory and main case study research - through which three basic propositions (Chapter 3) and subsequently an initial conceptual model and a set of propositions (Chapter 4) were developed and refined. The following section provides the conclusions of the study.

8.3. Summary of key findings

The study suggests that the discovery-evaluation-exploitation framework is a useful lens to investigate the process and dynamics of internationalization. It enables the researcher to study the way that opportunity and firms develop over time and therefore answer the dynamic and process gaps that exist in internationalization and resolve the inconsistencies between the predictions of existing theories. Key findings from this study can be organized into three elements: (1) opportunity discovery, (2) opportunity evaluation and exploitation, and (3) feedback mechanisms in internationalization.

Opportunity discovery

The cross-case analysis suggests that opportunity discovery is a creative cognitive process in which new means-ends relationships are identified by combining and recombining ideas and knowledge scattered among people/firms, places and time in new ways, that add value. It involves judgments or beliefs about possible futures in a world of Knightian uncertainty. The cases indicate that the entrepreneurial process begins with initial discovery and is followed by

further refinement and exploitation including searching, developing and experimenting in order to determine if there is a real and substantial opportunity or not, i.e. ‘see and then ’ and ‘ in order to see’ (e.g. the ANC versus BSD case in Theme 1 of Chapter 6). This cycle shapes subsequent patterns of refinement and further opportunity discovery as firms and their network of stakeholders make greater commitments and discover new things and adapt. It is a process of ‘muddling through’ as known unknowns gradually develop. The data suggests that the process largely depends on a firm’s starting conditions including its prior history and learning as well as those of other economic actors directly and indirectly connected to the firm, which both enable and constrain its ability and willingness to recognize and exploit international opportunities and to cope with uncertain outcomes.

The cross-case analysis identified that opportunity discovery involves using prior knowledge, information and knowledge already possessed, combined with knowledge obtained through existing networks. The case findings supported the role of serendipity (Crick and Spence, 2005). Serendipitous encounters such as developing new ties or encounters initiated by others who find the focal firm are further potentially valuable sources of knowledge (e.g. the RMW’s founders’ chance encounter with the Dubai lady in Perth). Deliberate search was found to play important roles in the firm’s entrepreneurial activities in that it can lead to discovery of things unexpected and unintended (e.g. 2SP’s search for suppliers in China led to partnership opportunities). In assembling and creating an opportunity, missing pieces of information become apparent, new known unknowns results in further search with maybe further unexpected results (e.g. WSR’s entry into the global nutraceutical market) . However, the cases suggest that deliberate search is not simply seeking and finding known unknowns but is an active, creative process of opportunity formulation and interpretations, whose results may take time to come to fruition.

Opportunity evaluation and exploitation

The cross-case analysis suggest that evaluation as systematic and independent may not exist in the early stages since it is a matter of refining opportunities to the point of action and formulating viable alternatives rather than evaluating some prespecified or consideration set of alternatives. The case study findings highlight the role of effectual and affectual reasoning and non-predictive approaches (Sarasvathy, 2001; Wiltbank et al., 2006) in dealing with the complexity and Knightian uncertainty in international markets. That is, the boundedly rational actors leverage contingencies, rely on affordable loss thinking rather than expected return, form partnership and alliances rather than engage in competitive focused analysis, rely on whatever simple means they have at hand or bricolage, rely on fast and frugal heuristics and on emotions and feelings (i.e. all 15 cases in the main study in Chapter 6). Over time, these firms learn more about what they did not know including their goals, options and preferences; their resources and

network ties further develop and opportunities become more refined (i.e. known unknowns develop); the nature of decision making increasingly follows causal reasoning and rational planning; they tend to establish and use clearer criteria in opportunity evaluation; opportunity costs become an issue; less potential opportunities are pruned in favour of more attractive alternatives; predicting the market becomes more possible; and professional managers are hired to further refine the opportunities. The gradual transition of the nature of decision making or mode of reasoning is not absolute but varies among firms due to the role of routines, habits, inertia and firm contexts (e.g. three cases consistently follow effectual reasoning – KEA, NUD and 2SP).

The nature of reasoning has implications on the choice of location, timing, sequence and mode of entry. The cross-case findings show that effectual reasoning was found to influence the timing and speed of internationalization (i.e. born globals) and use of multiple modes of entry at a point in time and full or partial de-internationalization or other forms of change of mode of entry to some extent. Causal reasoning and/or quasi causal reasoning was also found to play an important role in a number of cases, leading to the tendency for use of high risk/commitment/control mode such as foreign direct investment, focus on lucrative opportunities and termination of non performing distributors.

Feedback mechanism

The cross-case analysis suggest that opportunities are interconnected over time as the development of one can lead to others in a way that cannot be seen in advance. The case findings show that while international opportunity development and refinement can lead to an increasing commitment to international markets, it can also lead to changes in direction as additional opportunities are discovered, pulling and pushing the pattern of development in many directions across home and foreign markets. Eight plausible patterns of interconnectedness of opportunities were identified in the study, including the pattern of forward progression as in the Uppsala Model, full and partial de-internationalization and re-internationalization (see Chapter 6). The process of opportunity development/refinement and contingencies and feedback effects shape the pattern of development over time leading to patterns of opportunity development that are path dependent and in which history matters. The feedback cycle influences a firm's entrepreneurial orientation as well as its resources, which in turn influence subsequent opportunity recognition and exploitation. This is evident in the cross-case findings that suggest that firms that performed well in international markets in the early stages have become much more successful internationally later than those that experienced unfavourable 'epochs' or turning points (e.g. BSD, the successful case in international markets, versus NUD the less successful case in international markets due to a factory fire and take over by new

management). This feedback mechanism also explains that the born globals may be a classification error and not all born globals are truly 'born' globals since these firms are often the outcome of previous opportunity development; prior resources, knowledge and network ties that are brought forward; and the focal firm's inclusion into another firm's ongoing opportunity development where resources, knowledge and network ties have been well established. In summary, the mechanism of opportunity discovery, evaluation and exploitation including the feedback effects complement mainstream theories of internationalization as well as the theory of international new ventures and Jones and Coviello's (2005) model by offering new insights into the process and dynamics of firm internationalization over time.

8.4. Contributions to internationalization and international entrepreneurship research

In broad terms, this study contributes to the internationalization and international entrepreneurship literature by developing a dynamic, process oriented model of internationalization that explains the factors and processes that affect a firm's pattern of internationalization changes over time. More specifically, the study (1) enriches our understanding of the underlying mechanisms of internationalization, (2) fills in the gap left unanswered by the mainstream theories of internationalization and (3) integrates and resolves the discrepancies between the predictions of these theories. Each of these is now discussed in greater detail.

