THE INFLUENCES OF GEOGRAPHICAL CO-LOCATION AND SOCIAL NETWORKING IN INTER-FIRM COOPERATION IN MARKETING: A CROSS COUNTRY ANALYSIS

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ABSTRACT

The role of regional clusters in the development and growth of firms has been a key research theme within the management and entrepreneurship literature over the past two decades. The main focus of this research has been to consider issues relating to economic externalities: economies of scale or scope and the effects of knowledge diffusion or, as Krugman (1991) defined them, knowledge spillovers. While the idea of firm-level marketing externalities has been mooted as a potential benefit arising from geographic agglomeration (Bell and Brown, 2001), there has been, as yet, little research undertaken which can support such claims.

This thesis investigates the benefits from regional industry clusters by exploring the role of geographic co-location and the influence of social networks in the development of firm-level marketing externalities. Specifically, the following research propositions were examined:

Proposition 1: Social networking has a greater influence than geographic proximity in facilitating inter-firm cooperation in marketing activities.

Proposition 2: The social elements of networking are positively correlated to the development of inter-firm cooperation in marketing activities.

Proposition 3: Compared to formal relationships, informal networks are positively correlated with the development of inter-firm cooperation in marketing activities.

Proposition 4: Multinational Enterprises positively influence the development of inter-firm co-operation in marketing activities within regional clusters.

Proposition 5: Countries and regions in which there is a high level of social collectivism will demonstrate higher levels of inter-firm cooperation in marketing activities.

Data for this thesis was collected in two main stages. Stage one entailed semi-structured personal interviews (during July 2003 and January 2004), based on a purposive sample of twenty-two companies in two regions in Scotland (Northwest Scotland and Shetland Isles) and two regions in Chile (IX and X regions). The firms were drawn from a single industry, salmon farming, a sector that makes a substantial contribution to the remote-rural and regional economies of both Scotland and Chile. Stage two involved a postal questionnaire survey and follow-up process during 2004, to the total population of companies (N=229) involved in the main value chain activities of this industry in the two participant counties.

The results reveal that 'close proximity' is not a key issue for the development of inter-firm cooperation in marketing. Co-location is, however, beneficial for the development of 'social glue' (Porter, 1998), building trust among entrepreneurs within the specific industry and building a common knowledge base and culture. Close proximity also enhances face-to-face communication, helping the development of relational ties that are special for inter-firm interactions. In addition, co-location is

generally perceived to be useful for sharing general ideas with other people, rather than for sharing strategic information.

The results also suggest that elements of networking are important for inter-firm cooperation. They highlight the potential role of 'communication and social networks' (Szarka, 1990; Johannisson, 1995; Mackinnonn *et al.*, 2004) as well as 'extra local networks' (Mackinnon *et al.*, 2004) as relevant in providing information to firms in local and regional clusters. Thus, the concept of 'proximity' needs to be considered as being not only spatial but also social, assuming organisational and relational forms in which firms and entrepreneurs relate to each other. The evidence also emphasizes the use of electronic communication as a mechanism to facilitate inter-firm collaboration with partners irrespective of location, being an effective means of transmitting technical knowledge including marketing information.

The marketing collaboration process appears to be led by small innovative companies. As smaller companies increase in size and stronger competition for similar markets and customers becomes an increasingly important factor, the creation of individualistic-competitive strategies becomes the norm. Multinational companies were not found to influence marketing collaboration activities.

Inter-firm cooperation in marketing activities is not only affected by company size or company structure. Both the general business culture of the country and the 'special' characteristics of specific regions within countries affect cooperative behaviour. In the Shetland Isles, for example, the local culture appeared to emphasize more cohesive - collectivistic behaviour, an embedded part of the 'local industrial atmosphere' (Marshall, 1919), creating a special environment which manifested a complex mix of cooperation and competition within the industry.

Keywords: Regional clusters
Social networks
Marketing cooperation
Salmon industry

GLOSSARY

Co-location: refers to geographical co-location, geographical agglomeration, or close proximity among firms in specific regions within a country. Also refers to regional clusters.

Localized networks: refers to geographical co-location of firms.

Social networking: social relationships that includes some elements of trust, credibility, integrity, honesty and commitment among parties. They can be formal or informal relationships.

Externalities: external economies that provide general benefits to individual firms.

Co-marketing: refers to marketing collaboration among firms.

Networking: refers to social networks. Also, a group of firms using combined resources to co-operate on joint projects, independent of geographical location.

Marketing activities: refers to elements of the marketing mix: price, product, distribution, promotion. Especially when it is used at strategic levels.

Embeddedness: involves the concepts of social capital and the positive benefits of networks within business local communities.

Social capital: the degree to which a community or society collaborates and cooperates (through such mechanisms as networks, shared trust, norms and values) to achieve mutual benefits.

Informal networks: non-contractual relationships that may involve not only business matters, but also friendship, trust and the sharing of social elements independent of the location of the parties involved.

Personal network: all those persons with whom the owner-manager has direct face-to-face relations (e.g. partners, suppliers, distributors, trade associations and family members).

Joint marketing or co-marketing: refers to inter-firm cooperation in marketing activities. These concepts are seen as synonymous. They can be understood as a group of firms using combined resources to co-operate in marketing and/or sales activities at local and/or international levels.

Trust: a complex construct that includes integrity, honesty and confidence that one party (e.g. entrepreneurs, managers) places in another.

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Dedicación

A mi Madre, la cual siempre me ha motivado a lograr los más altos objetivos en la vida.

Tambien a aquéllos que han dejado esta vida, a los que estan vivos y a quéllos que vendrán en el futuro, porque me ayudan en la preparación de mis futuras responsabilidades en una sociedad que desea más equilibrio, justicia social, cooperación y desarrollo.

Dedication

To my mother who always encouraged me to achieve higher goals in life.

To those that have passed away, those who are alive and those who will come, because they are helping me in the preparation for my future responsibilities in a society that desires equilibrium, social justice, cooperation and development.

Table of Contents

Cover page i

Declaration ii

Abstract iii

Glossary v

Acknowledgements vi

Dedication vii

Table of Contents viii

List of Figures xv

List of Tables xvii

List of Graphs xix

List of Appendices xx

Chapter 1: Introduction

1.1 Introduction 1

1.2 Inter-firm networks and co-location 1

1.2.1 Social networking 3

1.2.2 The role of informal contacts 4

1.3 The research project 4

1.4 Structure of the thesis 6

Chapter 2: Literature Review

Agglomeration Economies and the Development of a Regional Cluster Theory

2.1 Introduction 7

2.2 Theories on regional agglomeration economies 7

2.2.1 The concept of industrial districts 10

2.2.2 From Marshall's theory to the new industrial districts 16

2.2.3 Regional innovative milieu 19

2.2.4 Regional innovation systems 24

2.3 Clusters definitions and theory development 26

2.3.1 Definitions 26

2.3.2 Theory development 27

2.3.3 Industrial clusters and the competitive advantage: a strategic approach 29

2.3.4 Porter's determinants of national competitive advantage 32

2.3.4.1 Porter's omission of multinational enterprises 35

2.3.4.2 National innovative capacity and Porter's competitive advantage 36

2.4 Clusters: some evidence from empirical research 39

2.4.1 Cluster an 'international concept' 39

2.4.2 Clusters in the United Kingdom 40
2.5 Conclusions 42

Chapter 3: Literature Review

Social Networks, Inter-firm Co-operation and Marketing Externalities in Clusters

3.1 Introduction 45
3.2 Clusters, SMEs and the marketing environment 45
3.2.1 Notions of networks in SMEs 48
3.2.1.1 Defining networks 49
3.3 The elements of trust and commitment in inter-firm co-operation 53
3.3.1 Defining 'trust' and 'commitment' 54
3.3.2 Trust, commitment and similarity in business networks 55
3.3.3 The role of cultural differences in inter-firm co-operation 56
3.4 The concepts of social capital in clusters 57
3.4.1 The role of informal contacts in networks 59
3.5 Clusters and active marketing externalities:
The development of a new social externality 61
3.5.1 Externalities: definitions and types 61
3.5.1.1 Production driven externalities and market driven externalities 62
3.5.2 Clusters' externalities: development and implications for SMEs network 65
3.6 Multinational enterprises:
Do they have a role in cluster development and inter-firm co-operation? 68
3.6.1 MNEs and Cluster upgrading 69
3.7 Externalities and inter-firm co-operation in networks and regional clusters:
Evidence from current research 71
3.7.1 Inter-firm co-operation, innovation and competitiveness 71
3.7.2 Inter-firm co-operation with the public sector and trade associations 72
3.7.3 Inter-firm co-operation, local embeddness and cultural influences 74
3.7.3.1 The paradox between co-operation and competition among
local - embedded firms 75
3.8 Externalities and inter-firm co-operation in networks and regional Clusters:
A research methodology approach 76
3.9 What is next in research? 78
3.10 Conclusions 79

Chapter 4: Industry Analysis

The Salmon Farming Industry

4.1 Introduction 86
4.2 Industry overview 87

4.2.1 Global production and the main competitor countries 88
4.2.2 Global consumption 90
4.3 The salmon farming industry in Chile 91
4.3.1 Geographical territory and local economic development 93
4.3.2 Structure and competition in the industry 96
4.3.2.1 The role of suppliers 99
4.3.2.2 The influence of foreign capital in the industry 100
4.3.3 Marketing and sales distribution 103
4.3.4 The cluster strategy in the Chilean salmon industry 104
4.3.4.1 Is there any collective efficiency in the industry? 109
4.3.4.2 Collaboration or inter-firm dependence? 111
4.3.5 Summary and outlook of the Chilean salmon farming industry 111
4.4 The Scottish food and drink cluster 113
4.5 The salmon farming industry in Scotland 114
4.5.1 Geographical territory and local economic development 117
4.5.2 Structure and competition in the industry 120
4.5.2.1 Salmon producers 122
4.5.2.2 The role of suppliers 125
4.5.3 Marketing and sales distribution 127
4.5.4 The cluster strategy in the Scottish salmon industry 130
4.5.4.1 Strategic framework for Scottish aquaculture 131
4.5.4.2 A unique 'top-down' cluster approach 132
4.5.5 Shetland: the case of a remote cluster 134
4.5.6 Summary and outlook of the Scottish salmon farming industry 137
4.5 Conclusions 138

Chapter 5: Research Propositions

5.1 Introduction 141
5.2 Inter-firm networks and co-location 141
5.3 Social networking 147
5.4 The role of informal contacts in inter-firm co-operation 153
5.5 Company size and structure of the industry 157
5.6 Cultural influences in inter-firm co-operation 159
5.7 General theoretical framework 162
5.8 Conclusions 163

Chapter 6: Research Methodology

6.1 Introduction 165
6.2 Research aim, objectives and questions 165
6.2.1 Research aim 166

6.2.2 Research objectives and questions 166
6.3 Research philosophy 167
6.3.1 The positivist approach 168
6.3.2 The anti-positivist approaches 170
6.4 Deductive vs. inductive research 171
6.5 The chosen philosophical approach 173
6.6 Primary research and research design 174
6.6.1 The importance of the research process 175
6.6.2 The importance of the research design 175
6.7 The chosen research design 178
6.8 Primary data collection 179
6.8.1 Personal interviews 180
6.8.2 Focus groups 181
6.8.3 Observational techniques 182
6.8.4 Survey research 182
6.9 The chosen data collection methods 184
6.10 The qualitative research 188
6.10.1 General data collection process 188
6.10.2 Data collection in Scotland 189
6.10.3 The interview outline and validity issues 190
6.10.4 The interview process in Scotland 191
6.11 Data collection in Chile 192
6.11.1 The interview outline 194
6.11.2 The interview process in Chile 194
6.11.3 Qualitative data analysis, main problems and further steps 195
6.12 Questionnaire survey 195
6.12.1 Survey procedure and pre-test 196
6.12.2 Scales of measurement 197
6.12.3 Sample frame, follow-up process and response rate 198
6.12.4 Data analysis techniques 202
6.12.5 Estimating non-response bias 202
6.13 Validity analysis 204
6.14 Limitations of the quantitative research 205
6.15 Research implications for a cross-country analysis 207
6.16 The advantages of two research methods 208
6.17 Project timetable 209
6.18 Conclusions 210

Chapter 7: Results and Discussion of Exploratory Interviews

7.1 Introduction 212

7.2 Demographic characteristics of the sample 213

7.3 Scotland 216

7.3.1 Mainland Scotland interviews 216

7.3.2 Shetland interviews 234

7.4 Chile 251

7.4.1 Xth. Region and Santiago interviews 251

7.4.2 Chilean non-cluster area interviews 271

7.5 Comparative Analysis: Scotland vs. Chile 275

7.5.1 Summary of the interviews in Scotland and Shetland 275

7.5.2 Summary of interviews in Chile 280

7.5 Conclusions 284

Chapter 8

Results: The Influences of Geographical Co-location

8.1 Introduction 288

8.2 Characteristics of the sample 288

8.2.1 Geographical location 288

8.2.2 Sources of capital, company size and age 290

8.2.3 Competitor's characteristics 292

8.2.4 Main markets 293

8.2.5 Marketing activities carried out by different people 294

8.3 Benefits based on location 296

8.3.1 General externalities 297

8.3.2 Joint marketing activities 301

8.4 Overall usefulness of co-location 305

8.5 Inter-firm cooperation in marketing 307

8.5.1 Firm's actual cooperation in marketing and main levels of collaboration 307

8.5.2 Geographical co-location: its importance for the firm and industry 311

8.5.3 Current or expected investment and intentions for developing joint marketing activities 313

8.6 Conclusions 315

Chapter 9

Results: The Influence of Social Networking

9.1 Introduction 318

9.2 Social networking elements 318

9.2.1 Marketing discussion at different social levels 319
9.2.2 The role of informal contact and the frequency of interaction 322
9.2.3 Social sources of marketing advice 324
9.2.4 Social expectations of marketing interaction 326
9.3 Multinational companies and relational benefits 330
9.3.1 Influence of multinational subsidiaries 330
9.3.2 Expected marketing benefits 331
9.4 Conclusions 332

Chapter 10: Conclusions, Recommendations and Limitations

10.1 Introduction 334
10.2 Summary of the results 334
10.2.1 Geographical co-location and social networking 335
10.2.2 The elements and importance of social networking 337
10.2.3 Multinational companies 339
10.2.4 Country specificity and cultural influences 340
10.3 Research contribution 343
10.3.1 Theoretical contribution 343
10.3.2 Methodological contribution 346
10.3.3 Managerial contribution 348
10.4 Limitations of the Research 349
10.5 Directions for further research 351

References 352

List of Figures

Figure 2.1: Marshall's triad of external economies of industrial localisation 10
Figure 2.2: Porter's competitive diamond on local clustering (based on Porter, 1998) 33
Figure 2.3: Main sources of national innovative capacity 37
Figure 3.1: The elements of social capital in the inter-firm co-operation 58
Figure 4.1: Location of the salmon farming industry in southern Chile 93
Figure 4.2: Salmon farming value chain (southern Chile) 95
Figure 4.3: Geographical distribution of the salmon farming industry in Scotland 117
Figure 4.4: Salmon farming value chain (Scotland) 126
Figure 4.5: The industry vision for 2010 131
Figure 4.6: Public policy in the salmon farming cluster strategy 133
Figure 5.1: Key definitions and concepts for proposition 1 141
Figure 5.2: Key definitions and concepts for proposition 2 148
Figure 5.3: Key definitions and concepts for proposition 2 148
Figure 5.4: Key definitions and concepts for proposition 2 148
Figure 5.5: Key definitions and concepts for proposition 2 149
Figure 5.6: Key definitions and concepts for proposition 3 154
Figure 5.7: Key definitions and concepts for proposition 4 158
Figure 5.8: Key definitions and concepts for proposition 5 160
Figure 5.9: The theoretical framework for research 163
Figure 6.1: Some implications of the positivist approach 169
Figure 6.2: Some implications of the non-positivist approach 171
Figure 6.3: Theory testing approach-Deductive 172
Figure 6.4 Theory building approach-Inductive 172
Figure 6.5: Research phases of the thesis 185
Figure 7.1: Graphical description of S1 219
Figure 7.2: Graphical description of TS1 222
Figure 7.3: Graphical description of S2 225
Figure 7.4: Graphical description of S3 227
Figure 7.5: Graphical description of S4 230
Figure 7.6: Graphical description of S5 233
Figure 7.7: Graphical description of TSh1 237
Figure 7.8: Graphical description of Sh2 240
Figure 7.9: Graphical description of Sh3 243
Figure 7.10: Graphical description of Sh4 246
Figure 7.11: Graphical description of Sh5 248
Figure 7.12: Graphical description of Sh6 250
Figure 7.13: Graphical description of TCh 254

Figure 7.14: Graphical description of Ch1 257
Figure 7.15: Graphical description of Ch2 259
Figure 7.16: Graphical description of Ch3 261
Figure 7.17: Graphical description of Ch4 263
Figure 7.18: Graphical description of Ch5 265
Figure 7.19: Graphical description of Ch6 267
Figure 7.20: Graphical description of Ch7 270
Figure 7.21: Graphical description of ChN8 272
Figure 7.22: Graphical description of ChN9 274

List of Tables

Table 2.1: Contexts of learning: milieu vs. cities 22

Table 2.2: Sector/cluster orientation in UK regions 41

Table 2.3: A conceptual path to cluster theory 43

Table 3.1: Cluster externalities 62

Table 3.2: Active and passive cluster externalities 64

Table 3.3: Negative externalities 65

Table 3.4: Externalities and inter-firm co-operation in networks and regional clusters: evidence from current research 81

Table 4.1: Summary of growth prospects for the main salmon farming producing countries 89

Table 4.2: Salmon farming production in Chile 92

Table 4.3: Number of firms and employment in the Chilean salmon industry 98

Table 4.4: Industry suppliers in the salmon farming industry (southern Chile) 99

Table 4.5: Main companies: Salmon farming cluster (southern Chile) 101

Table 4.6 Salmon farming cluster in Chile: three main steps 106

Table 4.7 Collective actions: firms, local institutions and government 110

Table 4.8: Is it collaboration or inter-dependence? 111

Table 4.9: Comparative estimated costs of kilo of farmed salmon: Chile and Scotland 118