First, this study advances research into firm internationalization by providing a better understanding of *how and why actors and firms discover, evaluate and exploit opportunities*. The findings highlight a number of key mechanisms in internationalization: (i) the lack of orderly sequential processes or stages of recognition, evaluation and exploitation in early stages of internationalization and the increasing role of systematic evaluation at the later stages when known unknowns develop, (ii) the cyclical feedback of discovery and further refinement as well as exploitation which involves searching, developing and experimenting in order to establish whether there is real and substantial opportunity or not, (iii) the role of prior and new knowledge, knowledge of others that can be accessed and utilized, serendipity such as finding or being found by prior and new ties leading to opportunity discovery/exploitation, (iv) the role of deliberate search which can lead to the discovery of things unexpected or unsought, (v) the interconnectedness of opportunities over time across the founding, domestic and international context as well as uncertainty which can push or pull the patterns of development in many directions that cannot be seen in advance, (vi) absorptive capacity, as a form of openness, judgment and connected others as extended minds, that enables opportunity discovery/exploitation, (vii) the role of entrepreneurial bricolage in dealing with Knightian uncertainty and marshalling resources under conditions of resource scarcity, (viii) the nature of

decision making that is influenced by effectual and affectual reasoning and non-predictive approaches when Knightian uncertainty prevails especially in the early stages of internationalization and which increasingly follows causal reasoning and rational planning when a firm's knowledge, resource and, network ties develop and opportunities are more refined (i.e. known unknowns develop), and (ix) the evolutionary not revolutionary trajectory of firm internationalization and the importance of prior histories.

Second, this study offers an explanation to the *process gaps* in internationalization, including how and why firms make early and accelerated international market entry (born globals), engage in various forms of de-internationalization, and use multiple modes of entry at a point in time. The study reveals two important processes underlying the born global or international new venture (INV) phenomenon: (i) it is an outcome of prior opportunity development and refinement by actors and firms under different legal entity/entities, (ii) it is influenced by the role of other actors/firms that may already have established resources, knowledge and network ties, who include the focal firm in their ongoing opportunity development. The thesis highlights the evolutionary process of firm development and internationalization and shows that not all born global firms may be truly 'born' global. Firms can easily be misunderstood as born globals or INVs for reasons of classification error and/or an artifact of the researchers' vantage point, and research methodologies that tend to ignore the role of histories of the focal firms and their connected others. This insight helps clarify the debate on the real meaning of born global (Madsen and Servais, 1997; vs. Oviatt and McDougall, 1994) and shows that while the manifest 'ring in the water' model is inadequate, it offers a valid theoretical reasoning for Uppsala/Process Model's evolutionary process of internationalization.

The study shows that full and partial de-internationalization is one of many plausible patterns of opportunity development due to the interconnectedness of opportunities across the founding, domestic and international contexts over time. The role of Knightian uncertainty can push or pull the patterns in many directions and firms rely on effectual reasoning, i.e. leveraging contingencies, and being opportunistic, including re-entering the domestic markets or pursuing more attractive opportunities, regardless of the risk/return/control/commitment type of entry mode.

The use of multiple modes of entry at a point in time reflects the role of effectual and affectual reasoning and non-predictive approaches as firms deal with uncertainty, i.e. firms pursue whatever opportunities present themselves and use any means at hand or any entry modes possible to exploit them (even if this means they may not be the most efficient or profitable from an economics/accounting perspective). The study reveals that the timing, sequence,

location and choice of entry mode of internationalization is contingent on the mode of reasoning used and the nature of uncertainty.

Finally, the study integrates and resolves the discrepancies between the predictions of mainstream theories of internationalization by revealing the evolution of firms' decision making or mode of reasoning over time as the nature of uncertainty evolves (i.e. Knightian uncertainty to known unknowns). The causal reasoning at the later stages of internationalization can explain the logic of the Eclectic Paradigm and the Uppsala Model that view internationalization respectively from an economic optimization and rational planning to manage risk, return and control. The effectual and affectual reasoning can explain the logic of the Network Perspective that shows unsystematic, non-linear patterns of internationalization. The opportunity-based paradigm of internationalization reveals that each of the mainstream theories has explained different parts of the overall internationalization phenomena and no single theory is invalid. The opportunity-based paradigm complements and connects these theories.

8.5. Contributions to entrepreneurship research

This study contributes to the entrepreneurship literature in terms of entrepreneurship as a general phenomenon, its antecedent, issues concerning its ontological debates, and unit of analysis. Each of these is discussed in greater detail.

First, this study contributes to the contemporary view of entrepreneurship, i.e. opportunity discovery-evaluation-exploitation (Shane and Venkataraman, 2000) by revealing that the entrepreneurial process does not follow a lockstep, linear process, but that these steps are inextricably linked – a 'complex and chaotic' process (see Aldrich and Ruef, 2006). There was also no evidence of extensive systematic evaluation at the early stages of an entrepreneurial process, rather it becomes part of opportunity exploitation, with more systematic evaluation taking place at later stages when a firm is clearer about known unknowns and as resources develop.

Second, Shane (2000) emphasized that entrepreneurs can discover opportunities related to the information that they already possess without deliberately searching for them. However, Shane provided little explanation about the role of deliberate search. This study shows that deliberate search can play an important role but not in the traditional sense of finding out things you do not know in some systematic manner. It is more that through search you discover something unexpected and unsought that has value.

Third, the study suggests that there is no clear distinction between different ontological views of opportunity, i.e. discovery vs. creation vs. enactment (Kirzner, 1997 vs. Alvarez, 2005 vs. Gartner et al., 2003), as they all involve creative process to see things in new ways and create new means-ends combinations. That is, they are all part of a more general process of groping forward or muddling through (Lindblom, 1959).

Finally, the study shows that analysis in the entrepreneurship process is not something done by a single firm or individual as has often been the case in prior literature. Rather, new ideas innovations and opportunities are produced via relations and networks. Markets, relations and networks are a form of collective intelligence (Hargadon, 2003; Chesbrough, 2003; von Hippel, 2005; Wilkinson and Young, 2005; Beinhocker, 2006).

8.6. Methodological contribution

This study offers two interrelated methodological contributions to research into firm internationalization. First, it advances a method of studying the behavioural processes and history of firm development and internationalization that has gained interest in recent years (Jones and Coviello, 2005; Jones and Khanna, 2006). More specifically, it develops a history of the key sequences of events from pre-firm founding, firm founding, first internationalization to subsequent internationalization phases. This fosters extensive data collection, mapping and analysis of events related to important opportunities in each of the firms studied. The method of analysis may be characterized as a form of process approach using a case study method (Van de Ven and Pole, 2005; Buttris and Wilkinson, 2006; Yin, 2003).

Second, it advances the ‘opportunity-firm’ nexus to the study of the internationalization phenomena. This departs from prior research that focus on the ‘firm’ (Johanson and Vahlne, 1990; Dunning, 1980, 1988; Crick and Spence, 2005), ‘transaction’ (Erramilli and Rao, 1993; Reid, 1983; Williamson, 1979), ‘product life cycle’ (Vernon, 1966), or ‘relationship’ (Johanson and Mattson, 1988, 1992; Coviello and Martin 1999; Ellis and Pecotich, 2001). While this approach has been used in prior research in technological entrepreneurship (see Shane, 2000), it is still in its infancy in the research in firm internationalization.