Table 4.10: Scottish sales with 'label rouge' label 121

Table 4.11: Main characteristics and prospects for different status groups in Scotland 123

Table 4.12: Comparative summary of Chile and Scotland 140

Table 6.1: Traditional research designs 176

Table 6.2: Primary data collection methods 179

Table 6.4: Main types of survey research 183

Table 6.5: Preliminary non-structured interviews 186

Table 6.6a: Participant companies in the exploratory personal interviews in Scotland 187

Table 6.6b: Participant companies in the exploratory personal interviews in Chile 188

Table 6.7: Sampling choices in international marketing research 208

Table 6.8: Project timetable 210

Table 6.9: The path from research objectives to results 211

Table 7.1 Demographic characteristics of the sample 214

Table 7.2: Summary of exploratory interviews in Scotland and Shetland isles 275

Table 7.3: Summary of exploratory interviews in Chile 280

Table 8.1: Geographical Location 289

Table 8.2: Firm characteristics 291

Table 8.3: Competitor's characteristics 293

Table 8.4: Number of firms selling more than 50% to these markets 293

Table 8.4b: Percentage of firms with majority of sales in local market 293
Table 8.5: Marketing activities carried out by different people 295
Table 8.6: Externalities produced by co-location 298
Table 8.7a: Marketing cooperation with other firms 303
Table 8.7b: Marketing cooperation with trade association 304
Table 8.8a: Firm's cooperation in marketing today 308
Table 8.8b: Reasons for not collaboration in marketing 308
Table 8.9: Areas of collaboration 308
Table 8.10: Location of inter-firm cooperation in marketing 309
Table 8.11: Value chain position of inter-firm cooperation in marketing 310
Table 8.12: Inter-firm cooperation by different marketing activities 311
Table 8.13: Co-location and inter-firm cooperation in marketing 313
Table 8.14: Current or expected areas of investment in marketing collaboration 314
Table 8.15: Current or expected intentions for developing marketing collaboration 315
Table 9.1a: Discussion about marketing activities 319
Table 9.1b: Main reasons for not discussion about marketing collaboration 320
Table 9.2a: Formality of current or expected discussion about marketing 321
Table 9.2b: Formality of current or expected discussion about marketing (with T.A.) 322
Table 9.3: Sources of marketing advice 324
Table 9.4: Features of the relationship for the most important source of advice 326
Table 9.5: Social expectations from meetings 327
Table 9.6: Partners behaviour expectation 327
Table 9.7: Social expectations from the partner 328
Table 9.8: General expectations from the partner 329
Table 9.9: Influences of MNEs subsidiaries 330
Table 9.10: Expected benefits of marketing collaboration 332

List of Graphs

Graph 4.1: Growth of annual Atlantic salmon harvest volumes by country 88

Graph 4.2: UK finfish landing 115

Graph 4.3: Production of farmed fish, Scotland, 1988 to 2001 116

Graph 4.4: Farmed fish and shellfish direct labour, Scotland, 1988 to 2001 119

Graph 4.5: Number of active salmon and smolt producing companies 122

Graph 4.6: Price trends 'label rouge' vs. others 129

Graph 4.7: Regional distribution of farmed salmon production 2002 135

Graph 8.1: Overall usefulness of co-location for marketing cooperation 306

Graph 9.1: Informal contact with other managers 323

List of Appendices

Appendix 1: Sample letter to the Managing Directors 384

Appendix 2: Interview guide 388

Appendix 3: Questionnaire 386

Appendix 4: Cover letter 387

Chapter 1: Introduction

The Influences of Geographical Co-Location and Social Networking in Inter-Firm Cooperation in Marketing: A Cross Country Analysis

1.1 Introduction

This thesis is concerned with the factors that influence the development of marketing externalities among cluster-based firms. Theorists have consistently demonstrated the role and importance of economic externalities, such as knowledge spillovers, within industrial clusters. Less research attention has been paid to the investigation of marketing based externalities, though it has been suggested that these may also accrue from geographical agglomeration. Thus, this thesis explores the development of marketing cooperation among firms operating in a single industry sector and located in close proximity.

1.2 Inter-firm networks and co-location

A new growing interest in localized networks and inter-firm relations has emerged; deriving support and competitive advantage through highly localised inter-firm relationships, place specific history, economic factors, values and culture (McNaughton and Bell, 1999; Brown and McNaughton 2001, 2002).

Inter-firm interaction or networks in localised clusters cannot be seen in isolation. Research has focused on concepts acknowledged by Porter (1998) as being 'social glue'. Thus, companies need to consider aspects of social structures (Gulati, 1999; Ahuja, 2000), social capital, referring to the social structures that determine who is going to interact (Davidsson and Honing, 2003), as well as the notions of embeddedness (Granovetter, 1985; Aldrich and Zimmer, 1986; Jack and Anderson, 2002), the mechanism whereby an entrepreneur, firm or organisation becomes part of the local structure involving the creation of social ties with the local environment (Jack and Anderson, 2002).

Implicit in each of the potential benefits resulting from SMEs networking, is the notion of trust as a key element in the development of a co-operation relationship (Bucklin and Sengupta, 1993; Hoang and Antoncic, 2003). Trust allows partners to respect the assumed commitments among the firms in the specific network (Joly and Mangematin, 1996). However, the threat of opportunistic behaviour, sometimes called the free-rider problem, by one or more partners is an ever-present risk (Bucklin and Sengupta, 1993; Gulati, 1999; Ahuja, 2000). Unlike co-located clusters, networks do not have to be geographically concentrated (Brown and McNaughton, 2002). As soon as trust among players has been established and the strategic direction agreed, the operational dialogue and communication can then be made possible through electronic means.

Maskell *et al.*, (1998) and Maskell (2001) suggest that the social process of learning and innovation in inter-firm co-operation work best when partners involved are sufficiently physically close to allow frequent interaction and effective exchange of information. The social process that is embedded in regional communities that share a common knowledge base and culture may be the best facilitator for inter-firm collaboration (Cooke, 1998; McKelvey *et al.*, 2002; Wolfe, 2003). Close proximity at regional level facilitates frequent face-to-face interaction in both formal and informal settings (Birley, 1985). This process creates a common language or code of communication, sometimes called tacit knowledge, through repeated interaction over time (Patel and Pavitt, 1994). This, in turn, leads to the creation of regional institutions that help to reinforce the right environments for inter-firm interaction (McKelvey *et al.*, 2002; Wolfe, 2003).

Huggins (2000) stressed the importance of co-operative activities and trustful relationships for achieving better competitive advantages for business. Furthermore, Huggins stated that social groups seem to be the most potent form of inter-firm network, and an initial informal structure is the best facilitator for this relationship. This argument stresses the importance of clusters and industrial districts as 'social network topography' (Van Dijk and Sverrisson, 2003), considering the key elements of the social relationships or 'relational mix' (Lechner and Dowling, 2003), and not only using an economic geography perspective.

An analysis of the networks literature provides an insight into the organisational processes that underlie alliance decisions. Social networks make potential partners aware of each other's existence, needs and capabilities requirements for entering alliances, help to develop the trust necessary for alliances (Gulati, 1995; Gulati, Nohria and Zaheer, 2000) and, moreover, make opportunism more costly because of reputation effects (Gulati, 1995). Granovetter (1992) identified two distinct components of social structure that are influential in alliance formation: the relational components consisting of direct relationships within which the firm is embedded, and structural components which comprise the overall social network within which firms exist and which provide knowledge about potential partners that firms may acquire from a variety of social sources. By participating in alliances and networks, firms develop capabilities in alliance formation that accrue as a result of a historical process of learning and which can then be used in subsequent new alliance formation (Dierickx and Cool, 1989).

1.2.1 Social networking

As noted above, social networks are key elements in relationships, at both organisational and personal levels, in embedded local firms (Birley, 1985; Dubini and Aldrich, 1991; Johannisson, 1995; Ahuja, 2000). Networks can also become the basis of a rich information exchange that enables firms to learn about new alliance and market opportunities with reliable partners (Birley, 1985; Powell *et al.,* 1996; Gulati, 1999; Ahuja, 2000). The development and gradual building of such networks implies a degree of mutual trust among partners (Gulati, 1999; Hoang and Antoncic, 2003). The literature identifies three broad types of networks (Johanninsson, 1995; Mackinnon *et al.,* 2004). Exchange networks involve commercial relationships with customers and suppliers; communication networks involve individuals who provide a firm with contacts and knowledge to inform business activities (for example, with industry bodies); and social networks, including informal relations, friends and other connections which provide support to owner-managers, and which have a broader scope of development, social embedded norms and expectations.

1.2.2 The role of informal contacts

The role of informal contacts within social networks has received particular attention in the regional clusters literature since the late 1990s. Informal contacts play an important role in inter-firm co-operation, acting as channels of knowledge flows (Birley, 1985; Bengtsson and Kock, 1999; Feldman, 1999; Melo, 2001; Dahl and Pedersen, 2003; Soh, 2003). At the same time, informal relations and the interaction between firms and their local environment are key issues for the development of trustful co-operation (Collinson, 2000; Huggins, 2000; Varamaki and Vesalainen, 2003). Knowledge spillovers through informal contacts can be considered as one of the externalities that Marshall (1919) and Krugman (1991) argued were the main forces behind industrial clustering. Companies located in a cluster, or industrial district, are linked by specific informal relations in a complex mix of co-operation and competition and share a set of common values and knowledge which is part of the *'local industrial atmosphere'* that Marshall described (Becattini, 1989; Brusco, 1990; Porter, 1998; Feldman, 1999; Dahl and Padersen, 2003).

Other research streams suggest that informal networks are more likely to share 'small ideas' rather than strategic knowledge (Breschi and Lissoni, 2001) and that inter-personal communication is relatively more important for sharing knowledge with customers than with competitors (Schrader, 1991; Lissoni, 2001).

1.3 The research project

The aim of this thesis was to explore the influences of geographical co-location and social networking in developing inter-firm cooperation in marketing activities. The five main research objectives were:

1. To build an understanding of the relationship between the issues related to regional clusters (geographical co-location) and social networking in developing inter-firm cooperation in marketing

2. To explore how and to what extent co-location and networking influence inter-firm co-operation in marketing

3. To understand the relative importance of the social elements of networking in influencing inter-firm co-operation in marketing

4. To explore if there is any influence played by multinational companies in the development of inter-firm co-operation in marketing activities, when firm are located in regional clusters

5. To explore if there is any country or region specificity in the use of different types of inter-firm co-operation in marketing among clustered companies

Data for this thesis was collected in two main stages. Stage one entailed semi-structured personal interviews (during July 2003 and January 2004), based on a purposeful sample of twenty-two companies in two regions in Scotland (Northwest Scotland and Shetland Isles) and two regions in Chile (IX and X regions) drawn from a single industry. Stage two entailed a postal questionnaire survey and follow-up process during 2004, to the total population of companies (229) involved in the main value chain activities of this industry in the two participant counties.

The salmon farming industry was chosen for a number of reasons. Firstly, it possesses similar characteristics in two countries with different levels of economic development, entrepreneurial capabilities and culture. Secondly, it is located in specific geographical regions, contributing directly to the local economic development of remote-rural areas of each country. Thirdly, it is possible to find inter-connections in the value chain activities through their processes; the industry constitutes a distinct 'industrial district' or a 'cluster' in both countries, thus enabling comparability. Finally, Chile and Scotland are the second and third largest producers as well as exporters of farmed salmon in the world (after Norway) and are thus important players in the global market of salmon farm products.

1.4 Structure of the thesis

Following this introduction, the thesis starts by reviewing the literature related to geographic co-location (Chapter Two), social networking, inter-firm cooperation and marketing externalities (Chapter Three). The industry analysis is presented in Chapter Four, highlighting the relevance of this specific industry for this study in a comparative perspective between Scotland and Chile. Chapter Five presents the development, main concepts, measures and scales used in the study, as well as the theoretical justification of the research propositions.

The philosophical foundations of the research, the research objectives and the methodological approach are described in Chapter Six. The qualitative results of the exploratory interviews and its discussion are presented in Chapter Seven. Chapter Eight and Nine present the quantitative results of the questionnaire survey and its discussion. Specifically, Chapter Eight is concerned with the characteristics of the sample and benefits based on co-location. Chapter Nine deals with the social networking elements, multinational companies, relational benefits, and the general factors influencing marketing collaboration. The final chapter concludes the study and presents recommendations concerning future research related to inter-firm cooperation in marketing. The cultural aspects surrounding the results of this thesis are highlighted as key aspects of this comparative research study.

Two technical appendices are included. The first provides the letter of introduction to the companies for interview, the interview guide, the cover letter from the questionnaire and a copy of the questionnaire used in this study. The second technical appendix includes complementary statistical analysis carried out through the quantitative stage of this thesis.

Chapter 2: Literature Review

Agglomeration Economies and the Development of a Regional Clusters Theory

2.1 Introduction

This chapter, organised both chronologically and thematically, provides an outline of the existing literature related to regional agglomeration economies and in that context, the concept of clusters. As a starting point an overview of the theories of regional agglomeration is given, following a historic path from the earliest concepts of industrial districts, regional innovative milieu, regional innovation systems, up until the clusters theory.

Although the cluster approach clearly proves to be one of the most comprehensive theoretic models so far, and is used as part of public policies in regional and local economic development, numerous issues are left unresolved, some of which are addressed at the end of this chapter.

2.2 Theories on Regional Agglomeration Economies

Many economic geographers, economists and nowadays more international business and public policy scholars have seen agglomeration economies theories as a starting point for contemporary academic research. However, the concept of agglomeration economies is far from recent. The first ideas and theoretical development go back to the first half of the nineteenth century with Johann Heinrich von Thünen and his masterpiece 'Isolated State'. Von Thünen (1842) developed a model for agricultural products in Germany, where products and production were determined by the price, as well as by the cost of

producing goods. This model was based on the assumption that the cost factors, which normally co-determine the location of agricultural production, were concentrated on the transportation cost from the country to the town. This was the *expression of distance* in von Thünen's model. The author worked on an idealised and hypothetical model which was described as follows:

> *"Imagine a very large town, at the centre of a fertile plain which is crossed by no navigable river or canal...Far from the town, the plain turns into an uncultivated wilderness which cuts off all communication between this State and the outside world....The are no other towns on the plain. The central town must therefore supply the rural areas with all manufactured products, and in return it will obtain all its provisions from the surrounding countryside..."* (von Thünen 1842, p. 7)

From the previous hypothesis, von Thünen (1842) tried to describe the problem that would lead to the development of his theory: "What pattern of cultivation will take shape in these conditions?; and how will the farming system of the different districts be affected by their distance from the town?" (von Thünen 1842, p. 8). Thus, the development of his theories is based on concentric rings or belts that are around the town, each of them with their own particular attached product. Furthermore, his study includes problems of how the distance affects labour cost, distance between field and farmstead, and a development of cost system for agriculture production in a specific location. In this way, as O' Kelly and Bryan (1996, p. 457) state, "von Thünen has had a tremendous impact, not only on location theory but also on economic geography as a whole".

Although von Thünen's model has been the foundation of modern agglomeration economies theories, it is based on various ideal assumptions of an "isolated town", which are far behind the reality of an interconnected world. Thus, this model is highly concentrated on an ideal *"isolated economy"* and it is powerfully conditioned by the time and the place where the author was located. In this case, the analysis lacks an

international perspective, which is essential in a contemporary economy of interrelated links of interdependency.

After von Thünen (1842), the contributions of his contemporaries Alfred Marshall (1842-1924) and Alfred Weber (1868-1958) are noteworthy for their roles in the development of agglomeration economies theories. A. Marshall, since his first edition of *Principles of Economics* in 1890 recognised the economic problems of a man, family, organisations and nations. In this respect, Marshall (1920) also recognised that the value of a space is affected by the geographical position of industries. In addition, the author focused his attention on the changes of industries located in the United Kingdom (and especially in England) undergoing during the 1850s; "the changes have tended to increase the specialization and the location of industries..." (Marshall 1920, p. 277).

The geographical distribution of industries, and especially the concentration of a significant number of small businesses in a similar economic sector, was a key issue for the development of new economic theories from the second half of the nineteenth century. Furthermore, Marshall (1920) introduced the early concepts of *co-partnerships*, *social elements of proximity* and *co-operation* among these industries, which were geographically concentrated in the early 1850s. As the author stated in his masterpiece *Principles of Economics*, "we shall have to study all those various co-operative and semi-co-operative forms of business more in detail, and to inquire into the causes of their success or failure in different classes of business, wholesale and retail, agriculture, manufacturing and trading" (Marshall 1920, p. 307). Thus, according to the research objectives of this study, Marshall and his work on industrial districts can be considered as the starting point for many conceptual considerations, of what in the future will be the broad concept of clusters.