8.7. Managerial and policy implications

Firms entering a foreign market face the liability of foreignness. For small and young firms, two more challenges are added when venturing into international markets: liability of smallness and newness. If customer preferences have not been strongly formed, as is the case with new products and services, customers do not know exactly what they want and are not able to

express correctly what they want or need. The above reflects a condition that approximates to Knightian uncertainty for a new entrant.

In this situation, firms have two choices. First, assume that an *international market exists* for them and rely on causal reasoning and predictive approaches. This is a core assumption in marketing and strategy, allowing managers and decision makers to analyze the market, segment it, target it and position itself in the market (see Porter, 1980; Kotler, 1991; Sarasvathy, 2001). Second, assume that *it does not* and that the market needs to be developed, which involves effectual reasoning and non-predictive approaches.

This study suggests that understanding the logic of decision making and when to use what type of reasoning are critical in international business and entrepreneurship. The study reveals that entrepreneurs and smaller firms can benefit from the logic of effectual and affectual reasoning and non-predictive approach in dealing with Knightian uncertainty, that prevails in the early stages of internationalization. This includes: (i) making the best use of any available means or entrepreneurial bricolage: what the actor knows, who the actor is, whom the actor knows; (ii) leveraging contingencies, (iii) relying on affordable loss thinking rather than expected return; (iv) focus on partnerships and alliances rather than competitive focused analysis, (v) using fast and frugal heuristics such as satisficing principle, take the first heuristic, recognition heuristic, or taking the easiest path. Although this type of reasoning can lead to biases and errors, it is an effective approach in dealing with the complexity and uncertainty in international markets. Smaller firms can benefit more from causal reasoning, rational planning and predictive approaches when they better know better their goals, alternatives and preferences; their resources and network ties further develop and opportunities are more refined (i.e. known unknowns develop). Although this context is associated with the later stages of internationalization, it may also be relevant for firms in the early stages of internationalization when significant experience, networks, resources and opportunities already exist or are carried forward from previous firms or prior development.

Second, the study indicates that entrepreneurs and smaller firms can benefit from international networks and should, therefore, pay greater attention to the development of networks. Entrepreneurs and firms can take advantage of distributed/collective intelligence; learning how to access and utilize connected others to see, hear, and know more to identify and create new means-ends combinations. Importantly, firms can generate diverse ideas through conferences and tradeshow and position themselves well in the communication networks through presence in the Internet to help diffuse the information and for others to find them.

Third, some opportunities may have longer gestation periods than others, which can be influenced by the nature of buying and/or the industry and a firm's position in the network. Therefore, being persistent, being around and waiting for the information to diffuse in the network and for people/firms to follow up are critical in the opportunity development process.

Fourth, the current pedagogical approach in entrepreneurship in business schools to-date has been predominantly based on writing business plans, conducting market research and financial modelling etc (see Honig, 2004; Bennis and O'Toole, 2005). This turns entrepreneurship into very much like strategic management or marketing strategy which assumes firms already know and have their goals, choices and preferences, a market exists for firms to analyze and that firm resources are available to do so. The teaching and learning in entrepreneurship can benefit from effectual reasoning and non-predictive approaches including (i) how to creatively recombine or adapt what is available at hand such as prior knowledge, existing resources, network ties with those of others to discover and create opportunities, and (ii) identifying which stakeholders need to be convinced to 'buy in' the idea/opportunity as entrepreneurial team, employees, suppliers and buyers; and (iii) a process-oriented learning and teaching of entrepreneurship throughout an academic calendar rather than a once-off consulting type assignment. As Sarasvathy (2001b) says, "entrepreneurship is not a 0-1 variable of failure or success" but is a process where continuous experimentation and learning takes place.

Finally, export promotion agencies seeking to promote firm internationalization would be best to focus their resources and support programs to assist novice exporters or internationalizing firms work through the initial opportunity recognition and exploitation process. The learning that takes place and the proliferation of opportunities that can follow will not only assist these firms make the most of their initial international opportunity, but will also help them to search, discover and develop subsequent opportunities (with less need for external assistance). Policy makers will benefit from fostering a conducive environment that allows entrepreneurial imagination and aspiration to flourish. By relaxing the regulatory constraints and providing incentives for new firm formation and internationalization, and inviting foreign firms to set up a presence will help to help spur collaborations and a proliferation of opportunities for local enterprises. Facilitating contacts through tradeshow, conferences and conventions to 'bridge' unconnected business actors from various countries in new ways can help spur more entrepreneurial activities across borders.

8.8. Limitations

This study is not without limitations. First, the study was based on a limited sample size. Although the firms were selected using stringent criteria and purposive sampling, they may be prone to biases since only firms who were willing to participate and share information are included in the study. However, the purpose of the research is not to achieve statistical generalization but rather analytical generalization hence limited sample size is acceptable as long as theoretical saturation is achieved (Yin, 1994). As this study focuses on the 'opportunity-firm' nexus, an extensive amount of data relevant to key opportunities in each firm over time was collected and analyzed. The in-depth analysis of each firm compensates the limited sample size.

Second, although in a number of cases the interviews were conducted with the connected others of the focal firms such as their suppliers, customers, partners and friends, many interviews were conducted with the focal firms only due to the key informants' request and or the unavailability of their connected others. This limitation is, however, partly dealt with by having multiple key informants within a focal firm and supplementing them with interviews with expert informants.

Third, respondent's self serving bias may be present, based on introspection and retrospection. They might have rationalized a process that had either favourable or unfavourable results for them. This is despite the efforts to sample only those firms that had internationalized recently, to rely on triangulation of data sources including interviews with key stakeholders of the firms and industry experts, and comparison with archival data and published materials in printed and electronic media. Most importantly, the recording of key sequences of events proved to be effective in assisting key informants retrieve relevant information about important past events and fill in the gaps through iterative processes. Therefore, this does not guarantee the census of events in each firm and the analysis was only conducted on events whose information is available.

Finally, the investigator's own bias may influence interpretation of the results. However, this was resolved by having two other researchers working as a team in analyzing the cases and attempting to achieve consensus. For the most part the focus on the analysis is not interpretive in the sense that the investigator did not seek to understand the way respondents interpret events and outcomes, so much as develop a history of the key sequences of events from pre-founding to subsequent internationalization phases.

8.9. Directions for future research

This thesis opens up a number of important directions for future research. First, there is an opportunity to develop models of the evolutionary process itself, such as are now possible using agent based modeling systems (e.g. McKelvey, 2004; Tesfatsion, 2005). These can be calibrated against known histories and mechanisms of the cases described in Volume 2 of this thesis as a test of their validity and robustness, and then used to systematically simulate patterns of internationalization under different conditions, in order to see the effects of different starting and contextual conditions and different types of firm and network characteristics and interaction patterns. Assumptions or “rules” of the agents can be built in silico using the findings from the cases to understand emerging entrepreneurial phenomena from bottom up. The “rules” can consist but not limited to (1) agents that have high perceptual abilities to discover opportunities versus those that are not, (2) agents that rely on effectual reasoning versus those using causal reasoning, (3) agents that tend to be naïve or unable to differentiate trusted from non trusted sources information in the networks (absorptive capacity level) versus those that are not, (4) the impact of communication networks on the success of international entrepreneurial activities such as agents having many but less informative weak ties versus those with few but highly informative weak ties, and (5) agents with plentiful stocks of knowledge, resources and networks versus those that do not, i.e. to test the born global hypothesis. These rules can be combined with one another to understand what phenomena that could emerge. This approach, or simulation methods in general, can be used for both theory development and theory testing, which has gained interest recently among empirical researchers (see Davis, Eisenhardt, and Bingham, 2007) and a special editorial board has recently been formed to advance this research approach in the *Academy of Management Review*.