2.2.1 The concept of industrial districts

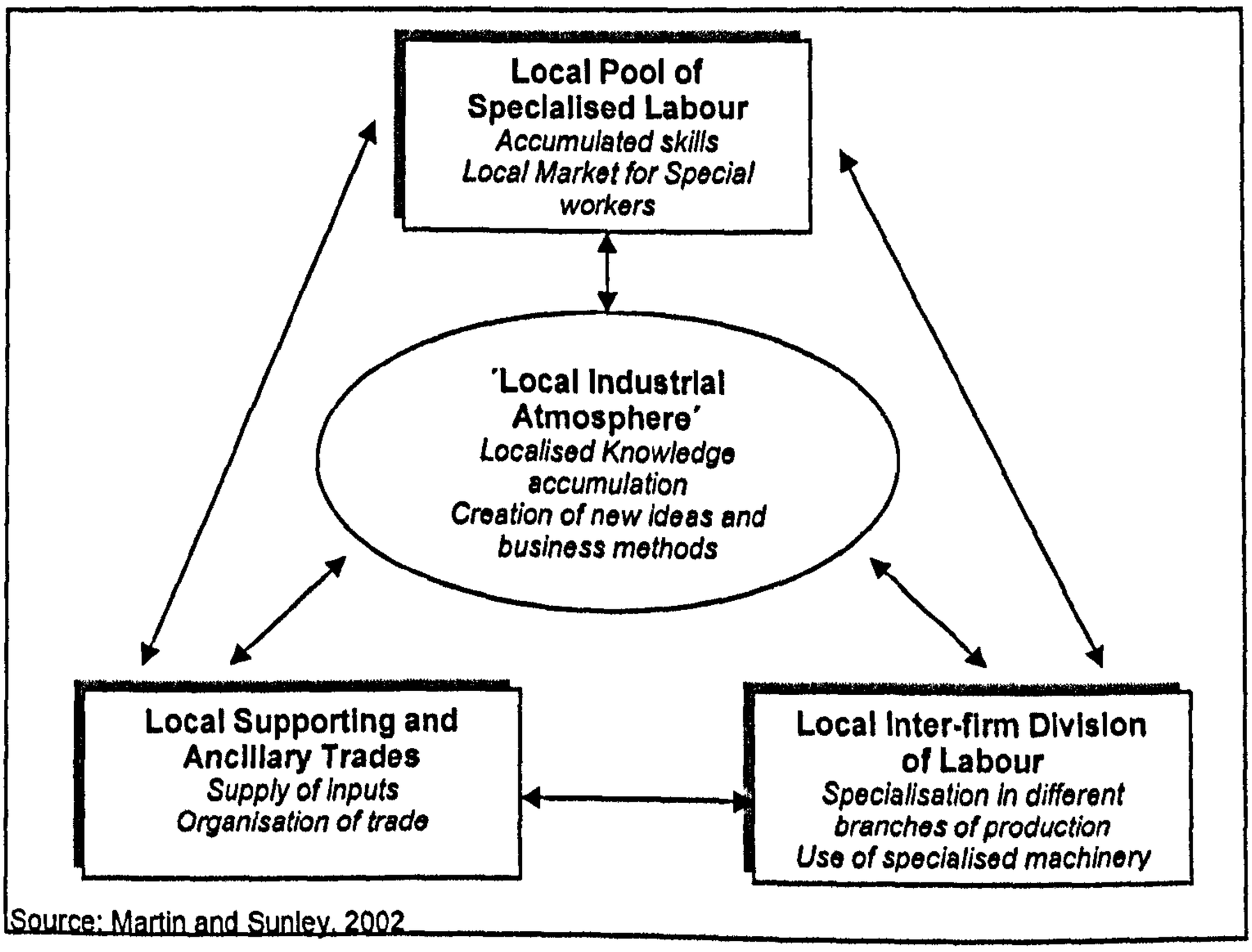
Alfred Marshall (1842-1924) can be considered as the first economic analyst of the theory of 'industrial districts', which refers to the concentration of specialised industries in particular localities, studying the long-term evolution of a particular industrial economy and the structure of its markets. In his work, he concluded three main reasons for the emergence and development of industrial districts, which are:

(1) It provides a pooled market for *specialised labour* so both the risk of being unemployed and the risk of workforce shortages will be minimised. This attracts more companies to locate or establish within an industrial district.

(2) The district offers a large variety of specialised inputs, which are difficult to trade for the fact that there are a large number of firms from one industry. Thus, the prices for inputs are lower permitting to have *economies of scale* in production.

(3) The geographic proximity provides better *information flows* for organisations and firms in industrial districts

Figure 2.1: Marshall's Triad of External Economies of Industrial Localisation



Source: Martin and Sunley, 2002

According to Marshall's theory, industrial districts in a given industry are created due to market advantages, specialised input availability, and ease of information flows. In other words, the idea surrounding industrial districts is to provide a number of small and medium sized enterprises (SMEs) with similar production efficiency as large firms while ensuring for greater flexibility at the same time. Furthermore, as Marshall (1920) states, if these factors are combined with advantages of concentration of production such as economies of scale, then agglomeration of industries is going to occur.

Marshall argued that once the process of 'agglomeration' starts, it becomes accumulative and part of the social structure of the local community or 'industrial atmosphere', in this way, "the mysteries of the trade become no mysteries; but are as it where in the air" (Marshall 1920, p. 271). With this idea, the author gives key importance to the concepts of *location* and *agglomeration* of industries. Whitaker (1975, p. 28) comments about Marshall's work as: "when large masses of people located in the same locality are engaged in similar tasks, one must note that though association with one another they educate one another".

Marshall (1923) also used the concept of industrial districts to refer to the development of large towns or cities which have an incremental number of specialised industries and resources in a country. Moreover, Marshall seems to be the first author to combine the concepts of *industrial districts, town development* and *marketing*; as quoted from his work, "the largest industries and especially those that need massive plant, are located increasingly in industrial district; the central cities of which are giving themselves more and more to work directly or indirectly connected with marketing" (Marshall 1923, p. 285).

The previous concepts indicate that the 'soft' elements of personal contact between traders, customers and producers, as well as the exchange of information, the circulation of new ideas and the diffusion of innovation (Scot, 1986; Bellandi, 1987), were one of the main ideas considered to be Marshall's contribution to agglomeration theories.

Additionally, the author also described industrial locations in open economies and in specialised nations, where international trade is necessary and essential part for the leadership and existence of a country. Then, he concluded that locations and specialisation are important in the economic development of a nation. Furthermore, he explained that *industrial atmospheres* represent "advantages that are not easily to be had elsewhere: and an atmosphere cannot be moved" (Marshall 1923, p. 284).

Based on the previous ideas, Marshall introduced the concept of *external economies*[1] as the economies of scale benefits derived from industrial location, which were described in Figure 2.1. In other words, Marshall explains that the economies of scale are not internal to the firm, but this occurrences lies outside its control, having a final impact of the firm's internal production or performance (Scott, 1986, Brown and McNaughton, 2002). As Courlet and Soulage (1995, p. 288) state, "Marshall demonstrated the potential for efficiency of industrial organisation characterised by a network of small enterprises: Such organisations are industrial districts, which are able to exist side by side with large-scale mass production". At the same time, this type of organisation may be benefit from geographical, historical and socio-political characteristics of a particular region.

Although Marshall gives a good transaction-cost explanation of industrial districts, he does not fully explain the differences on density and intensity of agglomeration economies in different parts of the world.

Brown and McNaughton (2002) also comment on Marshall works discussing that from the three main external economies of localisation, which are concentrated on economy of production, there is a fourth element that most of the authors do not properly acknowledge when they discuss Marshall's contribution. This factor is *market related.* This means, the convenience of customers looking for specialised – geographically concentrated – suppliers. Thereafter, geographically concentrated industries may

[1] Economies that depend on the general development of the industry providing general benefits to individual firms (Marshall 1920)

enhance the customers' perception of manufacturer credibility, adding more value to them through reducing search costs (Zaratiegui, 1997). In other words, Marshall (1923) influences some of the ideas about marketing in industrial clusters introducing the concepts of *'mutual discovery'* as key advantage of co-location. That is, co-location lessens the search of cost of buyers, and this is an important influence on the contemporary retail location theory that future research should take into consideration.

Finally, further contributions of Marshall's theories of location and foreign trade, can be found more recently in the third impression of his book *The Pure Theory of Foreign Trade and Domestic Values* (1949), in which Marshall based his premise upon the hypothesis of two countries where each one specialised in different products. Therefore, once again he involved location, specialisation and foreign trade in an open economy, which is an additional contribution to the "Isolated State" that von Thünen (1842) presented previously.

Almost in parallel to A. Marshall, but in Germany, Alfred Weber (1929) in his work *Theory of the Location of Industries*, also contributed to the long intellectual history of co-location trying to find the answers to two main questions with regard to:
(1) The causes of a given industry for moving from one location to another
(2) What are the general economic laws determining these movements.

With the aim of answering the previous questions, Weber (1929, p. 20) stated that "cost of transportation, labour and rent are general factors, since they should be considered in the case of every industry, influencing it more or less in one way or another". On the other hand, he argued that availability of raw materials and special environmental conditions are singular location factors, because they concern only specific industries. Weber considered three main factors influencing industrial location, of which two are *regional factors of location*: (1) transport and (2) labour costs; and one *local factor* that he called (3) *agglomeration* or *de-glomeration* forces, which direct industries to specific frameworks of locations. Furthermore, Weber (1929, p. 21) stated "to agglomerate and

to de-agglomerate means to establish industry at certain points within a location framework..." At the same time, the author explained that location in certain cultural environments helps to reduce costs of these industries localised in specific geographical spaces. Moreover, Weber also introduced and considered the importance of natural, as well as, social factors which influence industrial location. Therefore, "agglomerative factors cannot be found in an isolated process" (Weber 1929, p. 24) and this differentiates to Weber's contribution, from the earlier work of von Thünen (1842).

Like Marshall (1923), Weber (1929) combined the geographical location of industries with the concept of *marketing factors.* "The last group of factors 'those creating a more effective marketing situation' will also be found at the stage of social agglomeration" (Weber 1929, p. 130). Weber stated that social concentrations allow economies of scale, co-operation, marketing products jointly between companies, and joint visits from buyers and sellers. "This represents, not only an individual, but general economic or social savings as well, since in the process 'labour' or social energy is saved" (Weber 1929, p.130). Therefore, Weber considered *marketing externalities*[2] as a social benefit of regional agglomeration economies. This then represented an important contribution to the marketing and economic theories of his period.

Although the work of von Thünen (1842), Marshall (1920) and Weber (1929) represents an advanced way of thinking at the beginning of the twentieth century, it has been criticised by contemporary authors. For example, Isard (1962) stated that von Thünen's model is based on the concept of an isolated town, while Weber "pointed out that classical trade theory ignored entirely the transport cost involved in traversing space" (Isard 1962, p. 50). However, another author (Smith, 1971) stated that transport costs are viewed as the primary determinant of plant location in Weber's model.

[2] Accurate definitions of marketing externalities are given in the next chapter

"Weber's analysis of agglomeration is criticized on the grounds that no firm would move away from the least-transport-cost location to a potential agglomeration point unless it was sure that others would do the same" (Smith 1971, p. 124).

The critiques of Weber's work have also been concentrated on the narrow assumption of fixed prices for input and outputs, limited production sites and no recognition of market structure (Brown and McNaughton, 2002).

According to the previous ideas, the work of Marshall (1920) and Weber (1929) can be criticised in some economic geography aspects of the theory, or because they did not include empirical research methods in order to develop their hypothesis. However, they seem to be the first ones to incorporate, implicitly or explicitly, the concepts of *'marketing externalities'* and *'marketing factors'* as social benefits of regional agglomeration economies and especially in industrial districts. This conceptual contribution is widely used through the development of this research and they, as well as their implications to clusters and networking activities, will be broadly discussed during the next chapter.

More recently, Krugman (1991) in his work *Geography and Trade* stated at the very beginning "by economic geography I mean the location of production in space" (Krugman 1991, p. 1). He developed a model of geographic concentration based on the interaction of increasing returns, transportation costs and demand. In other words, achieving economies of scale, manufacturers provide their services and products to the nation from a single specialised location, minimising transportation costs.

Taking Marshalls ideas of industrial location, Krugman explained with a new approach the three main reasons for localisation developed previously:

(1) Specialised skills

(2) Lower costs, resulting in economies of scale

(3) Information flows, which Krugman called "*technological spillovers*".

Krugman (1991) theoretical impact of his 'new economic geography' contribution can be criticised as, in some way and based in the USA context, there is a *cuasi* repetition of the previous theoretical 'cost minimisation' approaches of agglomeration economies and industrial districts, which is based on the premises of a market with perfect knowledge, or *perfect market conditions*[3].

Krugman's contribution only offers a partial answer to why firms clusters in space and the importance of describing this model in a more contemporary environment with the conditions of an interconnected world and imperfect market structures (Kugman, 1996; Brown and McNaughton, 2002). Nonetheless, as Marshall noted "Economic conditions are constantly changing, and each generation looks at its own problems in its own way" (Marshall 1929, p. v).

2.2.2 From Marshall's theory to the new industrial districts

According to some authors (Sunley, 1992; Courlet and Soulage, 1995; Martin and Sunley, 2002; Olsen, 2002), Marshall had little to say about how the process of industrial localisation actually starts, why it starts in certain places and not in others, or exactly what 'local' meant. Many contemporary economic geographers and international business scholars nowadays still take Marshall's work as the basis for the explanations of agglomeration economies and industrial districts (Parr *et al.*, 2002). At the same time, these concepts have been used extensively in the academic literature with the most diverse industries, evolutions, levels of development and in a range of different countries. For instance, there are well-known cases regarding industrial district such as in Germany (Baden-Württemberg) and "Third Italy"[4] in Northern Italy, where there are existing districts established.

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[3] This implies rational decision making and the motive of profit

[4] The "third Italy" includes the regions of Umbria, Marche, Emilia-Romagna, Friuli-Venezia-Giulia, Veneto, Trentino-Alto Adige and Tuscany

The case of the "third Italy" is well known, and it has been studied extensively (Brusco, 1986; Bellandi, 1987, 2001; Pyke, 1990; Pyke *et al.*, 1990; Garofoli, 1991; Becattini, 1992; Bellini, 1993; Bianchi and Giordani, 1993; Bianchi, 1998, 2001). One of the main reasons for its popularity is the large concentration of specialised small firms, well networked and successfully active on the world markets. At the same time, these SMEs shared social, economical and historical traditions within their local communities (Brusco, 1986; Pyke, 1990). On the other hand, the case of Germany and its Baden-Württemberg region is well known for the engineering, machine tool building and the inter-firm co-operation in the automotive sector (Staber, 1998; Boekholt and Thuriaux, 1999).

Previous examples of industrial districts illustrate that by locating small and medium enterprises (SMEs) together, the firms could establish networks, thereby overcoming the resource constraints they would otherwise face. As Pietrobelli (2000) described, this is a new pattern of development different from that which was pursued by large firms as well as by many isolated SMEs, constrained by their small sizes. This development will benefit the small firms with more flexible and specialised production rather than large firms, while the cooperation between these firms raises the efficiency of production. It will also allow better information flows and linkages between companies, as well as leading to an increased aptitude of innovation (Pyke, 1990; Boekholt and Thuriaux, 1999; Pietrobelli, 2000).

According to Bianchi and Giordani (1993); Garofoli (1991), the linkages between companies in industrial districts foster incremental rather than drastic innovations. This may be attributed to the fact that industrial districts are composed of small companies which lack research and development (R&D) capacities, commonly found in larger companies within the same industry. Furthermore, as Asheim (1996) states, in today's increasingly globalised world, incremental innovation and higher productivity might not be enough to ensure long term competitiveness, and today this should be based on

combining knowledge from many different sources (Guinet, 1999; Mac Kinnon *et al.*, 2002).

Although trust and linkages between firms are crucial in helping the diffusion of knowledge, having companies from the same industry in one place is not likely to be enough (Malmberg and Maskell, 2002). Therefore, this is one of the key differences between the industrial district's theory and the cluster approach[5], since the latter addresses the important strategic factors which promote innovation and trust, turning a cluster into the material basis of an innovation based economy (Asheim, 1996).

Finally, it is important to state that some authors (Hover, 1937; Losh, 1954; Isard, 1962; Lloyd and Dicken, 1977; Krugman, 1991; Malmberg, 1996) have largely discussed and classified two main types of agglomeration economies:

(1) General economies of regional and urban concentrations, where it is possible to find a concentration of firms from diverse industries generating economies of scale, mostly known as *urbanisation economies.*
(2) *Localisation economies*, where inter-linked activities of related firms can be found.

Urbanisation economies reflect externalities associated with geographical co-location of different industries. This allows cross-fertilisation of industry practices from one industry to another. Thereafter, urban growth theories have emerged studding industrial parks and warehouse district phenomena (Brown and McNaughton, 2002). On the contrary, *localisation economies* are related to externalities that arise from geographically concentrated firms from the same industry, having economies of scale arising from a 'common' knowledge (Saxenian, 1990; Brown and McNaughton, 2002).

[5] The cluster approach and its definitions will be explained *in extenso* later in this chapter

In both cases, "agglomeration economies have their roots in processes whereby links between firms, institutions and infrastructure within a geographic area give rise to economies of scale and scope" (Malmberg *et al.* 1996, p. 87).

The notion of *localisation economies*, brings the concept of *innovative milieu* which it is also used by others contemporary authors.

2.2.3 Regional Innovative Milieu

The notion of 'regional innovative milieu' is born from the basis of the early models of agglomeration economies and industrial districts (Aydalot and Keebe, 1988; Camagni, 1991). According to Courlet and Soulage (1995), the notion of milieus has been developed by European research teams, in which they tried to define and apply the concepts of innovation with technical parameters. This is essentially done through a context for innovation and development that empowers and guides firms within its system of regional institutions, rules and practices (Brown and McNaughton, 2002). In short, the innovative milieu is characterised by:

(1) A *localised context of innovation* in a geographical space created by the interaction of different actors: enterprises, research institutions, local authorities among others.
(2) It has an organisational logic, which through the interaction of its actors generate *positive externalities*[6] specific to innovation
(3) It is a *dynamic learning that* allows transformations and adaptability of the different actors according to the changes in the environment

According to (Schiavulli and Baker, 2001; Parr *et al.*, 2002), the concept of *regional* refers to a territory that shares some similarities not only in terms of economic conditions, but also cultural affinities. At the same time, *innovative* may be related to the

[6] Positive externalities refer to social benefits that have no additional costs. More details and definitions of externalities are given in the next chapter.

introduction or use of new ideas, creating something new for the regions itself. Finally, *Milieu* has been defined as "a socio-cultural historical context that encourages development-inducing innovations" (Hansen and Dabney 1994, p. 28). In other words, a local or regional milieu is the social embedded process that allows firms to obtain outside complementary knowledge and be innovative in a process of interaction between different actors (Dosi, 1988; MacKinnon *et al.*, 2002; Malmberg and Maskell, 2002). This means, those firms operation in a network situation are necessarily embedded in historically determinate social conditions, which are enhance by spatial proximity (Brown and McNaughton, 2002).

Camagni (1991, p. 3) defined innovative milieu as "the set, or the complex network of mainly informal social relationships on a limited geographical area, often determining a specific external 'image' and a specific internal representation". This definition also shows the importance of the sense of belonging, which enhances the local innovative capacity through synergetic and *collective learning process* (Keeble and Wilkinson, 1999). Related to these ideas, the concepts of milieu combine the different types of interdependence in a specific territory. Furthermore, as Couriet and Soulage (1995, p. 295) states, "these relationships can be market interactions or commercial transactions, but they can also be liaisons of collaboration and co-operation outside the market".