Second, there is an opportunity to further test the final model that was presented in Chapter 7. This model was a system dynamics model which depicted internationalization as an entrepreneurial process. The core logic of the model lays the ground for further simulation using system dynamics tools such as the STELLA software. This model will be useful to study the born global hypothesis (Oviatt and McDougall, 2004) and the ‘learning advantages of newness’ hypothesis (Autio et al., 2000) experienced by early internationalizing firms by testing and comparing different parameters of stocks and flows of resources, networks and knowledge and their impact on opportunity discovery and evaluation as well as learning and performance. Additional factors can be built in including external shocks, such as economic recession, to the model. The main advantages of this model are that feedback processes and path dependence can be understood and insights can be generated through sensitivity analysis that will not be possible using empirical methods.

Third, the study also provides insights about the transition from effectual reasoning to causal reasoning, which provides a connection between entrepreneurship and strategy. Future research can confirm this finding by conducting protocol analysis or think-aloud protocol (Ericsson and Simon, 1993; Sarasvathy, 1998a, 1998b), a method commonly used in cognitive psychology, to compare expert and novice entrepreneur's mode of reasoning and problem solving in the context of doing international business. The protocol analysis method has been proven effective, and the theory of effectuation was produced through this method (see Sarasvathy, 1998a). Future research can use the protocol analysis to better understand the transformation/combination of mode of reasoning over a longer time horizon.

Finally, future work can include normative research using management science techniques to understand under what conditions firms should rely on either effectual or causal reasoning or a combination of both. Christensen's (2000) study of innovator's dilemma shows the limit of the efficacy of causal reasoning among large and mature incumbents and how small and new entrants can cause creative destruction in the disk drive industries who may have used entrepreneurial and non-predictive approaches to markets. Similarly, Mintzberg (1996) shows the boundary of causal reasoning when Honda's 50cc motorcycle, initially thought to be wholly unsuitable for the US market, resulted in an unexpected success that redefined the US motorcycle industry. By understanding the boundary limitations of causal vs. effectual reasoning, researchers can help entrepreneurs/firms make better decisions in international markets.

8.10. Summary

The objective of this study was to understand the factors and processes that affect the way a firm's pattern of internationalization changes over time (Chapter 1). It achieved this by reconceptualizing internationalization as an entrepreneurial process and identifying key variables that impact the discovery, evaluation and exploitation of opportunities in international markets (Chapter 2). From here, three basic propositions were developed and investigated through an exploratory research involving eight cases in knowledge-based industries (Chapter 3). This was followed by the development of an initial conceptual model and a set of propositions (Chapter 4), which were further investigated through a main case study research involving 15 cases in both knowledge and non-knowledge-based industries (Chapter 5 and 6). Next, this study developed a general model of internationalization as an entrepreneurial process and identified underlying mechanisms of internationalization (Chapter 7). As a result, this study has filled processual gaps in the internationalization literature, has extended the relationship between internationalization and entrepreneurship research streams and has

extended the methodological approaches used in the study of internationalization and entrepreneurship phenomena, and finally, has offered further research directions to better study the international entrepreneurial phenomena.

APPENDIX A: ADDITIONAL LITERATURE REVIEW

Summary of internationalization and entrepreneurship articles reviewed

Bibliographic source	No of studies included in Coviello & Jones' (2004) review	No of studies included in this review	Total (%)
Journal of Business Venturing	8	2	10 (13.3%)
Entrepreneurship Theory & Practice	10	1	11 (14.6%)
Academy of Management Journal	6	-	6 (8.0%)
Strategic Management Journal	1	-	1 (1.0%)
Journal of International Business Studies	3	6	9 (12.0%)
Journal of International Marketing	9	1	10 (13.3%)
Journal of Euro-Marketing	1	2	3 (4.0%)
Small Business Economics	1	-	1 (1.0%)
Global Focus	2	-	2 (2.6%)
Journal of International Management	3	1	4 (5.3%)
Others	10	-	10 (13.3%)
*International Business Review	-	4	4 (5.3%)
*International Marketing Review	-	3	3 (4.0%)
<i>Total</i>	55	20	75 (100%)

Note:

The review of the literature procedure follows Coviello and Jones (2004), but focuses on the articles published between 2003 and 2007 (i.e. Coviello and Jones' review covered articles published between 1988 and 2002).

Keyword search used: international new ventures, IE, international entrepreneurship, INV(s), Oviatt, McDougall, global startups, born globals, international, entrepreneurship. Two additional keywords used for this review: opportunity, entrepreneurial opportunity.

*refers to new journals reviewed in this study, in addition to the original journals reviewed by Coviello and Jones (2004)

**List of internationalization and entrepreneurship articles reviewed
(alphabetically categorized by topic)**

Entrepreneurial behaviour crossing international boundaries	Comparisons of entrepreneurial behaviour in different countries
Balabanis and Katsikeas (2003) Servais et al (2007) Kuivalainen and Sundqvist (2007) Pla-Barber and Escriba-Esteve (2006) Yiu et al (2007) Hashai and Almor (2004) Mudambi and Zahra (2007) Zhou et al (2007) Zahra and Hayton (2007) Knight and Cavusgil (2004) Cloniger and Oviatt (2007) Andersen and Foss (2005) Dimitratos et al (2004) Mort and Weerawardena (2006) Crick and Spence (2005) Crick (2004) Coviello (2006) Freeman et al (2006)	Luthans and Ibrayeva (2006) Spence and Crick (2006)

Note:

The review of the literature procedure follows Coviello and Jones (2004), but focuses on the articles published between 2003 and 2007 (i.e. Coviello and Jones' review covered articles published between 1988 and 2002)

APPENDIX B: CASE STUDY PROTOCOL FOR EXPLORATORY RESEARCH

Case study protocol for the exploratory research

A study of internationalization of Australian SMEs in knowledge-based industries

SCREENING CRITERIA

(To be screened through the telephone)

Tick (✓)

☐ **Small & Medium Enterprises:**

Firms with less than 200 employees (ABS/Austrade 2000 and Austrade 2002 definition)

☐ **Indigenous firms:**

An Australian owned company

Non-Internationalised firm:

☐ Never entered overseas markets, is currently considering, ceased entering overseas market

Or...