In relation to the previous concept of milieu, Malmberg *et al.* (1996); Storper (1997); Asheim and Cooke (1999); McKinnon *et al* (2002), state that, geographically and socio-cultural proximity as well as trustful relationships, tend to reinforce co-operation, mutual commitments and accelerate the process of '*tacit knowledge*', which is related to that part of knowledge that is not formalised in any external body. At the same time, it can only be explicit through socialisation, observation and practice in a specific community (Nonaka, 1996, Schiavulli and Baker, 2001).

Apart from the previous ideas; it has been well documented (Brusco, 1986; Pyke, Becattini and Sengenberger, 1990; Becattini and Rullani, 1996; Humpherey and

Schmitz, 1996; Enright, 1998; Porter, 1998) that geographic proximity helps to build the necessary intra-firm relationships, by providing a common language, a shared history and other necessary factors. This is precisely the contribution of local or regional milieu, which not only factors related to industrial structure or economics terms, but also social, cultural and institutional factors (Malmberg, 1996). Hence, in the interaction of the different actors, the elements of co-operation can be found in social relationship, norms, values and institutions. Therefore, *prima facie*, the innovative milieu approach seems to be an extension of Marshall's third determinant of industrial districts: 'information flows'.

As stated before, the innovative milieu concepts explicitly consider sources of knowledge outside itself (Camagni, 1991). Thereafter, through selected linkages with the world outside the milieu companies might attract complementary assets needed in the innovation process. This could include obtaining an innovative impetus from outside that helps them sustain technological processes.

Although the local-regional milieu concept brings a wider perspective to the traditional agglomeration economies and industrial district approach bringing explicitly the social and embedded aspects of co-location, it does not specify the processes and mechanisms that promote innovation in geographically concentrated firms or specific regions within a country. Therefore, it cannot explain *why* some regions are more successful innovators that others (Asheim, 1996).

Related to the above issues, Felsenstein and Taylor (2001, p. 2) state, "this has led to a re-thinking of the neo-classical growth model and the development of 'new endogenous growth theory' with its stylised facts ('externalities', 'returns to scale') on the one hand, and 'new institutional theory' with its equally stylised soft concepts ('embeddedness', 'social capital', 'learning regions'), on the other". In this way, Oinas and van Gils (2001) have tried to identify, in a theoretical manner, contexts of learning in firms and regions, where learning is seen as a collective interactive process between different actors which

builds specific resources. Clearly, the organisational learning process seems to be related to the previous concept of *local or innovative milieu*, which according to the authors, is characterised by specialised resources related to each other and supported by similarities. At the same time, this concept tends to be confused with the notion of *cities* that are characterised by relatively diversified resources (Oinas and van Gils, 2001). For a better and deeper understanding, the following table explores these differences.

Table 2.1: Contexts of Learning: Milieu vs. Cities

Industrial organisation **Type of Region**	***Networks* with resource similarity** *(intra-industry networks)*	***Networks* with resource complementarity** *(inter-industry networks)*	***Corporations* with resource similarity** *(Corporations with related business)*	***Corporations* with resource complementarity** *(Diversified corporations)*
Milieu	1 Traditional Industrial District	2 Modern Industrial District	5 Traditional Company Town	6 Modern Company Town
Cities	3 Fragmented City	4 Integrated (innovative) City	7 Fragmented Corporate City	8 Integrated Corporate City

Source: Adapted from Oinas and van Gils, 2001

The previous framework, presented in table 2.1, suggests that in the type of region characterised by the *milieu* a majority of firms operate in one dominating industry, together with auxiliary industries that form a 'sector' or 'cluster', where firms and organisations build horizontal and vertical relations for intra-sector networks. This form of organisation is called a *'traditional industrial district'* because there is relatively little variety in the products and processes of each industry branch. Furthermore, economic actors tend to be well established in the region's social relations.

When traditional industrial districts start in the development of external collaborative relations, increasing the scope of learning, they can usually be called *'modern industrial*

districts', where the level of dynamism tends to be greater than traditional industrial district. Using the concept of cities, but still in the networks relationship, a *'fragmented city'* can be found, where related firms operate within several intra-industry networks that, according to the authors, are unrelated industries co-located for historically or natural endowments reasons. However, "although actors share the same regional institutional competences this does not trigger their use as common ground for increasing the scope of learning in inter-industry networks" (Oinas and van Gils 2001, p. 73).

With regard to *'integrated (innovative) city'*, the development of networks and complementary relationships between the previously unrelated industries found in a fragmented city, are their main features. This results in the generation and dissemination of new ideas (Amin and Thrift, 1992) and the identification of potential complementarities between industries (Oinas and van Gils, 2001).

'Traditional company town', refers to an urban area with different actors of similar competences, dominated either by locally headquartered or an externally controlled branch plant specialised in one or more related lines of production. In contrast to this, a *'modern company town'* is dominated by a diversified corporation with one or more related business operating in the milieu and along with others elsewhere (Oinas and van Gils, 2001).

Using the cities concept, in a *'fragmented corporate city'*, firms operate in several unrelated industries where there is little local integration between competences in the various industries. Subsequently, an *'integrated (innovative) corporate city'*, can host a number of locally diversified corporations, surrounding activities in different industries that create complementary competences and networks. This increases competences and learning with the support of a shared institutional environment.

The description of the previous model, and its implications for learning contexts, is an interesting start that can be tested in different empirical research in regional clusters, regional milieu or in 'learning regions', as some authors name them. In this logic, it can be observed that the importance of external contacts and the ability to exploit the positive agglomeration effects from competitors, supplies, related firms and universities is becoming a must in a knowledge economy of innovation (Russo, 1985; Porter, 1990; Malmberg, 1996; Baptista and Swann, 1998; Zander and Sölvell, 2000). Apart from this, these ideas may be related to 'marketing externalities' and 'joint marketing activities' in clusters, both concepts that are important for the development of the research objectives of this study and which are fully analysed in Chapter 3.

2.2.4 Regional Innovation Systems

Related to the previous ideas, the concept of *regional innovation systems* strikes a very similar theme to the innovative milieu approach (Evangelista *et al.*, 2002). However, stressing the relationship between users and producers of knowledge, as well as the institutional settings as important determinants of innovative capacity creation, is a distinction not made by the previous innovative milieu concepts.

According to Nauwelaers and Reid (1995, p. 22), a 'regional innovation system' is defined as "the set of economic, political and institutional relationships occurring in a given geographical area which generates a collective learning process leading to the rapid diffusion of knowledge and best practice". At the same time, the notion of 'national systems of innovation' (Freeman, 1987; Nelson, 1988; Cooke and Morgan, 1998) brings a national, regional, or sparital framework between inter-firm co-operation and the role of geographical location: "This approach demonstrates that the competitiveness of companies is becoming more dependent on complementary knowledge acquired from other firms and institutions" (OECD 1999, p. 7). In short, this

model enhances the value of inter-firm networking and collaboration in order to reduce transaction costs and improve efficiency in organisations (OECD, 1999)

Consequently, according to the previous characteristics, more recently Furman, Porter and Stern (2002) have conducted an empirical examination of the determinants of country-level production of international patents. This analysis has been based on the definition of *National Innovative Capacity*, which the authors have defined as "the ability of a country to produce and commercialise a flow of innovative technology over the long term" (Furman *et al.* 2002, p. 899). Furthermore, the authors argue that this capacity depends on the strength of a nation's common innovation infrastructure, the environment for innovation in a nation's industrial clusters and the strength of linkages between these two. This empirical study is based on a major question: *if inventors draw on technological and scientific insights throughout the world, why does the intensity of innovation depend on location?* (Furman *et al.*, 2002).

As the concept of National Innovative Capacity is partially based, and takes important aspects of Porter (1998) national competitive advantage theories, explained through his 'competitive diamond', further discussion and development of this issue is continued in section 2.3.4.

During the development of this chapter, analysing agglomeration economies, industrial districts, innovative milieus and regional systems of innovation, the concept of 'clusters' has been presented without being given a clear definition and explanation. Hence, it is time to start with this contemporary concept that has been the based not only on much research in the area of agglomeration economies, but also debated by certain critics during the last decade.

2.3 Clusters Definitions and Theory Development

2.3.1 Definitions

There is not a unique definition for cluster. However, a century after Marshal's theory of industrial districts, Porter (1990) argued that leading export companies in the USA economy do not work in isolation. Consequently, these firms are grouping into what he called 'clusters', which can be defined as a set of industries related horizontally and vertically having different kind of interactions ending with greater levels of productivity. Moreover, later on, this idea led to his model of a 'competitive diamond', involving the interaction of firms' strategy and rivalry, demand conditions, input and related industries[7].

After the first approach of Porter's cluster definition, there have been many other attempts to explain this concept. For example, Enright (1996) in his contribution 'Regional Clusters and Economic Development', states "A regional cluster is an individual cluster in which members firms are in *close proximity* to each other" (Enright 1996, p. 191); Other authors describe clusters in a more precise manner as follows, "clusters are defined as groups of firms *within one country* based in *one geographical area*" (Swann and Prevezer 1996, p. 139); or as "concentration of firms that are able to produce synergy because of their geographical proximity and interdependence" (Rosenfeld 1997, p. 4). Furthermore, other definitions of clusters include: "industries and institutions that are more competitive by virtue of their relationships" (Feser 1998, p. 26); "*geographically proximate group* of interconnected companies and associated institutions in a particular field, linked by commonalities and complementarities" (Porter 1998, p.199); or as "large number of interconnected industrial and/or services companies having high degree of *collaboration...*" (Simmie and Sennet 1999, p. 51); also as "network of producers of strongly *interdependent firms*" (Roelandt and den Hertag

[7] More details of the 'competitive diamond' and the Porter's theory is given is section 2.3.3 Porter's determinants of national competitive advantage

1999, p. 9). More recently, 'clusters' has been defined as "local or regional *dimension of networks*" (van Den Berg, Braun and van Winden 2001, p. 187).

Although there are a variety of definitions and contexts of clusters, there are still some ambiguities in the concept: how large is the 'geographical area'? or what 'close proximity' is defined as? are examples. These are only some gaps that almost every single author (Enright, 1996; Rosenfeld, Swann and Prevezer, 1998; Feser, 1998; Porter, 1998; Simmie and Sennett, 1999; Van Dennerg, Braun and van Winden, 2001) has not attempted to answer during the last few decades. Furthermore, this issue tends to create confusion in the choice of a unit of analysis when more empirical research needs to be done in the topic of industrial and regional clusters, as this thesis does.

2.3.2 Theory development

In the literature related to clusters, authors usually start with the early concepts of Marshall in concentration of specialised industries in particular localities, which are related with industrial districts or with the concern of the existence and reproduction of spatial cluster of related firms (Malmberg *et al.*, 1996). As Malmberg (1996) states, classical agglomeration theory involved three main arguments:

(1) That the world manufacture of products is concentrated only in some core regions

(2) That related industries tend to be located in particular places

(3) Both of these patterns tend to be sustainable over time.

However, in the classical theory, there are still some conceptual disagreements related to what the definition of local is and what spatial scales are?

Related to the previous ideas, and following the classical philosophy of minimisation of cost, Malmberg (1996) explains that agglomerations economies arise when linked firms produce lower transactional costs and production is improved. In other words, they help

to improve performance of companies located or *socially* related together (Appold, 1995). However, nowadays, there is some agreement that the main parameters of competition cannot be fully based on the traditional framework of relative cost advantages (Porter, 1990; Malmberg, 1996). This suggests that agglomeration may be enhancing learning, creativity, innovations and not only economic cost reduction. On the other hand, Hirschman (1958); Pred (1977); Malmberg (1996); Parr *et al.* (2002) have concluded that agglomeration economies and clustering can bring efficiency and externalities based mainly on economies of scale and transaction costs.

According to Malmberg (1996), at least two processes are involved in the reproduction of spatial agglomeration:

(1) Concentration of industries where their is already a strong presence of related business and where, in this case, new entrepreneurs and new business have a learning opportunity, as well as, a time to establish contacts and become familiar with other local institutions; or
(2) New business and entrepreneurs may adapt the regions in a suitable way for the specific necessities of their industry and where in this way, the region will have the opportunity to develop their own desired capabilities.

The previous ideas developed by Malmberg (1996) bring to the discussion that the traditional transaction cost approach has largely ignored technological, informational and social inter-dependences, which can led to better externalisation of activities (Brown and McNaughton, 2002). As Easton and Araujo (1994) states, these inter-dependencies tend to be embedded in a fabric of social relations including friendship networks and other sociological elements, which Marshall (1920) and Weber (1929) explained in certain direct or indirect manner.

The 'social networks', its importance and influence in the cluster theories are fully discussed in chapter 3. Now, the cluster as a strategic approach continues the conceptual

discussion of this section aiming to give a full understanding of the dimension of this concept.

2.3.3 Industrial Clusters and the competitive advantage: a strategic approach

Michael Porter is perhaps the single most important contribution to the discussion that location within clusters of industrial belts results in a competitive advantage over those which are located in more disperse areas (Brown and McNaughton, 2002).

Porter (1990, 1998) shifted his focus from the analysis of nations to firms, because "firms, not nations compete in international markets...and it is important to understand how firms create and sustain competitive advantage in order to explain what role the nation plays in this process" (Porter 1998, p. 33). In his book *'The Competitive Advantage of Nations'*, Porter (1990) emphasised the theory on national, State, and local competitiveness within the context of a global economy. In this logic, he defines clusters as "geographical concentrations of interconnected companies, specialised suppliers, services providers, firms in related industries and associated institutions[8] in particular fields that compete but also co-operate" (Porter 1998, p.197); Or in a more direct way as "a geographically proximate group of interconnected companies and associated institutions in a particular field, linked by commonalities and complementarities" (Porter 1998, p. 199).

According to the previous definitions, the cluster theory offers important insight into the nature of competition and the role of *competitive advantage* (Hill and Brennan, 2000; O'Malley *et al.*, 2001), changing its focus from a 'costs-based-location approach' developed by Marshall (1920) to a more complex, 'knowledge-based' and dynamic focus with Porter's work (1998). In other words, the process that drives technological

[8] i.e. Universities, Standard Agencies and Trade Associations

know-how, innovation and information creation, appears to be the most favourable when such development is localised (Martin and Sunley, 2002).

Porter's work (1998) argues that competition among localised firms underpins competitiveness. This competition drives productivity, innovation and new firm development. Furthermore, this environment creates new resource endowment, including not only skilled staff and technological knowledge, but also a *'social glue'* (Porter 1998, p. 225) involving social structures and inter-firm relationships in embeddedness[9] clusters' firms (Brown and McNaughton, 2001).

Although has been largely acknowledged that Porter's theory offers a new strategic approach to the concept of cluster, his definitions lack a more precise scope and depth, both at industrial and geographical levels (Martin and Sunley, 2002). Clearly, basic concepts of 'industrial aggregation', range of 'related' activities, 'strong' association and 'specialised' linkages among firms are not clear. Furthermore, in the Porterian definition, the geographic scope of a cluster can range "from a single city or state, to a country or even a network of neighbouring countries" (Porter 1998, p.199). Consequently, using this definition, clusters can take different forms depending on their depth and sophistication, which once again, gives ambiguity in a more precise definition. Furthermore, this broad description gives almost unlimited scope for the application of the cluster's concept. As Martin and Sunley (2002, p.16) state, "the problem is that geographical terminology is used in a quite cavalier manner". According to this, one of the main weaknesses of the Porterian cluster concept is that, there is not a clear spatial range limit, nor clear boundaries in his geographical scope as well as in the ways that differentiate clusters operate in dissimilar industries and geographical scales. Therefore, Porter's competitiveness can be seen as a result of clusters activity, not a cause of it (Brown and McNaughton, 2001).

[9] The concept of *embeddedness* comes from Granovetter (1985) involving the concepts of social capital and the positive benefits of networks within business communities. A complete revision and implications of these concepts is in chapter 3.

Another further problem with the definition of a cluster, in a strategic perspective, arises when Porter (1998) employs the concept of 'Regional Clusters'. This is used in his work, listing more that sixty of these clusters in the USA economy without a clear definition or boundaries among them. Furthermore, some authors (Enright, 1996; Baptista and Swann, 1998; Porter, 1998) use the concepts of 'Clusters' and 'Regions' interchangeably, which can create confusion when doing empirical research among them. Moreover, these unclear boundaries between the previous two concepts, may involve a wider misunderstanding among the use of 'clusters', 'regions' and 'cities', which in turn create a theory without clear boundaries or territories for research. According to this situation, the description and explanation of Oinas and van Gils (2001), which has been previously presented, offers a good base for the distinction of the concepts 'milieu', 'cities' and 'industrial districts' that are the foundations of the current concept of clusters.

One of the main criticisms of Porter's work on defining clusters is the lack of 'rigorous testing', as his concepts are highly generic in character (Martin and Sunley, 2002). Furthermore, as Perry (1999) states, this definitional incompleteness of the cluster concept may be seen as an important reason for its popularity. Furthermore, Porter's theories do not fully explain *why and how* the first firms set up in a particular location or 'regional cluster'. In this respect, Martin (1999) and Brown and McNaughton (2002) offer a good explanation. They explain that in an initial catalyst for a cluster these may be an 'accident of history', but once it is established, the accumulative causation based on increasing returns and positive externalities, led to the attraction of new firms. Thereafter, the concept of 'lead firms' is the focal point for the initial 'cluster and network development' (Scott, 1998; Martin, 1999; Brown and McNaughton, 2002).