Internationalised firm:

- ☐ Any mode of entry: export, agent, sales subsidiary, Joint Venture, strategic alliances, contract manufacturing, licensing, franchising
- ☐ Relatively new to internationalisation (maximum 5 years since entering first overseas market)

Purposive Sampling for this interview:

- ☐ One matched pair of (internationalised and non-internationalised) firms from the Biotechnology sector
- ☐ One matched pair of (internationalised and non-internationalised) firms from the Software/Computer sector
- ☐ One matched pair of (internationalised and non-internationalised) firms from the Business Services sector
- ☐ One matched pair of (internationalised and non-internationalised) firms from Electronics/Telecommunication sector

☐ **Key decision maker in the firm**

Owners/founders/chief executives/managing directors/senior export managers

SECTION 1: INTRODUCTION

About the Study

- ✓ To understand how Australian SMEs relate to the market and thereby to understand ways to increase their competitiveness in the local and international marketplace.
- ✓ A study conducted by the School of Marketing, UNSW
- ✓ This interview will be recorded for ease of analysis and will be heard only by the chief investigator. It will be destroyed once the analysis is complete
- ✓ Any information given will be treated in the strictest confidence unless specific permission is given
- ✓ The interview will last for about 45 minutes

SECTION 2: BACKGROUND

General questions

- ★ Respondents profile, job title, and responsibilities
- ★ Company background: nature of business activities
- ★ Size of total business (sales, number of employees, number of offices/facilities)

For internationalised firms

Key Market Presence (Name of customers or partners)	Country	Method of serving the market (Export, licensing, JV, franchising, etc)	Year entered	Significance to total business (in% or Hi, Med, Lo)

Growth Objective

- ★ How would you describe your growth targets?
- ★ May I know what growth targets do you set for this year?

SECTION 3: FIRM RESOURCES

Your company has served the local/international market for the past X years.

- ★ **Resources** in your firm that enable you to serve the (local/international) market.
(Assets = Capital, technology, time, human resources, copyrights, brand names, reputation, etc)
- ★ **Capabilities** or expertise that enable you to serve the (local/international) market.
(Capabilities = management skills, technical or technological expertise, or R&D capabilities)
- ★ **Most precious** resources and capabilities. Or the ones that make your firm stand out of the rest

SECTION 4: FIRM CHARACTERISTICS

Each firm has unique characteristics in their philosophy and way of doing business.

- ★ Your firm's tendency to lead others in the market or to think and act faster than others.
Examples.
(Original items = Does your company typically initiate actions to which competitors then respond; Is your company very often the first business to introduce new products or services, administrative techniques, operating technologies, etc)
- ★ Your firm's attitude to try something new, support new ideas, challenge orthodoxy, think out-of-the box or doing novel things in the market. Examples.
(Original items = Do you put a strong emphasis on R&D, technological leadership and innovation? Do you have very many new lines of products or services marketed during the past 3 years? Have changes in product or service in your company usually been quite dramatic?)
- ★ Your firm's attitude to risks. Examples.
(Original items = Do you have strong tolerance for high risk projects with chances of high returns? Do you believe that, owing to the nature of the environment; bold, wide-ranging acts are necessary to achieve the firm's objective? When confronted with decision-making situations involving uncertainty, does your firm typically adopt a bold, aggressive posture in order to maximize the profitability of exploiting potential opportunities?)
- ★ Your firm's aggressiveness towards its competitors? Examples.
(Original items = In dealing with competitors, does your firm typically adopt a very competitive, "undo-the-competitors" posture? Is your firm very aggressive and intensely competitive?)
- ★ Scope in your firm for people or teams to independently come up with new ideas and pursue them. Examples.

(Proposed items = Does your firm grant autonomy to individuals or teams to bring forth an idea or vision and carrying it through to completion? Does your firm allow the independent spirit of individuals or teams to exercise their creativity and champion promising ideas? Does your firm favour actions by individuals or teams that bend the rules and bypassing procedures and budgets in pursuing opportunities?)

Ask the respondent to fill in EO Scales

SECTION 5: EXTERNAL ENVIRONMENT

Domestic Market Attractiveness

- ★ How attractive is the Australian market? How big and how fast is it growing?
- ★ How attractive are international markets?
- ★ How much do you have to lose if you choose either market?

International Industry Growth

- ★ How fast is the industry your business in growing internationally?

SECTION 6A: STAY DOMESTIC HISTORY

Let's focus on your current domestic business operations.

- ★ Why does your firm choose to stay local?
- ★ Has it crossed your mind to enter overseas markets at all?
- ★ What obstacles that prevent your firm to enter overseas markets? Give examples?
- ★ Have you ever recognized any overseas business potential but decided not to exploit it?
Why did you not exploit the potential?
- ★ Have you previously been involved in any international business activity, e.g. exporting etc, that has now ceased? What were the reasons?

SECTION 6B: INTERNATIONALISATION HISTORY

- ★ At what point do you see your firm crossing the line to being internationalised?

What signal(s) the internationalisation?

- ★ How did you make that first ‘break’ into overseas market?

(Spot respondent’s terminology for OPPORTUNITY and use it consistently)

- ★ Story of how you recognized that ‘first’ international business opportunity.

(“First” = the opportunity that turned the company international)

- ★ Did you deliberately search THE opportunity?

(Check if Search vs Discovery vs Pure Luck; Find out if these factors play a role: Prior International Knowledge, International Orientation, International Social Ties, Growth Objective, Internationalisation of other actors, Entrepreneurial Orientation)

- ★ Were there any other international business opportunities that you recognized?

(Check the existence of opportunities pre and post ‘first’ opportunity)

International Entrepreneurial Opportunity Exploitation

- ★ What happened once you recognized THE opportunity?

(Check the critical events and factors prior international entry)

- ★ What were your considerations before you entered the overseas market?

(Check decision-making factors)

- ★ Were there any obstacles along the way until you entered the overseas market?

(Check if Assets, Capabilities, Domestic Market Attractiveness, Industry Growth, and Entrepreneurial Orientation play a role)

- ★ What was the time frame from your recognition to the exploitation of THE opportunity?

SECTION 7: OTHER ISSUES

To be asked at any appropriate stage during the interview

International Social & Business Ties

- ✳ Do you have friends, families or business contacts overseas?
- ✳ How important are they to your firm? Examples
- ✳ How many of them are important to your firm?
- ✳ How do you get to know them?

Entrepreneurial Activities of Other Firms in International Markets

- ✳ Do your competitors, suppliers, distributors, or customers serve international markets?
- ✳ What effects do they have on your firm?

Prior International Knowledge

Of the Market

- ✳ Did you know how the international markets (that you entered) work before you went there?
(Only focus on the first entrepreneurial opportunity that turned the company international)
- ✳ For instance, did you know the business customs, capital requirements, legal issues, how business relationships work, where to find suppliers, or “what to avoid” principles in overseas market (that you entered?)
- ✳ How did you obtain such knowledge?
(Find out if International Orientation or foreign orientation was the source of the knowledge!)

Of ways to serve market

- ✳ Did you know how to serve international markets (that you entered) before you went there?

Only focus on the first entrepreneurial opportunity that turned the company international!

- ✳ For instance, do you know any appropriate product, pricing, distribution, communication decisions for local markets, or management techniques to deal with local businesses, particular technology that suits local businesses, etc?

- ✳ How did you obtain such knowledge?

(Find out if International Orientation or foreign orientation was the source of the knowledge!)

Of International customer problems

- ✳ Did you know about specific customer problems or their dissatisfactions with current market offering (in the market you entered) before you went there?

(Only focus on the first entrepreneurial opportunity that turned the company international!)

- ✳ Did you know about any unspoken or unarticulated customer needs (in the market you entered) before you went there?

- ✳ How did you obtain such knowledge?

(Find out if International Orientation or foreign orientation was the source of the knowledge!)

International Orientation & Experience

- ✳ Are you or your key managers proficient in any foreign languages?
- ✳ Did you or your key managers often travel abroad?
- ✳ Have you or your key managers studied abroad?
- ✳ Have you or your key managers lived abroad before?
- ✳ Do you or your key managers have previous work or business experience overseas?

What is your theory of the key success & failures in recognizing and exploiting international business opportunities?

SECTION 8: MISCELLANEOUS

Collect any data available to support case:

- Sales data, Accounts, Company reports/financial statements
- Mission statement, Brochures

Take photographs if permitted/possible

Check if respondents are ok if their case is used for illustrative or educational use (minus sensitive information)

- As identified case study
- As anonymous case study
- Not at all

Thank You

APPENDIX C: QUESTIONNAIRE FOR EXPLORATORY RESEARCH

Questionnaire for exploratory research

In general, the top managers of my company favour....

A strong emphasis on the marketing of tried and true products or services

1 2 3 4 5

A strong emphasis on R&D, technological leadership, and innovations

How many new lines of products or services has your firm marketed during the past 3 years?

No new lines of products or services

1 2 3 4 5

Very many new lines of products or services

Changes in product or service lines have been mostly of minor nature

1 2 3 4 5

Changes in product or service lines have usually been quite dramatic

In dealing with its competitors, my company....

Typically responds to actions which competitors initiate

1 2 3 4 5

Typically initiate actions to which competitors then respond

Is very seldom the first business to introduce new products or services, administrative techniques, operating technologies etc

1 2 3 4 5

Is very often the first business to introduce new products or services, administrative techniques, operating technologies etc

Typically seeks to avoid competitive clashes, preferring a "live-and-let-live" posture

1 2 3 4 5

Typically adopts a very competitive, "undo-the-competitors" posture

In general, the top manager at my company.....

Have a strong proclivity for low-risk projects (with normal and certain rates of return)

1 2 3 4 5

Have a strong proclivity for high-risk projects (with chances of very high returns)

Believe that owing to the nature of the environment, it is best to explore it gradually via careful, incremental behaviour

1 2 3 4 5

Believe that owing to the nature of the environment, bold, wide-ranging acts are necessary to achieve the firm's objective

When confronted with decision-making situations involving uncertainty, my company.....

Typically adopts a cautious, "wait-and-see" posture in order to minimize the probability of making costly decisions

1 2 3 4 5

Typically adopts a bold, aggressive posture in order to maximize the probability of exploiting potential opportunities

APPENDIX D: CLASSIFICATION OF INDUSTRIES

A classification of knowledge based and non-knowledge based industries

Knowledge based industries

- Emerging industries:
Information & Knowledge based**
- Health, biotechnology & science
 - Information & communication technology

- Knowledge based industries:
High Technology**
- Aircraft
 - Office & computing equipment
 - Drugs and medicines
 - Radio, TV, communication equipment

- Medium-High Technology**
- Professional goods
 - Motor vehicles
 - Electrical machinery (excl. communication equipment)
 - Chemicals (excl. drugs)
 - Non-electrical machinery

- Knowledge based services**
- Communications
 - Finance, insurance, real estate & business services
 - Community, social and personal services
 - Health & education services

Non Knowledge based industries

- Non Knowledge based industries:
Medium-Low Technology**
- Rubber & plastic products
 - Shipbuilding & repairing
 - Other manufacturing
 - Non-ferrous metals
 - Non-metallic mineral products
 - Metal products
 - Petroleum refineries & products
 - Ferrous metals

- Low Technology**
- Paper, paper products & printing
 - Textiles, apparel & leather
 - Food, beverages & tobacco
 - Wood products & furniture

- Non Knowledge based services**
- Electricity, gas & water supply
 - Construction
 - Wholesale trade
 - Tourism
 - Government administration & defense
 - Personal & other services

Source: OECD (1999) and Austrade (2002)

APPENDIX E: CASE STUDY PROTOCOL FOR THE MAIN RESEARCH

Case study protocol for the main research



INTERNATIONAL ENTREPRENEURSHIP RESEARCH AUSTRALIAN SMALL AND MEDIUM ENTERPRISES

Required historical artefacts

- (1) Personal interviews
- (2) Documents, e.g. business plans, letters, faxes, and minutes of meetings, financial statements (optional)
- (3) Physical artefacts, e.g. the firm's products, brochures, photos

INITIAL CONDITION: NEW VENTURE FORMATION

❖ *Opportunity recognition, evaluation and exploitation leading to NVF*

Who, when, where, and what business?

- Gestation activities, e.g. business plan, develop prototype, apply license/patent
- Prior Knowledge
- Access to New Knowledge
- Search, discovery, luck
- Capacity to absorb knowledge, assimilation, transformation, and exploitation

❖ *Nature and size of business*

(% of foreign revenue, no of employees, no of offices/operations)

MAKING THE FIRST LEAP

Focus on the first entry (i.e. deriving revenue from the int'l market for the first time)

- ❖ *Process of opportunity recognition* (what & who were involved)
- ❖ *Other opportunities recognized which may be discarded AND considered*
How, when they were recognized
- ❖ *Evaluation of opportunities* (what criteria, the decision maker)
- ❖ *Reasons for capitalizing on the opportunity that leads to first entry* (country, timing)
- ❖ *Choice of mode of entry and why* (incl. external endowment, appropriability regime)

Probe: Entrepreneurial Orientation, Competitive Advantage

IMPACTS OF THE FIRST LEAP

- ❖ *Did the company behave or perceive things differently after the first entry?*
 - Impacts on Entrepreneurial Orientation (risk taking, innovative, proactive, aggressive, autonomy)
 - Competitive Advantage (resources & capabilities)
 - Prior Knowledge (business, institutional, technological, internationalization)
 - Access to New Knowledge (network centrality, link to central actors, weak/strong ties, movement of people)
 - Absorptive Capacity (ability to absorb, assimilate, transform, and exploit knowledge)
 - Performance

Informant to fill in the q'naire (compare prior to and after 1st entry)

MAKING THE SUBSEQUENT LEAPS

- ❖ *Process of subsequent opportunity recognition (note the differences with the first)*
- ❖ *Evaluation of opportunities (discarded and considered)*
- ❖ *Choice of entry mode and why*
- ❖ *Timing difference with the first entry (is it faster than first entry)*

IMPACTS OF THE SUBSEQUENT LEAPS

- ❖ *Did the company behave or perceive things differently after the first entry?*
 - Impacts on Entrepreneurial Orientation
 - Competitive Advantage
 - Prior Knowledge (business, institutional, technological, internationalization)
 - Access to New Knowledge (network centrality, link to central actors, weak/strong ties, movement of people)
 - Absorptive Capacity (ability to learn?)