Although Porter's terminology for cluster's has been criticized for its lack of geographical terminology and ambiguity, it has its merits in combining the different findings from a variety of local experiences (industrial districts, local milieus, regional systems, etc.) in a central body, as well as, combining applied economics with the tools

of strategic management for its theory development (Schiavulli and Backer, 2001). Furthermore, there are two core elements of his theory that combine previous definitions and models of agglomeration economies that are useful for any further empirical analysis:

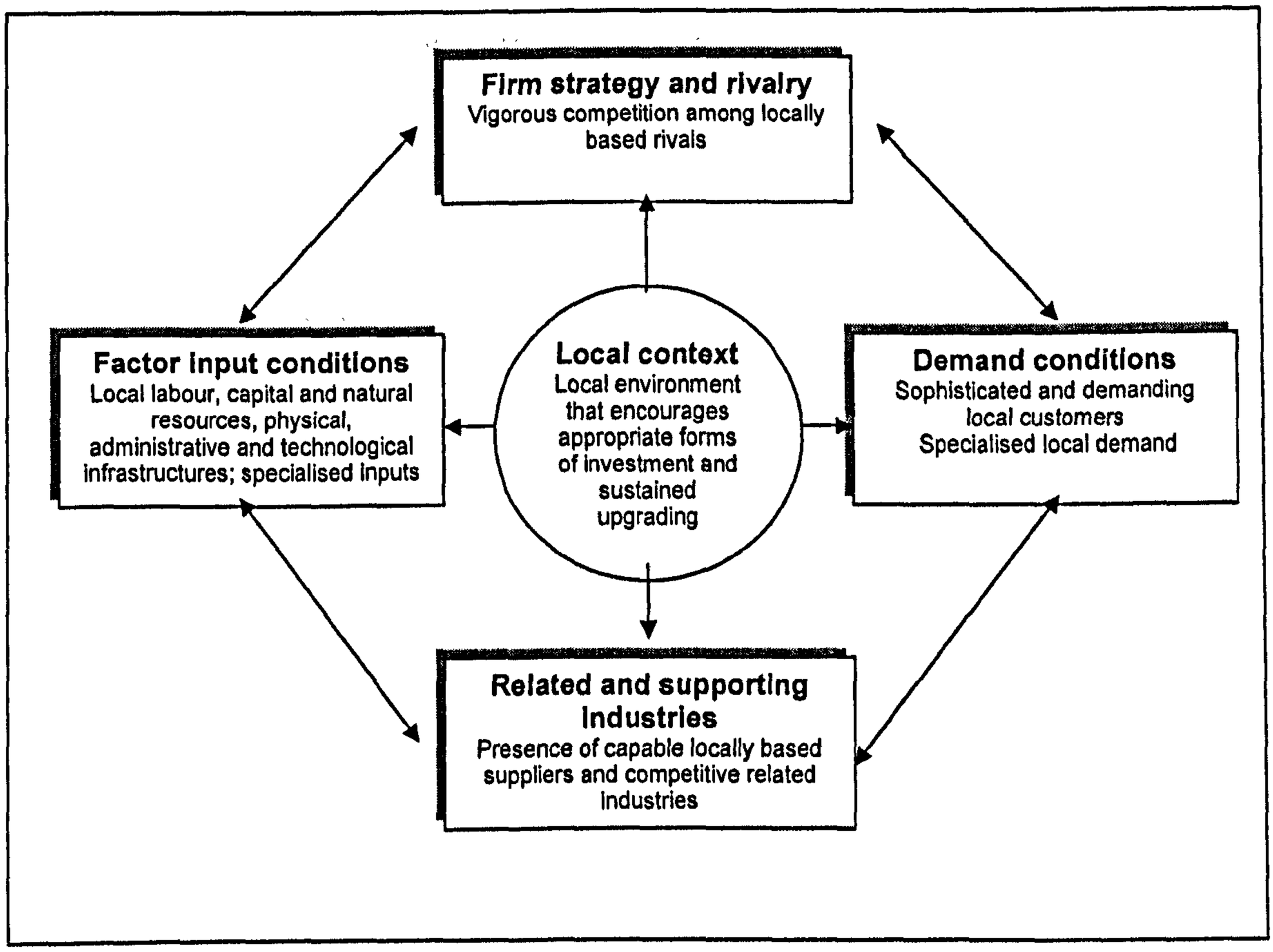
(1) *Firms in a cluster must be linked in some way*, constituting interconnected companies and associated institutions linked by commonalities as well as complementarities.
(2) Clusters are *geographically proximate groups of interlinked companies*, and this co-location encourages the formation of networks on interaction between firms.

These previous key aspects of Porter's definition are important considerations in the definition of clusters that are considered during this current research, especially in the justification of the selected industry in chapter 4, that according to the research objectives, investigate the issue of geographical co-location and their influence on inter-firm co-operation in marketing activities.

2.3.4 Porter's determinants of national competitive advantage

Porter (1998) created a 'competitive diamond', which is based on the arguments that companies that are geographically concentrated in a cluster may enhance their intensity of interaction. According to Porter (1998, p. 157) "the process of clustering, and the intense interchange among industries in the cluster, also works the best, where industries involved are geographically concentrated". This model shows some relationships with the early concepts of industrial location, developed by Marshall (1890), where companies located and interacting in specific geographical locations create positive externalities or as Krugman (1991) called *'information spillovers'*.

Figure 2.2: Porter's competitive diamond on local clustering (based on Porter, 1998)



Source: Martin and Sunley, 2002

Porter (1998) identifies four economic and two non-economic factors that determine national competitive advantage (see figure 2.2.):

(1) ***Factor (input) conditions***, such as labour, capital and land, which according to Porter's theory cannot be replicated easily. Furthermore, to maintain a competitive advantage, those production factors have to be upgraded constantly, especially those which are specialized inputs.

(2) ***Home Demand*** plays a critical role in how firms develop and market their products. The nature and needs of buyers play a key position in this process. According to this, Porter (1998) argues that this link is strongest in the home market, because cultural proximity and the company's attention is strongest to the nearby locality. Furthermore,

demanding buyers' pressure assist companies to meet higher standards helping them to innovate more and to move to advancer segments.

(3) The presence of ***related and supporting industries*** provides access to world-class inputs. Due to proximity, communication becomes easier. In the same way, competitive related industries in the same market provide better opportunities for information exchange and can pull demand for related products through their internationalisation. Furthermore, Porter (1998) states that the strength of these effects depends on the extent of the interdependencies between products and that the advantages for industries arises from efficiency, knowledge and innovation.

(4) ***Context for Strategy and Rivalry,*** where macro-economic factors and political environment influences the investment climate in a specific location. According to Porter (1998), domestic rivalry is the single most important factor in creating and sustaining national competitive advantage, as it pressures a nation's companies to constantly improve and innovate.

The two non-economic factors can be described as follows:

(1) ***Chance,*** which are incidents that have little to do with the national circumstances but bear significant impact on future economic development. In other words, chance events can influence the environment, creating or destroying national competitive advantage.

(2) ***Governments*** also have a role in creating and sustaining competitive advantage, which lay in influencing the previous four determinants that Porter states, through adequate policy measures.

Finally, Porter's 'competitive diamond' can be seen as a dynamic system, which creates synergy as well as positive externalities. Hence, any weakness from their components and factors will constrain the main industry's potential and productivity growth.

2.3.4.1. Porter's omission of multinational enterprises

Maybe one of the main problems of Porters' determinants of national competitive advantage is his lack of empirical analysis and the applicability of his model to 'every single cluster'. Furthermore, as Enright (1999); Dunning (1993, 2002); Peters and Hood (2000) state, Porter's 'competitive diamond' clearly omits the strategic role played by multinational enterprises (MNEs) in the cluster development and their contribution at local, regional and country levels.

From an international business perspective, Porter's work is an incomplete treatment of the role of MNEs. Accordingly, Dunning (1993) proposed an 'augmented diamond' where multinational-business activity is formally incorporated as an independent variable influencing all the other determinants of competitiveness. This is important, as MNEs are a key element in promoting economic development and integration in of a global economy (Peters and Hood, 2000). These issues are of key relevance in peripheral, distance, and less-favoured countries and regions, with high dependence on foreign direct investment (Young, Hood and Peters, 1994; Peters and Hood, 2000).

Enright (2000) proposes a model of interdependences between MNEs and regional clusters, which is characterised by a "strong or dominant presence of foreign companies, as well as a strong contribution by cluster-based subsidiaries to the overall strategy of the MNEs" (Enright 2000, p.114). According to these ideas, foreign multinationals play a critical role in clusters, transferring skill and capabilities to embedded local firms providing employment to the regional territory and contributing widely to the industry with their own research capabilities. Furthermore, Birkinshaw (2000) proposed three alternative propositions with regard to how foreign ownership may affect industry clusters:

(1) Foreign ownership is not good for cluster upgrading and development because foreign subsidiaries tend to be less embedded in the local economies, compared to local companies.
(2) MNEs want to build a presence in foreign clusters. Thus, they contribute with leading-edge ideas, helping the upgrading of the industry in regional clusters.
(3) A neutral perspective, where foreign ownership *per se* is irrelevant.

Although the previous alternative propositions have not been empirically tested in quantitative studies, and their analysis have been more related to case study research at exploratory levels, they are a good platform for developing enquiry related to the role of MNEs contribution.

Finally, as MNEs continue having a potential significance to the overall clusters strategy of regions, especially with regards to the dimensions of cluster intensity, depth, activity-richness and innovative capacity, as well as its relevance for local policymakers. They must be formally incorporated into the cluster characterisation of any contemporary study.

2.3.4.2 National Innovative Capacity and Porter's Competitive Advantage

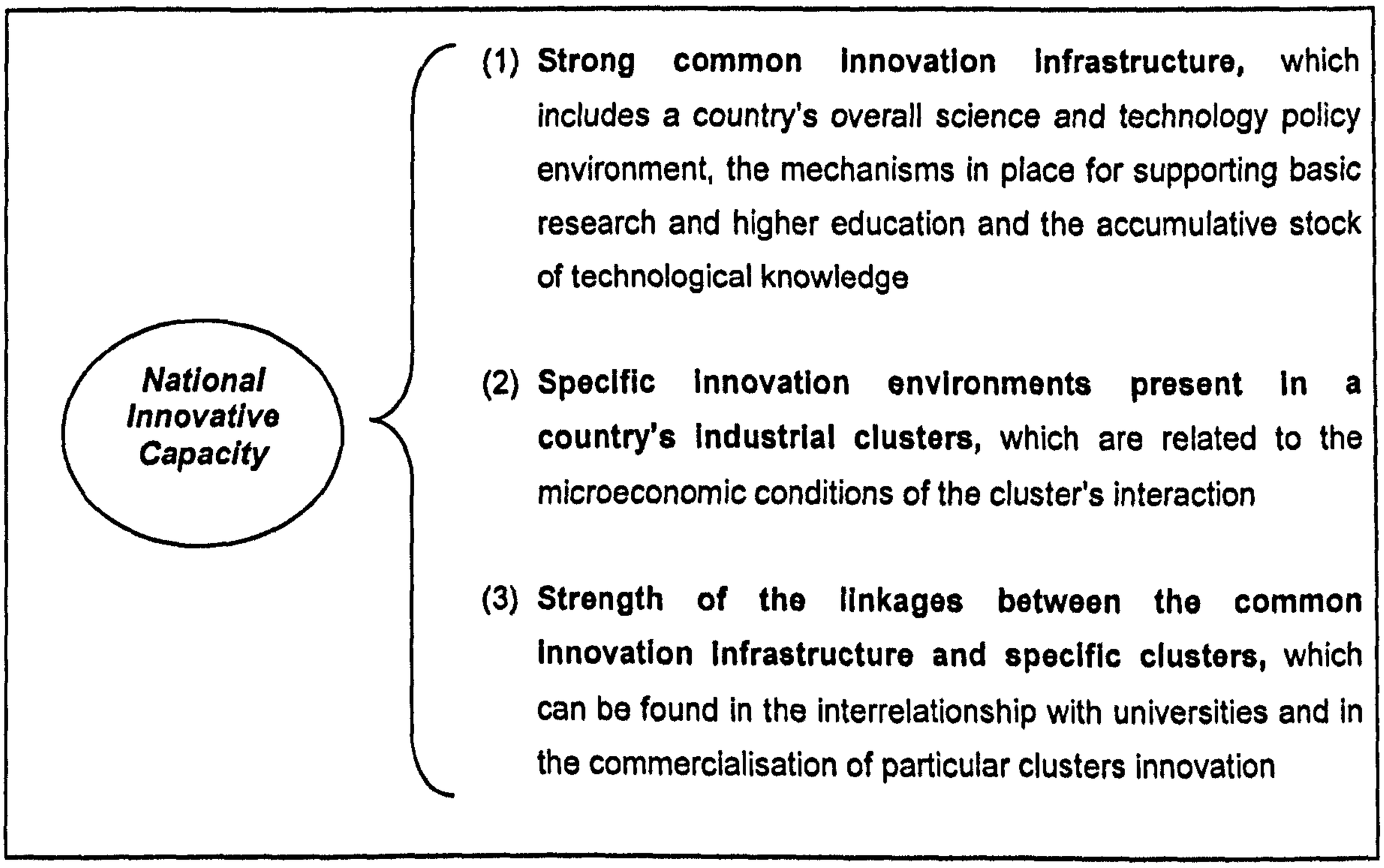
Previously, in section *2.3.4: Regional Innovation Systems*, the concept of National Innovative Capacity was introduced as "the ability of a country to produce and commercialise a flow of innovative technology over the long term" (Furman, Porter and Stern 2002, p. 899). This concept has been based on three main areas from prior research:

(1) Ideas-driven endogenous growth theory (Romer, 1990; Acs and Vaga, 2002), which operates in a high level of abstraction focusing in the knowledge stock of the whole economy.

(2) The cluster-based theory of national industrial competitive advantage (Porter, 1998), which focuses on the microeconomic conditions and the interaction of the economic agencies involved in the process of clustering.

(3) The research on national innovation systems (Nelson, 1993), which centres their attention in the role of the overall national policy environments.

Figure 2.3: Main Sources of National Innovative Capacity



Source: Adapted from Furman *et al.* (2002)

As figure 2.3 describes, each of these perspectives identifies country-specific factors that determine the flow of innovation (Furman *et al.*, 2002). Accordingly, Schmitz (1995, 1997) argues that clusters and their geographical concentration of enterprises bring benefits, facilitate the labour division, specialisation and co-operation between organisations. These factors imply the concept of '*collective efficiency*', which can be

seen as "the competitive advantage derived from local external economies and joint actions" (Schmitz 1999, p.141). The concepts of 'collective efficiency' and 'country-specific factors' which determine innovation (Furman, Porter and Stern, 2002), are directly related with the issues of inter-firm co-operation as an innovative process that may determine success of regions and industries.

Related to the above ideas, Rosenberg (1963); Porter (1990) and Furman *et al.* (2002), explain that the *microeconomic environment* plays a key role in mediating the relationship between competition, innovation and productivity growth. Furthermore, the authors also suggest that it is of particular importance to highlight the dynamic of innovation and interactions between clusters and their closer institutions within their geographical area. At the same time, Porter (1990); Niosi (1991); Audretsch and Stephan (1996) emphasized the micro conditions of industrial clusters in specific regions and that innovation can be stimulated by a local advanced demand for goods. Under these circumstances, the question raised is: what is the situation of industries that are geographically concentrated and export oriented, in countries where the local demand is marginal and it is not as sophisticated as the one in overseas market? The previous gap in the current literature bring new areas for future research, especially doing cross-cultural - empirical – comparisons analysing single or multiple industry sectors in different economic and cluster policy environments.

The description of Porter's 'economic factors' combined with some aspects of the 'National Innovative Capacity' have been the foundation for many further analysis of the topic, including many publications by the Organisation for Economic Co-operation and Development (OECD). Furthermore, according to the objectives of this research, the description of the third economic effect in Porter's diamond – 'presence of related and supported industries' – serve as starting point for the analysis of information exchange and interdependence among companies that belong to a cluster. Therefore, this may be seen as the starting point for the creation of a more developed analysis of regional clusters and their influence in the creation of 'marketing externalities'.

2.4 Clusters: some evidence from empirical research

Nowadays 'clusters' have become a 'popular' concept, and at a first sight it seems that there are plenty of research material related to it. However, much of this research, using the 'cluster' concept found in academic journals, sometimes are based on theoretical levels, or describing cases study of success or failure of particular regions (Bigarelli and Crestanello, 1994; Courlet and Soulage, 1995; Collinson, 2000).

Interesting research on clusters can be found in some OECD[10] procedures having examples at national, industry and firm levels. At the same time, the most common research methodology has been based on a case study approach, which in certain situations provides more in-depth information, and can be used to interpret the results of statistical analysis (OECD, 1999).

2.4.1 Cluster an 'international concept'

As stated before, there is plenty of research using a case study approach in many countries and in the most dissimilar industries. The OECD has a list of many cases using the cluster concept, as an approach for public policy that governments can use. For example, in its proceedings *'Boosting Innovation: The cluster approach'*, there are cases stressing a methodological dimension of research (DeBresson and Hu, 1999; Hauknes, 1999; Spielkamp and Vopel, 1999); or a more empirical dimension using examples in different countries and industries, such as:

(1) Regional economy in the United Kingdom (Lagendijk and Charles, 1999), clusters in the Australian economy (Marceau, 1999)

(2) Ottawa high-tech cluster (Heath, 1999)

[10] Organisation for Economic Co-operation and Development

(3) Information and Communication (ICT) cluster in the Netherlands (den Hertog and Maltha, 1999)

(4) ICT cluster in Spain (Chaminade, 1999)

(5) Regional Policy in the USA (Bergman and Feser, 1999)

Others use a more policy dimension using cases studies in the technology policy in:

(1) The Danish economy (Drejer, Kristensen and Laursen, 1999)

(2) Cluster policy in the Netherlands (Roelandt, Hertog, van Sinderen, 1999)

(3) Finish cluster policy (Rouvinen and Ylä-Anttila, 1999), and so on so forth.

Most of the previous case studies include a public policy component and the study of a particular region or countries as a whole. This means a clear concentration of the studies at national and industry levels. Therefore, there is a clear lack of research studying clusters at a *firm level* basis. In other words, conducting research related to the social interaction among companies in a cluster. Furthermore, no one in previous research has looked at the 'marketing externalities' that inter-firm relationships may produce in a cluster. This is a clear gap in the literature that, according to the research objectives, this study aims to fill.