Informant to fill in the q'naire (compare after 2nd and 3rd and last entry)

DYNAMICS OF INTERNATIONALIZATION

- ❖ *Addition AND OR deletion of international portfolio*
 - De-internationalization, reverse internationalization, use of multiple modes
 - Entry mode, country selection, customers, timing

NATURE OF INDUSTRIAL ORGANIZATION

- ❖ *The nature of the industry*
industry lifecycle, growth rate, domestic vs. international attractiveness, competitive intensity, threats of new entry, threats of substitutes, bargaining power of suppliers, bargaining power of buyers
 - ❖ *Is their technology/product easy or difficult to imitate?*
 - ❖ *Legal mechanisms used to protect it*
 - ❖ *Location of the company* (within a highly internationalized industrial district or not)
 - ❖ *Prevalence of movement of people in the industry and speed*
 - ❖ *Tendency to spin off new companies*
-
-

NATURE OF THE FIRM

- ❖ *The most precious resources in this firm*
Technology, human talent, patent/copyright, brand, reputation, capital, etc
 - ❖ *The most precious capabilities or competencies in this firm*
Management skills, technical or technological expertise, or R&D capabilities, etc
 - ❖ *Most unique/distinctive and difficult to imitate or substitute*
-
-

DOMESTIC HISTORY

- ❖ *Reasons to stay local*
 - ❖ *Obstacles in international market entry. Give examples?*
 - ❖ *Industrial Organization issues?*
 - ❖ *If ever recognized int'l opportunity but did not exploit it – reasons!*
-
-

KEY SUCCESS FACTORS

- ❖ *Describe your theory of success or failures in recognizing, evaluating, and exploiting international business opportunities*
- ❖ *Key lessons to survive and thrive in the international market*

Seek permission to obtain firm historical artefacts and to contact “related others”

Thank you for your participation! We will provide you with a summary of the findings

APPENDIX F: RECRUITMENT PROCEDURE AND QUALITY CONTROL

Recruitment procedure and quality control

About this study

- Australian companies are facing greater challenges from foreign competition at both the domestic and international market than ever before. The Federal Government aims to double the number of exporters by 2006.
- This research aims to uncover the key characteristics and behaviour of small and medium enterprises (SMEs) that have entered overseas markets as well as those that remain domestic. The findings from this research will be useful for entrepreneurs/managers in identifying key success factors, obstacles and hence strategies to increase their international competitiveness. For policy makers, this study will provide a guideline for more effective and efficient assistance to SMEs.
- A study conducted by the School of Marketing, UNSW, under the direction of Mr. Yanto Chandra, the chief investigator and a Ph.D. candidate at the school
- The interview will be audio-recorded for ease of analysis and will be heard only by the chief investigator. It will be destroyed once the analysis is complete.
- Any information given will be treated in the strictest confidence unless specific permission is given
- This interview should take about 30 to 45 minutes

Precall planning

- Have sufficient copies of work-in-progress sheet before you start phoning
- Keep office phone 93852643 and dedicated mobile phone 0423245478 handy
- Always obtain some background information about the company before phoning (in case the company contact list is not detailed enough, conduct some searches on the internet)
- Get mentally ready for the calls to come

GETTING PAST THE GATEKEEPER (e.g. Receptionist/secretary)

- If the receptionist says a different company name check to get the correct name as some companies may have been taken over
- Introduce yourself and UNSW and briefly mention the purpose of your call
- Ask to speak to the person responsible for the company's *strategic decisions particularly the international business* matters (e.g. the founder, owner, CEO, managing director, marketing manager, export manager, business development manager).

- The ideal person is the entrepreneur who has ownership in the company, who also acts as the decision maker for the international business matters for the company
- If the receptionist won't put you through to someone, ask if you can at least send them some information, and get their correct name, title/position and email address. A few companies may ask you to post, fax, or email information.
- If the person isn't there, either leave a message or find out a time to call back. Make sure you make a note on the work-in-progress sheet about the outcome of the call and put a date and time for callbacks.

Talk to the right informant

- Explain again who you are, where you are from, the purpose of the call
- Ask if they have a few minutes to talk to you. If not, ask if you can call back another time.
- Check if the person is knowledgeable about the firm's first and subsequent international market entry (if this is not the right person, politely ask for the right person)
- If they say yes, tell them what is required from this interview (it takes 30-45 minutes, it will be recorded but confidentiality guaranteed, we offer a summary of results of the study)

Screen the firm

(Each of the following criteria must be satisfied)

- ✓ Must have less than 200 employees
- ✓ Ideally established in the 90s (the newer the better)
- ✓ Australian owned since inception (avoid company with complicated ownership changes)
- ✓ Any forms of legal entity (Pty Ltd, Partnership) BUT "public listed company", 'co-operative' or 'government agency'
- ✓ Interviewee was involved in the internationalization process/decision making (ensure the person is knowledgeable about the firms first and subsequent international market entry)

Gather the following information:

Internationalization status (please circle as appropriate)

- 1 = never goes international (solely deriving revenue from domestic)
- 2 = considering to internationalize
- 3 = currently internationalize (still generating revenue from international market)
- 4 = de-internationalized (pull out/stop deriving revenue from international market)
- 5 = reverse internationalization (use less risky/commitment entry mode)

Industry sector – check the theoretical sampling matrix (please circle as appropriate)

1 = Knowledge Based = high tech

2 = Non Knowledge Based = low tech

Closing

- If they fit all the criteria and is willing to participate, tell them the chief investigator will contact them shortly to ask a few brief questions and to fix an appointment for an interview
- If not, apologize and say thank you for their time

Interview arrangement

The recruiter is expected to assist to make the interview happen, including finding out or confirming the venue of the interview (preferably the informant's office) and some travel arrangements as necessary. This requires coordination with the chief investigator.

Successful recruitment

The recruitment is deemed successful upon the completion of the interview in which the chief investigator will determine the suitability of the company with the theoretical sampling.

APPENDIX G: LETTER TO COMPANIES

Letter to companies

THE UNIVERSITY OF
NEW SOUTH WALES



Mr. X
Chief Executive Officer
Company A

September, 2005

Dear Mr. X,

The University of New South Wales would like to invite you to participate in a research project that will examine the international entrepreneurial activities of Australian small and medium enterprises. The project is being conducted by a team of researchers from two universities, led by Professor Ian Wilkinson of the School of Marketing of UNSW and Professor Chris Styles of the Department of Marketing at University of Sydney.

The objectives of the project are to: (i) gain a better understanding of the processes and dynamics of international entrepreneurial activities of Australian SMEs, and more specifically (ii) to identify the factors necessary for the opportunity recognition, evaluation and exploitation in international markets, and (iii) understand the key success factors and obstacles in doing international business. This research was conducted to provide inputs to the Federal Government who aims to double the number of exporters by 2006. Austrade has reported that only 4% of Australian SMEs have gone international, a figure which is considerably lower than other OECD countries. Moreover, the opening of the Australian economy to the global market also leads to stronger competition in both the domestic and international markets. Therefore this research is important and timely for the Australian business community.