2.4.2 Clusters in the United Kingdom

Lagendijk and Charles (1999) have researched clusters as a new growth strategy for regional economies in the United Kingdom. The author especially focused on the analysis of cluster-based policies in the UK regions of Scotland, Wales, Northern Ireland and North East England, where each of these region have a different organisations for regional development, that in certain ways, have a decentralised yet co-ordinated body that has helped in the development of clusters. Table 2.2 presents a summary of the sector/cluster orientation in UK regions:

Table 2.2: Sector/cluster orientation In UK regions

Region	Organisation	Cluster Focus	Cluster methodology
Scotland	Scottish Enterprise	Information industries, energy, food, textiles and tourism	Focus groups, co-ordinating policy initiatives along clusters lines
Wales	Welsh Development Agency	Automotive sector, consumer electronic sector, medical devices and diagnosis sector, telecommunications equipment sector	Supply chain initiatives, links to centres of excellence
Northern Ireland	Northern Ireland Growth Challenge	Engineering, food processing, health technologies, software, textiles and apparel, tourism and leisure, tradable services	N/A
North East England	Northern Development Company: Real service centre	Automotive, off-shore, food, electronics, business cervices	Varied top-down and bottom up initiatives, but primarily agency-led

Source: Adapted from Lagendijk and Charles, 1999

Lagendijk and Charles (1999) developed their research describing each of these regions and the public policies orientation for cluster development. They use a regional case study approach involving examination of documentation and interviews for the explanation of each case. However, they do not provide evidence of how companies in these regional clusters interact, or what levels of inter-firm co-operation exists among them. Thereafter, gaps related to the social process of inter-firm interaction arise again and remain largely ignored in the literature.

2.5 Conclusion

The previous concepts of industrial districts, innovative milieu, innovation systems and clusters, have in common certain links with regional relationships, which make the agglomeration unique and thus connect companies locally. However, as it has been stated before, there are significant differences between each concept and different authors give those different interpretations without an easy agreement (see table 2.3).

The concept of clusters combines some aspects of industrial districts, innovative milieu and regional innovation systems. Furthermore, the theories of the cluster approach make an important contribution in the inclusion of related and supporting industries into the framework of analysis, which previous concepts did not include explicitly. Thereafter, the cluster approach and definition (Porter, 1998) is used during this thesis and its empirical research in a specific industry.

Particular gaps among the literature of regional clusters lie in the omission or further analysis of 'marketing externalities' and marketing related concepts that Marshall (1920) and Weber (1929) early brought, as one of the social benefits find in industrial districts. Furthermore, the influence of clusters in the internationalisation process of companies and the clear omission of MNEs in Porter's work, are only some spaces that are still present, or need further analysis, in the current literature. At the same time, the literature of clusters does not offer clear boundaries between clusters and networks. Hence, for the purposes of this research, it is important to state that networks refer to the interaction between companies independent of their location.

The next chapter goes beyond the economic-based location theories explained in this chapter. At the same times, it offers a complete description of the social networks concepts and their influence in inter-firm dependency and positive externalities creation in geographically co-located firms.

TEXT BOUND INTO

THE SPINE

Table 2.3: A conceptual path to cluster theory

Concepts	Main authors	Main characteristics / contribution	Main weaknesses
Agglomeration Economies	Von Thünen (1842)	Started as a model for agriculture products. Transportation costs from the country to the town as key factors determining location.	Bases in an ideal assumption of 'isolated town, which is far behind the reality of an interconnected economy. It lacks an international perspective
Industrial Districts	Marshall (1920)	Concentration of specialised industries in particular locations. Introduction of the early concepts of co-partnership, social elements of production, co-operation and marketing in industrial districts. Specialised labour, economies of scale and better information flows are key 'traditional' factors for the development of industrial districts. A fourth 'market related' factor is related to geographically concentrated companies may enhance customers' perception of manufacture credibility, adding more value to them through reducing search costs	Lacks of a company internationalisation perspective in the value chain activities (transnational corporations). Does not fully explain the intensity or density of varying types of 'industrial districts' in different economies.
Social Agglomeration	Weber (1929)	Reinforce 'social elements' and the 'marketing factors' of industrial districts. Introduce the concepts of 'joint marketing' (or marketing products jointly between companies). Marketing externalities as social benefits of agglomeration economies.	Narrow assumption of fixed prices for inputs and outputs, limited products sites and no cognisance of market structure. No mention of internationalisation activities or worldwide suppliers' competition.
Innovative / Regional Milieu	Aydalot and Keeble (1988); Dosi (1988); Camagni (1991)	Embedded social relationships and history that helps to have better interaction, collaboration and co-operation among geographically localised firms. Thereafter, more innovation process can be found.	It does not specify the process and mechanisms that promote innovation. Therefore, it cannot explain why some regions are more successful innovators than others.
Regional Innovation Systems	Freeman (1987); Nelson (1988)	Stresses the relationship between users and producers of knowledge as well as the institutional settings, as an important determinant of innovation capacity creation.	The concept does not provide a clear explanation of its effects in attention to foreign direct investments in a global economic context and its implication for regional innovation systems.

Concepts	Main authors	Main characteristics / contribution	Main weaknesses
Regional Clusters	Porter (1990)	Industries related horizontally and vertically having different kind of interactions ending with greater levels of productivity.	How large is the 'geographical area'? Or what is 'close proximity' defined as?, are examples of the ambiguities related to the cluster concept.
	Enright (1996)	Individual clusters in which member firms are in 'close proximity' to each other.	Not clear boundaries among the different types of clusters.
	Swann and Prevezer (1996)	Group of firms 'within one country' based in 'one geographical area'.	Lack of rigorous testing in some of the definitions.
	Rosenfeld (1997)	Concentration of firms that produce synergy because of their 'geographical proximity' and interdependency.	Lack of research related to clusters and their influence and interaction with multinational companies, internationalisation theories and the social elements of inter-firm firm co-operation in marketing activities
	Feser (1998)	Industries and institutions that are more competitive by virtue of their relationships.	
	Porter (1998)	Geographically proximate group of interconnected companies and associated institutions in a particular field, linked by commonalities and complementarities.	
	Simmie and Sennet (1999)	Large number of interconnected industrial and/ or services companies having high degree of collaboration.	
	Roelandt and den Hertag (1999)	Network of producers of strongly interdependent firms.	
	Van Dennerg, Brown and van Winden (2001)	Local or regional dimension of networks	

Source: Author, based on literature review

Chapter 3: Literature Review

Social Networking, Inter-firm Co-operation and Marketing Externalities in Clusters

3.1 Introduction

The present chapter analyses the issues related to inter-firm co-operation, the marketing environment in which small and medium sized enterprises (SMEs) operate, the social elements of business networking, the different kind of externalities that regional clusters produce, and the role of multinational companies in inter-firm co-operation among geographically co-located firm. Later, different evidence from research of inter-firm co-operation in networks and clusters is presented chronologically and thematically. Due to the importance and diversity that this topic has attained in the last decade, the period of time covered by this empirical evidence is from the 1990s until now. Finally, the chapter gives an independent view on what is still needed for research in the area of 'marketing externalities', social networking, inter-firm co-operation and cluster.

3.2 Clusters, SMEs[1] and the marketing environment

Porter (1998) states that, paradoxically, today's competitive advantages of the global economy lie increasingly in local things, such as knowledge, relationships, and motivations that distant rivals cannot match. These factors determine the concept of

[1] There is no single definition of SMEs. They can be defined as firms with less than 500 employees, having small firms as those with less than 100 employees (Oughton and Whittam, 1997). The European Commission used the terms micro firms: up to 10 employees, small: up to 50, medium: up to 250 employees. The DTI includes the definition of large enterprises, which are those firms with more than 250 employees. Finally, the working definition will depend on the particular objectives of every research (Broocksbank, 2000, Carter and Jones-Evans, 2000).

clusters, which as stated in chapter 2, are "critical masses - in one place – of unusual competitive success in particular fields" (Porter, 1998 p.78). Arguably, the cluster theory is positively correlated with the present trend towards globalisation, because it affects not only the competitiveness of specific regions and countries, but also it has an effect across national borders, changing the nature of the value chain activities. This means that an increasingly globalised economic system does not necessarily indicate an increasing number of people engaged in international activities. As Felsenstein and Taylor (2001) state, much of the economic growth is found at local and regional levels in the diffusion of geographic clusters.

In today's global economy, which has integrated the production and management process, clusters can be seen as a competitive tool of networking, which facilitates the development not only of local economic strategies, but also the capacity to achieve competitiveness in global markets. In this way, the different examples of clusters development around the world provide "evidence that even as competition and economic activity is globalised, the competitive advantage can be localised" (Enright 1999, p. 35). Simultaneously, during the last few years, various studies in dissimilar industries have concluded that the geographical implication of clusters has an effect on the development of local wealth, not only attracting foreign investors (FDI[2]), but also generating global networking and helping in the export and internationalisation process of companies as part of 'regional clusters' (Porter, 1998; Enright, 1999; Peters and Hood, 2000; Romano *et al.*, 2001; Felsenstein and Taylor, 2001; Rosenberg, 2002). On the other hand, Morgan and Hant (1994) have suggested that to be an effective competitor in the global economy requires more cooperation or networking between firms, which will lead to establish or maintain a marketing competitive advantage. This argument can be seen as a strategic issue for small and medium sized enterprises (SME's), especially those located in open and small economies, which must seek out different alternatives of differentiation, obtaining in the end a marketing competitive advantage (Brown and Bell, 2001).

[2] Foreign Direct Investment, or attraction of inwards investment into countries (Young, Hood and Peters 1994)

Accordingly, SME's must respond to an increasingly competitive global market place, where international activities and the internationalisation process are more important than ever before. Furthermore, some authors, (McNaughton and Bell, 1999; Brown and Bell, 2001), state that although small and medium sized enterprises tend to be more flexible and have a tendency to respond quickly to the changes in the environmental conditions, they need to realize the importance of co-operation and networking with other firms that operate in a cluster.

In the literature review there seems to be an agreement and consensus that clusters provide general benefits to firms, especially in the value chain inputs as well as in the general aspects of the production process (Marshall, 1910; Weber, 1919; Krugman, 1991; Malmberg *et al.*, 1996; Storper, 1997; Storper and Salais, 1997; Baptista, 1998; Porter, 1998; Asheim and Cooke, 1999; Schmitz, 1999; Olsen, 2002; Hanes, 2002; MacKinnon, 2002; Parr *et al.*, 2002). However, as Brown and Bell (2001, p.11) state, "limited research exists to indicate the degree of impact that clustering has on marketing activities in a domestic and international context". Furthermore, research on strategic behaviour of firms has been mainly concentrated on large scale firms. Therefore, the knowledge base about strategies and in particular, the marketing strategy of small firms is quite limited (Olson and Bokor, 1995; Lee *et al.*, 1999; Forsman, 2003).

The previous gaps in the literature offers many opportunities for this research in that specific area and especially in the relationship of cluster and marketing externalities, investigating the influence of geographic co-location and social networking in inter-firm cooperation in marketing, which are part of the 'positive marketing externalities[3]' that clusters are seen to generate.

[3] Marketing benefits that clusters may generate

3.2.1 Notion of networks in SMEs

Through the literature, authors explain that SMEs can acquire learning at local and international levels through co-operative inter-firm arrangements, where co-operation may be defined as reciprocal involvement between firms vertically linked in design and production of determinate goods allowing access to the knowledge in possession of firms' downstream (Golden and Dollinger, 1993). Moreover, although marketing is a key factor for small firms survival, they face certain problems such as a restricted customer base, limited marketing expertise and a lack of funding among others (Stokes, 2000).

Small firm networks in industrial districts have been well documented, especially in the northern Italy (Bianchi, 1990; Pike, 1992; Pyke and Sengerber, 1992). This research has focused on the understanding of how collaborative arrangements can enhance competitiveness in SMEs. Besides, the development of a strong small firm sector has become an increasingly important priority of industrial policy because of its importance in the generation of employment. Subsequently, according to Guo (1999), research on small firms' growth has been concentrated in three primary areas: (1) external environment issues, such as product and market structure; (2) internal structural dynamics of the firm, for instance the firm's management structure, control and reporting situation; and (3) characteristics of the owner/ manager. At the same time, the emergence of new types of industrial organization, especially those related to stimulate more inter-firm cooperation, offers new elements for research as well as for public policies that can support the SMEs development plans.

According to the previous situation, notions of clustering and networking have been especially attractive as a means by which small and medium size enterprises can collaborate to compete more effectively in the global marketplace. At the same time, formal policy mechanisms have been introduced in several developed countries in recent years to address structural deficiencies and raise competitiveness by encouraging cooperation among small and medium sized firms (Ingley, 1999; Freel, 2003). Freel's

(2003, 2004, 2005) research indicated the need for caution when developing network strategies, as innovation is a necessary condition for more innovation. Consequently, a firm's capacity for innovation is linked to an extended knowledge base and linkages with external agencies, including relations with public organizations (Freel, 2000, 2002).

3.2.1.1 Defining networks

Although a single definition of inter-firm networks is problematic, it can be seen as a group of firms using combined resources to co-operate on joint projects (Akoorie, 1998, Ceglie *et al.*, 1999; Akoorie and Pavlovich, 2003). Networks take different forms and serve different objectives. Some examples include structured and formal networks, which even have their own legal personality (as in the case of Italy's 'consortia'). Other networks are informal; for example, where groups of firms exchange ideas or develop broad forms of co-operation. Some of the firms aim at the general sharing of information, and others deal with more specific objectives such as joint ventures. Furthermore, it has been suggested that the entrepreneurs who choose to develop and maintain ties with other entrepreneurs are likely to outperform those who do not (OECD, 2000; Shaw and Conway, 2000; Bianchi, 2001; Akoorie and Pavlovich, 2003).

Through the literature (Johanninsson, 1995; Mackinnon *et al.*, 2004) it is possible to find three different types of networks: exchange networks, which involve commercial relationships with customers and suppliers; communication networks, involving individuals which provide a firm with contacts and knowledge to inform business activities (e.g. with industry bodies); and social networks, including informal relations, friends and other connections who provides support to owner-managers with broader scope of development, social embedded norms and expectations.

For the purpose of the social networks analysis, the structural and interactional dimensions need to be considering (Shaw and Conway, 2000). One of the morphological

dimensions is the 'density' or 'social cohesiveness' of a social network. This is a measure to the extent to which social actors are connected to one another by social relationship. Consequently, density is an indicator of the impact that the structure of a social network can have upon the activities and behaviour of its social actors. In contrast to the morphological dimension, the interactional dimensions of social networks are particular to individual relationships. Among this dimension, important concepts for this research are: 'content' which refers to the meanings and understanding of their involvement in particular relationships. Examples of content of social networks include the issues of friendship and trust. 'Direction' refers to the person from whom a relationship is oriented and provides an indication if the direction of the power of a relationship (Shaw and Conway, 2000).

The OECD (2000) has made some differences between softer and harder networks. According to this, *softer networks* generally encompass a larger number of firms rather than harder networks, with membership subscription open to all those that meet the minimum requirements[4]. Soft networks come to an agreement with research bodies, education and training institutions as well as public authorities. By contrast, *harder networks* are commercially inclined, involving a limited number of pre-selected firms that are sometimes formally and tightly linked through a joint venture or strategic alliances. Networks also facilitate an accelerated *learning process* (Grabher, 1993; Staber, 2001; Evangelista *et al.*, 2002; Furman *et al.*, 2002; Acs and Varga, 2002). Furthermore the peer-based learning, which networking makes available, becomes the means of choice of learning for many small firms. For innovation, often the entrepreneurs need to reconfigure their relationships with suppliers, which again networking may facilitate (Acs and Vaga, 2002). In other words, another advantage that networking allows is "the sharing of overhead costs and the exploitation of specific economies of scale such as bulk purchasing inputs" (OECD 2000, p. 53).

[4] These requirements may include minimum numbers of participants, industry relations, etc.

In addition to the above ideas, networking literature suggests that markets are depicted as a system of relationships among a number of players including customers, suppliers, competitors as well as private and public support agencies. Furthermore, the network involves resource exchange among its members (Cooke and Morgan, 1998). Therefore, as Axelsson and Easton (1992) state, strategic action is rarely limited to a single firm and the nature of relationships established with others in the market influences, and often dictates, future strategic options. However, in terms of internationalisation, Johanson and Mattsson (1988) suggest that a firm's success in entering new international markets is dependent more on its relationships within current markets, both domestic and international, than on the chosen market and its cultural characteristics.

Clearly, the recent progress of information technology, telecommunications, and transportation has caused markets to expand globally and this offers opportunities as well as new challenges to all businesses concerned. Globalisation, therefore, has made imperative that SMEs pursue technological improvements and information networking by establishing new forms of partnerships and strategic alliances[5] among themselves and with large enterprises. Also, according to Nadvi (1995) networking among SMEs is crucial; especially in weak economic regions, as it enables SMEs to make informed business decisions on how to fully exploit their innovativeness and creative potential.

In contemporary literatures some benefits that SMEs can accrue from effective networking can be found. These are: (1) *Information gathering* (Camagni, 1991), where the continuous learning, monitoring, acquisition and management of information ensures that an enterprise remains aware of changes and developments in the markets in which it operates. In other words, this process can further motivate members of the network as they become aware of how they can succeed after meeting and corresponding with other successful small firms. (2) *Knowledge acquisition* (Romijin *et al.*, 2002), a process which enterprises define, acquire the skills, know-how and strategic intelligence

[5] "Strategic alliances are voluntary cooperative inter-firm agreements aimed at achieving competitive advantage for the partners" (Das and Teng 2000, p.33)

necessary to carry out day-to-day activities[6]. Also, "the more firms interact with research laboratories and universities, the more likely they are to come up with at least one major recent product innovation" (Romijin and Albu 2002, p.15). (3) *Skill transference* (Grabher, 1993) encouraging those who have less knowledge of new technology to learn and participate in new developments. (4) *Marketing Networking* (Gilmore *et al.*, 2001; Coviello *et al.*, 2002), where SMEs may have limited resources available. Thus, they can use inherent networks such as personal contact networks (PCN), social networks, industrial networks and marketing networks to carry our their marketing activities globally

An analysis of the networks literature also provides an insight into the organisational processes that underline alliance decisions. Social networks make potential partners aware of each other's existence, needs and capabilities' requirements for entering alliances, help to develop the trust necessary for alliances (Gulati, 1995; Gulati, Nohria and Zaheer, 2000) and, moreover, make opportunism more costly because of reputation effects (Gulati, 1995). Granovetter (1992) identified two distinct components of social structure that are influential in alliance formation: the relational components consisting in direct relationships within which the firm is embedded, and structural components which comprise the overall social network within which firms exist and which provide knowledge about potential partners that firms may acquire from a variety of social sources. By participating in alliances, firms develop capabilities in alliance formation that accrue as a result of historical process of learning and which can then be used in subsequent new alliance formation (Dierickx and Cool, 1989).