The part of the project we are inviting you to participate in focuses on how and why you recognize, evaluate and exploit opportunities in international markets over time. This includes the processes you went through in establishing your firm, your first international market entry, and subsequent international market entries, including any changes of operations that may take your firm further into the international markets and/or re-focus on the Australian market. To provide a holistic view of the research, we will also cover issues related to your firm characteristics and external market conditions in general.

What makes this research unique is that we will be looking at the historical process of how your firm evolves. Participation in this research will therefore involve the following:

- In-depth interviews with top level management of your company. The ideal person to speak with will be someone who holds key responsibility in the firm's strategic direction and involve in the process of going international such as the founder, CEO or managing director. You may also advise us that it is appropriate to speak with more than one top level managers in your company.
- An in-depth interview with your key business partners in the international markets, whenever appropriate.

During our visits, we would also like to get access to relevant documentation that you think will help us better understand about the dynamics of your firm's development. Confidentiality will ofcourse be assured.

The outcome of this section of the research will be a fully documented case study of the firm internationalization process – which may itself be a valuable tool for internal learning. We will then make comparisons between your firm's international entrepreneurial activities with the others we will be studying. The findings of our analysis will be available to you on completion of the project.

As the researcher in charge of this part of the study, I will contact you within the next week to discuss your potential participation in this research project. I can be contacted on (612) 93852643 or 0401836620.

I look forward to speaking with you about your involvement in this important research.

Thanking you,
Yanto Chandra

APPENDIX H: QUESTIONNAIRE FOR THE MAIN STUDY

Questionnaire for the main study

NAME OF COMPANY: DATE:		Prior to 1 st entry	After the 1 st entry	After the 2 nd entry	After the 3 rd entry	Latest entry -- ..?
My top management tends to see... The world as our firm's marketplace since day one	1 2 3 4 5					
The top managers of my company favour.... A strong emphasis on the marketing of tried and true products or services	1 2 3 4 5					
How many new lines of products or services has your firm marketed? No new lines of products or services	1 2 3 4 5					
Changes in product or service lines have been mostly of minor nature	1 2 3 4 5					
In dealing with its competitors, my company.... Typically responds to actions which competitors initiate	1 2 3 4 5					
Is very seldom the first business to introduce new products or services, administrative techniques, operating technologies etc	1 2 3 4 5					
Typically seeks to avoid competitive clashes, preferring a "live-and-let-live" posture	1 2 3 4 5					
The top manager at my company.... Have a strong proclivity for low-risk projects (with normal and certain rates of return)	1 2 3 4 5					
Believe that owing to the nature of the environment, it is best to explore it gradually via careful, incremental behaviour	1 2 3 4 5					
When confronted with decision-making situations involving uncertainty, my company.... Typically adopts a cautious, "wait-and-see" posture in order to minimize the probability of making costly decisions	1 2 3 4 5					

1 = not at all; 7 = to an extreme extent

NAME OF COMPANY: DATE:									Prior to 1 st entry	After the 1 st entry	After the 2 nd entry	After the 3 rd entry	Latest entry ---?
Do you have knowledge of customers, market, competitors, suppliers, distributors etc in particular foreign markets?	1	2	3	4	5	6	7						
Do you have knowledge of government, institutional frameworks, norms, rules, and values in particular foreign markets?	1	2	3	4	5	6	7						
Do you have the technical know how or technological skills needed to transform input into output in the firm?	1	2	3	4	5	6	7						
Do you have the experience of being an importer, licensee, franchisee, or as exporter, licensor, franchisor, or foreign manufacturer?	1	2	3	4	5	6	7						
Do you have links or connections with key firms or individuals in the industry? (e.g. venture capitalists, financiers, entrepreneurs, corporate executives, headhunters, or consultants?)	1	2	3	4	5	6	7						
Do you have friends, friends of friends, or business acquaintances in particular foreign markets?	1	2	3	4	5	6	7						
How would you rate your firm's ability to absorb knowledge?	1	2	3	4	5	6	7						
How would you rate your firm's ability to process knowledge?	1	2	3	4	5	6	7						
How would you rate your firm's ability to transform knowledge into new ideas, technologies, or products?	1	2	3	4	5	6	7						

1 = not at all; 7 = to an extreme extent

NAME OF COMPANY: DATE:		Prior to 1 st entry	After the 1 st entry	After the 2 nd entry	After the 3 rd entry	Latest entry ---?
Relative to your prior expectations, how satisfied have you been with your product's performance regarding...						
Market share?						
Sales growth?						
Pre-tax profitability?						
Compared with your main competitor(s), sales growth of this product or service in its main export market has been...						
substantially lower	1 2 3 4 5 6 7 substantially higher					
How would you rate the success of this product or service in its export-market?						
unsuccessful	1 2 3 4 5 6 7 8 9 10 successful					

APPENDIX I: PARTICIPANT CONSENT FORM



INTERNATIONAL ENTREPRENEURSHIP RESEARCH
AUSTRALIAN SMALL & MEDIUM ENTERPRISES
Participant Consent Form

About this study

The purpose of this interview is to get your expert opinions about a number of factors that may be relevant to your current business activity in the domestic and or international context. You were selected as a possible participant in this study because of your involvement in the industry you are in. This interview should take about 45 minutes.

Recent research in the international business discipline show the growing presence of smaller firms in the domestic and international market. Some are even entering the international market soon after inception, while others took a long development time until their first international market entry. Many others have entered as well as pulled out from the international markets, as well as increasing and decreasing their commitment to their international operations. These dynamic processes of international entrepreneurial behaviour have not been well addressed by existing theories. Therefore the objective of this research is to uncover the dynamics, processes and challenges that smaller firms face in entering international markets. Specifically, we are interested in how and why you recognize, evaluate and exploit opportunities over time. The findings from this research will be useful for managers in identifying key success factors as well as obstacles for smaller firms to grow their business. For policy makers, this study will provide a guideline for more effective and efficient assistance to smaller firms.

Summary of results available for participation

We value your participation in this study and to show our appreciation for taking your valuable time to participate in this interview we are happy to provide you with a summary of the results when they are analysed. Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or except as required by law. Note that it is standard practice to tape interviews to assist analysis. These tapes will only be heard by the chief investigator and will be destroyed once the analysis is complete.

In any publication, information will be provided in such a way that you cannot be identified. Complaints should be directed to the Ethics Secretariat, The University of New South Wales, Sydney 2052, Australia (Phone 9385 4234, Fax 9385 6648, Email ethics.sec@unsw.edu.au). Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome. If you have any questions, please feel free to call Yanto Chandra on 0401 836 620 at any time.

You are making a decision whether or not to participate. Your signature indicates that, having read this Participant Information Statement, you have decided to take part in this study. The project leader will pick this original and signed form from you during the interview.

Signature _____ of _____ Respondent.....PRINT
NAME.....DATE: ____/____/____

Project Leader

Yanto Chandra

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