As networks and alliances become more significant, the composition and behaviour of the group of firms become more important determinant of economic behaviour, including the perception of benefits from traditional externalities of the individual firms comprising the network (Dunning, 1995, 1998; Hakansson and Johansson, 2001). Some

[6] For example through networking, firms can learn of the latest technology and where to acquire it at reasonable costs and market trends and demand

of the industry level factors that may affect strategic alliances, network formation and inter-firm cooperation include the extent of competition, the stage of development of the market, as well as competitive uncertainty (Burgers *et al.*, 1993; Eisenhardt and Shoonhoven, 1996; Furman *et al.*, 2002).

In each of the potential benefits of SMEs networking and alliances, trust can be seen as a key element in the cooperation relationship. This allows partners to respect the assumed commitments among the firms in the specific network (Joly and Mangematin, 1995). Besides, networks do not have to be geographically concentrated as clusters. As soon as trust among players has been established together with the strategic direction agreed upon, the operational dialogue and communication can then be made possible through electronic means.

3.3 The elements of trust and commitment in inter-firm co-operation

Trust and commitment are key factors in the establishment and development of long-term relationships among firms (Dibben, 2001; Coulter and Coulter, 2003; Coote *et al.*, 2003) and help in the development of business networks (Granovetter, 1973; Schmitz, 1999; Wilkinson and Young, 2002; Gadde *et al.*, 2003). The issues of relationship marketing involve certain elements of trust, because its goal is to achieve satisfactory long term and quality relationships (Crosby *et al.*, 1990; Coulter and Coulter, 2003).

A great deal of research, and with different perspectives, has documented trust as a key issue in relationship marketing and inter-firm co-operation (Crosby *et al.*, 1990; Morgan and Hunt, 1994; Coulter and Coulter, 2003). Moreover, some of these studies have reported a positive relationship between similarity and trust among participants (Morgan and Hunt, 1994). However, others did not (Crosby *et al.*, 1990). Accordingly, *similarity* is related to the extent to which firms or individual participants share common background, values or social norms (Crosby *et al.*, 1990; Morgan and Hunt, 1994; Coulter and Coulter, 2003).

3.3.1 Defining 'trust' and 'commitment'

According to Coutler and Coutler (2003), *trust* may be seen as a complex construct that includes integrity, honesty and confidence that one party places in another. This also involves the issue of credibility among parties (Coote *et al.*, 2003). This involves an active participation of the 'soft social elements' of any inter-firm co-operation, when one firm trusts the other. Consequently, trust is an important influence to interpersonal and inter-group behaviour (Golembiewski and McConkie, 1975; Coulter and Coulter, 2003) as well as it is a critical element of competitive success in firms (Wolfe, 2003).

Time variable and length of the relationship may be important concepts related to trust, and may influence it. According to Coutlet and Coutlet (2003), *knowledge* and *familiarity* will increase over time as firms conduct business knowing each other. However, "this knowledge and familiarity is *independent* of the length of time that the customer has been in a relationship with its *current* service provider" (Coutlet and Coutlet 2003, p. 34). Consequently, issues related to relationship quality may affect the long term commitment.

According to de Ruyter *et al.* (2001) and Coote *at al.* (2003), *relationship commitment* can be defined as an exchange partner's enduring desire to maintain a valued relationship. Commitment can be seen as an important element for developing and maintaining a successful relational exchange among firms, enhancing efficiency and effectiveness of marketing relationships. Furthermore, it predicts willingness to cooperate (Morgan and Hunt, 1994).

Another important issue for building trustful relationships is *communication*, which is defined as "the formal and informal sharing of credible and meaningful information between exchange partners" (Coote *et al.*, 2003). Relevance and timelines of the information exchange, rather than the volume, affect the quality of communication (Lush and Brown, 1996; Coote *et al.*, 2003). Furthermore, Morgan and Hunt (1994) in their research found a positive correlationship between communication and trust. These

issues may also affect the quality and intensity of marketing externalities in inter-firm cooperation.

3.3.2 Trust, commitment and similarity in business networks

According to Gadde *et al.* (2003), firms are embedded in networks where both economic and social factors are crucial to the development of co-operation. The way that they handle these relationships is not easy and will depend on different internal factors of the firm, as well as, their relationship with others. In this respect, some authors (Hakansson and Johanson, 2001) argue that firms need to use their positioning in a network with the aim to have access to joint resources achieving and performing a better competitive advantage. Then, companies learn how to use their capabilities and complement them with the use of complementary resources that networks bring. In others words, they learn from each other by 'learning-through-interacting' (Lundvall, 1992; Lundvall *et al.*, 2002, p. 214). Therefore, firms do not work in isolation and build interdependencies systematically (Hakansson and Ford, 2002; Gadde *et al.*, 2003)

One important consideration of the role of trust, commitment and similarities among firms that participate in any forms of collaborative networks, is that these co-operative activities impact considerably on the productivity of individual firms (Gadde *et al.*, 2003). Therefore, it is important that firms may develop their strategies in this associative environment that can be found in geographically concentrated areas, as the case of industrial districts and clusters. Hence, firms can possess a competitive advantage difficult to imitate when international competition and globalisation are the trends in an open and interconnected world of relationships.

Finally, SMEs are better able to innovate when they are part of clusters and embedded in regions (Granovetter, 1985; Becattini, 1989; Gordon and McCann, 2000). It is through the networking process and the management of externalities that they develop new capabilities as result of a long sequence of path-dependency activities. Moreover, *knowledge spillovers*, inter-firm relationships and the utilisation of shared resources, as

well as joint actions, provide the basis for social and economic 'connectivity' that emphasize the operation of firms in clusters (Mitra, 2000).

3.3.3 The role of cultural differences in inter-firm co-operation

As previously stated, trust and commitment are important concepts which influence inter-firm co-operation. Besides, different cultural[7] influences among countries have an effect in the cooperative behaviour that firms perform (Chen *et al.*, 1998; Hewett and Bearden, 2001). Parkhe (1991) identifies three distinct factors (societal culture, national context and corporate culture) that include norms, values and personal behaviour of managers. The national context also comprises the surrounding industry structure, local institutions, such as trade organisations, as well as the role of local governments and their regulations, while the corporative culture includes the values which characterize particular organisations (Peters and Waterman, 1982).

Different cultural influences that deal with models of conduct, standards of performance and inter-personal relationships in particular societies may have an effect in the cooperative behaviour that firms engage in (Chen *et al.*, 1998; Hewett and Bearden, 2001). In this respect, Hofstede (1980, 1991) stated that cultural differences vary along four main dimensions: (1) uncertainty avoidance, (2) individualism / collectivism, (3) tolerance of power distance, and (4) masculinity / femininity. Based on these dimensions, Hofstede (1980) created indices for more that forty countries for each dimension. According to some authors (Williams *et al.*, 1998; Hewett and Bearden, 2001; Steenkamp, 2001) the individualism / collectivism dimension of culture appears to be an important issue in the study of inter-firm relationships, because it reflects the way people in a particular society or groups interacts.

[7] The role of culture deals with the models of conduct, standards of performance and inter-personal relationships in a particular society (Herbing and Dunphy, 1998)

Thus, inter-firm co-operation behaviour in cross country analysis may be influenced by the differences in local-national cultures. For example, in more individualistic cultures individual goals take on greater importance than group goals, whereas in more collectivistic societies interpersonal and informal ties take greater importance and help in the collaborative process at individual and firms levels (Chatman and Barsade, 1995; Doney *et al.*, 1998; Chapman and Harris, 2000; Hewett and Bearden, 2001). Consequently, it may be expected that the levels of individualism / collectivism influence the co-operative behaviours through the trust and commitment relationships.

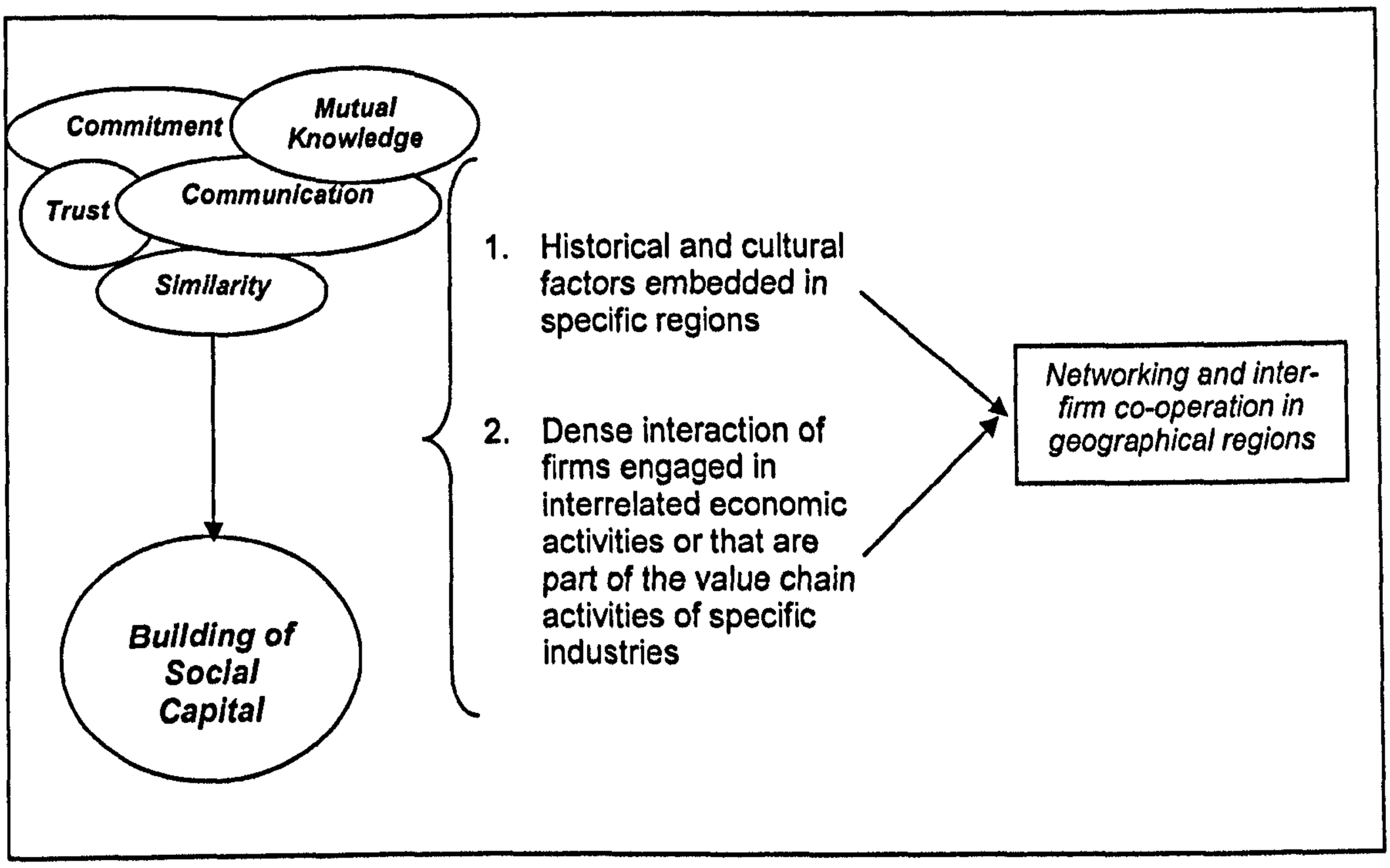
3.4 The concepts of social capital in clusters

According to Evangelista *et al.* (2002) and Wolfe (2003) the concept of *systems of innovation* is used to analyze the network of relationships among firms and the broader institutional settings that support their innovative process. Knowledge among institutions, both public and private, comprises this innovation system. Furthermore, several factors such as access to support service for local industry, the establishment of trust relations among networks of suppliers and buyers, and the interactive learning in geographically concentrated areas, among others, contribute to stressing the importance of local agglomeration effects and social interdependencies (Wolfe, 2003).

Maskell and Mamberg (1999) suggest that the social process of learning and innovation in inter-firm co-operation work best when partners involved are close enough to one other to allow frequent interaction and effective exchange of information. At the same time, this social process is embedded in regional communities that share a *common knowledge base and culture* (Cooke, 1998; McKelvey *et al.*, 2002; Wolfe, 2003). Furthermore, this close proximity at regional level facilitates frequent face-to face interaction at both, formal and informal settings (see figure 3.1). This process creates a common language or code of communication through repeated interaction over time (Pater and Pavitt, 1994), which leads to the creation of regional institutions that helps to reinforce the right environments for inter-firm interaction (McKelvey *et al.*, 2002;

Wolfe, 2003). As figure 3.1 shows, the 'soft' elements of interaction: trust, commitment, mutual knowledge, communication and similarity among partners, help to build the social capital, which may lead to a greater co-operation among firms. Furthermore, these elements combined with the historical and cultural embeddedness of specific local regions, as well as co-location factors with interaction in the value chain activities, may lead to the result of networking and inter-firm co-operation in geographical regions.

Figure 3.1: The elements of *social capital* in the inter-firm co-operation



Source: Author, derived from Stopper (1996) and Wolfe (2003) literature

Wolfe (2003) argues that the concept of *learning regions*[8] and its social components are seen as different in the North American context compared to the European one. In the former, learning regions are associated with the presence of a dense network of research institutions and the broader set of social as well as environmental amenities that attract resources to specific geographic locations. In a European context, the analysis of

[8] *Learning regions* are seen as the territorial and institutional embeddedness of learning organisations and interactive learning (Asheim, 1998)

learning regions focuses more on the contributions that *social capital*[9] and *trust* make to support dense networks of inter-firms relationships and the process of interactive learning. This latter context is the one that this study uses, according to the characteristics and research objectives previously stated.

Finally, it is important to stress that not only SMEs are part of this learning process and social relationships in geographical clusters. Multinational firms are learning to exploit the richness and benefits of those geographically concentrated regions. They contribute, but also absorb, part of these local capabilities through research and development (R&D) activities in both their home base and those overseas centre (Wolfe, 2003). Large firms, and subsidiaries of multinational companies, are willing to invest more in those places providing the best prospects for learning and innovation (Birkinshaw *et al.*, 1998; Enright, 2000). As Morgan (1997, p. 495) states "globalisation and localisation, far from being mutually exclusive process, are actually much more interwoven that is generally acknowledged".

3.4.1 The role of informal contacts in networks

The role of informal networks in regional clusters has received particular attention in the literature during the late 1990s up to date. The concept of *informal networks* has an important role in inter-firm co-operation, acting as channels of knowledge flows (Bengtsson and Kock, 1999; Feldman, 1999; Melo, 2001; Dahl and Pedersen, 2003). Furthermore, knowledge spillovers through informal contacts can be considered as one of the externalities that Marshall (1890) and Krugman (1991) argued to be the main forces behind industrial clustering: *technological externalities* or *knowledge spillovers*. Then, companies located in a cluster, or industrial districts, share a set of common values and knowledge which is part of the *'local industrial atmosphere'* that Marshall described. In this way, firms are linked together by specific informal relations in a

[9] *Social capital* refers to the various features of the social organisation of a region, such as the presence of shared norms and values that facilitates the co-operation of individuals and firms (Wolfe, 2003)

complex mix of co-operation and competition (Becattini, 1989; Brusco, 1990; Porter, 1998; Feldman, 1999; Dahl and Padersen, 2003).

Maskell *et al.* (1998), explain that the creation of informal networks go through several phases, from relations between two individuals to entire networks, where they transfer knowledge among them. Furthermore, these relationships are done both vertically and horizontally, where regular understanding and trusts are the common features (Maskell, 2001).

According to Granovetter (1973) in the analysis of interpersonal networks the notion of 'strength' deals with the combination of the amount of time, the emotional intensity, the intimacy, and the reciprocal services which characterised the ties among firms or individuals. Thereafter, stronger ties involve larger time commitments, stronger sentiments of friendship for one another, stronger feelings of similarity, and therefore, a better sense of community. On the other hand, meetings, conventions, private clubs, special schools and social registers also offer good opportunities for the development of ties, in which the maintenance of 'weak ties' is a consequence of such meeting (Granovetter, 1973; Migchels, 2001). "Co-operating partners must find one another in a world of incomplete information, and this process of search is largely influenced by their primary relations with other firms as well as by the relations of other firms to one another" (Grabher 1993, p.15).

Other streams of the literature suggest that informal networks are more likely to share 'small ideas' rather than strategic knowledge (Breschi and Lissoni, 2001) and that inter-personal communication is relatively more important for sharing knowledge with customers than with competitors (Scharader, 1991; Lissoni, 2001). For this reason and accord with the research objectives, as well as for the influence of this informal relationships in exchange of information, this current research includes the study of formal and informal / business and non-business relationships as means for the development of inter-firms co-operation in the marketing activities in clusters and industrial districts.

3.5 Clusters and Active Marketing Externalities: *The development of a new social externality*

3.5.1 Externalities: Definition and types

Most of the time authors use the term 'externalities' without giving it a precise meaning, which can be confusing when conducting empirical research. In the chapter on 'General equilibrium, economic efficiency, externalities, and public goods', Mansfield (1991) explains that external economies or externalities occur when "an action taken by economic units results in uncompensated benefits to others" (Mansfield 1991, p. 449). Furthermore, the author explains that when such benefits are the result of an increase in a firm's production, externalities can be called 'external economies of production'. More recently, Carlaw and Lipsey (2002, p. 1306) stated that "Externalities are unpaid for effects conferred by the *continuing* and *potentially* variable actions of one set of agents on another set of agents who are not involved in the initiating agent's activity, and for which the receiving agents would be willing to pay".

It is important to remember that Krugman (1991) explained the concept of 'externalities' as external economies resulting from the interaction of firms' decisions, where governments protect these firms as a group which bring down average costs of industries and enable firms to compete in external markets.

As it has been stated in chapter 2, Marshall (1919) and Krugman (1991) argue that information spillover and access to specialised labour pools are the main positive externalities in a cluster. These authors have concentrated on the presence of external economies in industrial districts and the reasons why firms co-locate. Furthermore, Marshall (1919) simply defines external scale economies as cost savings, which may be seen as limited to the transaction costs side. However, as Peneder and Warta (1997) and Dicken and Malmberg (2001) noted, most of Marshall's analysis of external economies is relevant to Porter's thinking of strategy and rivalry as key determinants of competitiveness and co-operation. Porter (1998), among others, has focused on the

competitive advantage externalities and firm innovation externalities of clusters. Within the current literature, there is a strong focus on 'production externalities' and not much on 'market driven externalities' in which marketing activities are included (Belleflamme *et al.*, 2000; Brown and Bell, 2001). Table 3.1 explains the main differences between these two externalities, where market driven externalities include the 'soft' benefits that geographical co-location produce. This includes aspects of credibility and reputation, sharing of information through informal means and 'active joint marketing activities' among players located in the cluster.

Table 3.1: Cluster externalities

Production driven externalities	***Market driven externalities***
Technological spillovers	Intermediate outputs/local demand
Specialised labour pool	Chance of discovery
Intermediate inputs	Credibility and reputation
	Informational spillovers
	Active joint marketing activity

Source: Brown and Bell (2001)

3.5.1.1 Production driven externalities and market driven externalities

There is agreement that externalities play an important causal role in economic development (Ravallion, 2002). However, as stated before, most of the studies of clusters and externalities have been concentrated in 'production driven externalities' (Marshall, 1910; Weber 1929; Krugman, 1991). Furthermore, according to Bannock *et al.* (1977, p. 158) "production externalities exist when the production activities of one firm directly affect the production activities of another firm". Others (Holtz-Eakin, 2000) refer to the situation in which a firm's production generates an effect not captured by the cost of production.

According to some authors (Paul and Rosenbloom, 1990; Lall, 1991; Hanes, 2002; Furman *et al.*, 2002), one particular case of externalities is the term called 'external economies', which may exists if the increased technological efficiency, improvement in the quality of inputs and other factors in the industry, result in a fall in the costs of each individual firm. Externalities can also be associated with technological change in terms of research and development (R&D) and innovative activities among firms (Bell and Albu, 1999; Carlaw and Lipsey, 2002; Feser, 2002; Bischi *et al.*, 2003). Furthermore, externalities in a cluster may indicate that there are 'passive' or 'unconscious' marketing benefits for companies, consisting in 'incidental' benefits which clustering firms create for each other (Schmitz, 1999) (see table 3.2).

According to Brown and Bell (2001), there are some 'active marketing externalities' that require particular 'motivation' from companies located in a cluster, such us joint marketing activities, creation of business associations, producing '*consortia*', joint trade activities, joint marketing delegations for foreign markets, share market information and so on (see table 3.2). Additionally, network effects in the marketing of 'traditional industries', such as agriculture products, can also generate externalities that encourage the acquisition and sharing of knowledge among local firms (Ravallion, 2002). These issues are investigated in this thesis in a 'traditional industry' setting (see chapter 4).

Table 3.2: Active and passive cluster externalities

Market driven externalities	***Production driven externalities***
Passive Output multipliers Localised demand Increased market share Chance of discovery Credibility Informational spillovers ***Active*** Active joint marketing activity: -Trade fair participation -Delegation to clients -Trade missions -Firm referrals -Information gathering/sharing Infrastructural support	***Passive*** Specialised labour force Technological spillovers Input multipliers Informational spillovers Infrastructural support ***Active*** Joint research and development

Source: Brown and Bell (2001)

According to Marshall (1910), Krugman (1991) and Scott (1998) 'passive externalities' occur outside the firm and provide benefits that have not been directly sought. On the other hand, as the above table 3.2 shows, 'active externalities' are those that arise directly through a firm's action (Brown and Bell, 2001). For example, market influence and joint interaction, familiarity and trust among companies as a part of social networks, are some of the 'active' externalities that, in a direct or indirect way, may help to define public policies and cluster development.

Although the importance of '*active marketing externalities*' (Brown and Bell, 2001) and their relationships with networking in clusters, at both local and international levels, the extant literature has not paid adequate attention to the role of marketing, and international marketing activities in clusters or industrial districts as a significant source of increasing returns and externalities for individuals firms as well as for regional economies (Samiee and Walters, 2003; Schlegelmilch and Chini, 2003).

Table 3.3: Negative externalities

Market related	***Production Related***
Congestion	Congestion
Increased output competition	Increased input competition
Loss of informational advantage	Increased labour costs
Groupthink	Increased real estate costs
	Loss of technological advantage
	Groupthink

Source: Brown and Bell (2001)

Finally, clusters not only generate positive externalities, but also some negative conditions (Baptista, 1998; Brown and Bell, 2001). As table 3.3 shows, congestion, increased competition in firm costs, labour, ineffective operation of network relationships within a cluster, risk of losing an innovative or technological advantage, exclusion of newcomers or outsiders, reinforcement of poor management practices, increased competition on prices, profits and market share, are only some of the negatives externalities that can result from a cluster.

3.5.2 Clusters' Externalities: development and implications for SMEs network

As stated previously, the idea and concepts of geographic location externalities date back to the early contributions of Marshall (1919) and Weber (1929) who investigated the effects of agglomeration economies and external advantages in spatially clustered production. During the last few decades, and especially during the 1980s and 1990s, the increasing importance of networks and co-operation in a competitive environment as a part of territorial externalities has been seen as a tool for survival, a complement to skills and resources, as well as growth capacity among small and medium sized companies (Gibb, 1993). Furthermore, inter-firm linkages have been subject of greatest attention within the small business and entrepreneurship literature (Freel, 2000, 2003, 2005). At the same time, horizontal linkages have been extensively analysed in the literature on

regional clusters and industrial districts (Becattini, 1990; Porter, 1990; Grabeher, 1993). Consequently, in the past few years this analysis has re-emerged investigating the way in which SMEs, within industrial clusters, co-operate and compete, benefiting from the geographic proximity, local infrastructure and *spillover of knowledge* (Staber, 1998; MacKinnon *et al.*, 2002) as sources of positive externalities of co-operation.

Previous literature indicates that a major change and treatment of SMEs in industrial districts came from the 1970s and 1980s with the growing importance of the north-east and central Italy, commonly known as the *Third Italy,* which is characterised by the predominance of small firms and defined as the *peripheral economy* (Becattini, 1990; Bianchi, 1998). In this respect, Becattini (1990) has seen this kind of industrial district as a 'socio-territorial entity', which involved the community in a natural and historical geographical-productive area with a long tradition and *'a common social culture'*. Furthermore, other authors (Schmitz, 1995; Keeble and Wilkinson, 1999) have introduced the term *'collective efficiency'*, which relates the concept of *competitive advantage* (Hill and Brennan, 2000) derived from local external economies and joint actions among companies located in industrial districts and clusters. This shows the growing importance of socio-economic networking that improves the business climate, or what Marshall (1890) called 'the industrial atmosphere'.

According to Oughton and Whittam (1997) it is possible to distinguish four types of external economies of scale that affect SMEs: (1) Internal economies, (2) Competitive external economies, (3) Technological external economies, and (4) Collective external economies. The last one arises when firms cooperate over inputs activities, which includes marketing, export promotion and other business services. As Oughton and Whittam (1997, p. 3) described "Collective external economies are therefore, external to the firm but internal to the group or network of participating firms". Furthermore, internal economies arise at the firm level, while external economies are available to all firms within an industry, and therefore accrue at the industry, local or regional levels (Becattini, 1990; Lazonick, 1993; McCann *et al.*, 2002). External economies play an important role in the economic development of regions. Thereafter, they can be seen as

an important component of the Marshallian concept of *'industrial atmospheres'* used to describe the influence of 'local environments' in industrial districts.

Collective external economies possess four distinguishing characteristics (Oughton and Whittam, 1997):

(1) They are realised within a network of participating firms.
(2) They require the active rather than passive involvement of participating firms, which is related to the 'active' and 'positive' marketing externalities that agglomeration economies and clusters produce.
(3) They depend crucially on the maintenance of effective cooperation between firms.
(4) Provided entry to the network is not restricted. Then, they reduce barriers to entry.

According to the above ideas, marketing activities that firms perform in networks can be seen as results of collective external economies, where economies of scale in general, and co-marketing activities[10], can be found. Clear examples of these activities can be found easily in the Italian textile industry with its 'Made in Italy' logo or within Emilia-Romagna marketing services and export promotion with a view to promoting the products from the region as a whole (Comanor and Wilson, 1979). Small food processors industries also offer good examples of co-operative actions in marketing and distributions channels, where typical foods, such as fresh meat and fish are jointly promoted (Akoorie, 2000; Forsman, 2003; Moxnes, 2003; Akooire and Pavlovich, 2003). However, in all the previous examples the risk in these 'joint strategies' is the free-rider problem[11] (Oughton and Whittam, 1997), issue that is present during this thesis analysing the dilemma between cooperation and competition among clustered firms (See results chapter 7, 8 and 9).

[10] i.e. joint advertising among two or more firms, promoting jointly the country of origin of products in an specific industry, collective distribution or export promotion, among others
[11] i.e. Individual firms can cash-in on collective marketing activities without contributing to the cost

3.6 Multinational Enterprises: Do they have a role in cluster development and inter-firm co-operation?

So far, this chapter has emphasized the role and importance of embedded SMEs in regional districts and clusters. However, the study of a regional territory and their surrounding organisations cannot ignore the position that multinational enterprises (MNEs) have in regional economic development.

According to Young, Hood and Peters (1994), multinational companies possess the potential for providing several benefits at global, country and regional levels. Thus, inward direct investment, improvement of efficiency in local areas[12] and better competitiveness, are just some of the contributions to local economies (Dunning, 1993, 2002). However, this is conditional on the regional incentive policies to attract and stimulate international investments in local economies (Young *et al.,* 1994; Hood and Young, 1999; Gray and Dunning, 2002).

Through the literature, the concept of 'location' and how companies can create a firm-level competitive advantage have been identified as critical issues for the development of MNEs in foreign countries (Porter, 1990; Storper, 1995; Frost and Zhou, 2000). Moreover, the link between companies and locations has been based on the assumption that learning and innovation depends crucially on what happens outside the firm (Frost and Zhou, 2000). Therefore, concepts of the immediate geographic environment, 'milieu', 'industrial atmosphere' or 'local surrounding', are key issues on the creation and development of firms capabilities in regional economies. Furthermore, these also help in the formation of new sources of competitive advantage (Dunning, 1993; Birkinshaw *et al.,* 1998; Sölvell and Ghoshal, 1989) and thus, "more attention needs to be given to the importance of location *per se* as a variable affecting the global competitiveness of firms" (Dunning 1998, p. 60).

[12] This includes: higher productivity, better technology and improvement of technical efficiency, among others

A number of authors have explained the role played by agglomeration economies and industrial districts in influencing the location of foreign investment (Head *et al.*, 1995; Zander and Sölvell, 2000). However, for the most part this research has concentrated on develop economies and has lacked comparative analysis with countries with different levels of economic development. Furthermore, there is a lack of attention on the positive externalities that MNEs creates in co-operative activities within regional clusters and how they 'interact' with the embedded SMEs in the marketing activities at both local and international levels.

3.6.1 MNEs and Cluster upgrading

An emerging theme with the research related to MNEs in regional economies, is how foreign companies influence the upgrading and evolution of industry clusters (Birkinshaw, 2000; Enright, 2000). It has been recognised that the process of globalisation has increased the levels of foreign ownership in regional clusters, which in the past was mainly achieved by a concentration of embedded local firms, especially SMEs (see the case of the particular industry analysed in chapter 4 of this research). Birkinshaw (2000) proposed three alternative propositions with regard to how foreign ownership may affect industry clusters:

(1) Foreign ownership is not good for cluster upgrading and development, because foreign subsidiaries tend to be less embedded in the local economies, compared to local companies.
(2) MNEs want to build a presence in foreign clusters. Thus, they contribute with leading-edge ideas, helping the upgrading of the industry in regional regions.
(3) A neutral perspective, where foreign ownership *per se* is irrelevant.

Although Enright (1999, 2000) has emphasised the benefits that foreign multinationals can bring to clusters. Stronger, deeper, multi-sector and cross-country empirical research is needed in this area. Thereafter, the above preposition can be empirically tested.

However, it is likely that the effect of MNEs will depend in the particular interdependencies between the various firm levels and cluster levels characteristics.

Although there is a relatively little literature specifically concentrated on the benefits to MNEs making investment into regional clusters. Birkinshaw and Hood (1998) suggest that foreign companies located in clusters tend to be more internationally oriented compared to those not located in such clusters. On the other hand, Enright (2000) proposes a model of interdependences between MNEs and regional clusters, which is characterised by a "strong or dominant presence of foreign companies, as well as a strong contribution by cluster-based subsidiaries to the overall strategy of the MNEs" (Enright 2000, p.114). According to these ideas, foreign multinationals play a critical role in clusters, transferring skill and capabilities to embedded local firms providing employment to the regional territory and contributing widely to the industry with their own research capabilities.

Finally, further research in the area of MNEs and their interrelationships within a particular cluster is needed. However, before starting the study of these interactions, it is necessary to understand deeply the real nature and structure of a particular cluster, as well as the reasons of why MNEs chose to locate their facilities in these particular regional territories. Furthermore, the issues concern to public policies at both national and regional levels may also help to the understanding of how they can incentive[13] the interdependences between MNEs, embedded SMEs and the cluster strategy as a whole. Then, after a clearer comprehension of all these concerns, research with the depth of insight that is needed will be achieved.

[13] e.g. Investment in education, training, infrastructure and information, among others

3.7 Externalities and Inter-firm Co-operation in Networks and Regional Clusters: Evidence from current research

Over the past decade, the issues related to inter-firm co-operation have been an interesting and diverse topic of research at both firm and public policy levels. Studies in this area have included diverse research methodologies, different industries, as well as dissimilar problems (for detailed analysis of selected studies, see table 3.4 at the end of the chapter). Within the literature on Entrepreneurship and Regional Development, there are three main topics relating to inter-firm co-operation that have drawn research attention: (1) the role and influences of innovation and competitiveness; (2) the interaction with public sector and trade associations; and (3) the local embeddness and cultural influences in the co-operation process.

3.7.1 Inter-firm co-operation, innovation and competitiveness

Bigarelli and Crestanello (1994) stated that industries may change their way of marketing and production, with the aim to maintain good levels of competitiveness, when strong competition from countries with lower production costs and changes in the market conditions affect 'traditional' industrial districts.

When companies work in a close proximity using collaborative agreements, the quick circulation of information is able to produce the right environment for innovation and strategic change in particular industries and economic sectors. These ideas are related to Marshall (1920), who emphasised the advantages of shared location: face-to-face contacts between players, exchange of information or 'information spillovers' and in general, the diffusion of innovation and so forth. As Courlet and Soulage (1995, p. 289) described, "This interconnection in practice stimulates the general development of industry which in its turn leads to the growth of external economies, giving an optimum efficiency to the industrial system".

Maillat (1998) researched the influences of 'innovative milieu' in the generation of regional policies of innovation and competitiveness, which aim to create comparative and environmental advantages. It appears that a general context of innovation allows firms to play an active role in the transformation of territorial production systems. At the same time, Staber (1997) and Ritsillä (1999) described the role of innovation as a tool for regional development, where social networks, synergy and dynamic learning are seen as factors that contribute to the flexibility of companies. Finally, as Starber (1997, p. 59) stated "the geography research of social relations deserves more attention because it affects the demarcation of districts boundaries and thus the limits of co-operation and competition".

Other important streams of the literature have focused on external linkages and product innovation in SMEs. A good example of this kind of research is found in Freel (2000, 2003), who considered issues related to function, geography and strength of innovation-related co-operation. Among the main conclusion of this research, it has been suggested that inter-personal dynamics, attitude and expectations in facilitation are important to successful collaboration. Moreover, innovative small firms are more likely than non-innovative small firms to establish collaborative arrangements with external agencies. Freel's study contributed to the understanding of the importance of social dynamics, including familiarity and trust, as a facilitator for collaboration and co-operation among companies, issues that are important to understand for the development of this thesis which contributes with a specific marketing approach to inter-firm co-operation of companies located in a close proximity in industrial districts and regional clusters.

3.7.2 Inter-firm co-operation with the public sector and trade associations

As stated before, innovation can be seen as a powerful tool for regional development, and it is a factor that contributes to the flexibility of companies (Ritsillä, 1999). The question which then naturally arises is: What does empirical research tell us about the role of public policy in firms' innovation? In this respect, Ritsillä (1999) stated that

regional co-operation of public sector is a part of a wider concept of local synergy, consisting of several forms of co-operation (Starber, 1997), including social organisations, municipalities and educational institutions among others (Donckels and Lambrecht, 1996; Minguizzi and Passaro, 2001; Requier-Desjardins *et al.*, 2003).

One interesting stream of research has been focused on the relationship of local embedded SMEs, large firms and the role of public policies in knowledge transference. In this respect, Bellandi (2001) studied the possible developmental role of embedded large firms' investment in local economies. The main proposition of this study is that involvement in knowledge exchange among local actors is more probable where and when these local actors are supported by local policies. These issues imply connections between local economic development, local firms and the exchange of social capital through the social interaction and co-operation of different actors of a particular economic sector.

The role of trade associations has also been a topic of considerable research in the entrepreneurial and small firms' literature. However, despite the extensive literature on the role of business associations, there has been little attention to their potential contribution to the competitiveness of SMEs. Bennet (1998) examined the relationship between SMEs and business associations, concluding that it is important to differentiate associations by type of members because of their dissimilar objectives. SMEs appear to be most closely served by associations of owner-managers, which have overlapping characteristics between both trade and professional associations. Finally, the main focus of all associations is on information, advice, benchmarking, influencing government, conferences, social events and newsletters. Bennet's research provided a general idea of the relationship of SMEs and business associations. However, it does not prove a clear picture of marketing activities and joint actions among their participants, issues that according to the research objectives this thesis deals with.

3.7.3 Inter-firm co-operation, local embeddness and cultural influences

If a co-operation led to innovation, and this process is supported by regional public policies creating synergy among different actors, the question remains as to the influence of local cultures in this process. In other words, does local culture really matter in co-operation?

Mariolli and Piscitello (2001) argued that internationalisation of production through foreign direct investment by SMEs is influenced by localised capabilities, which are related to the 'Marshallian atmosphere' strengthening and complementing their long-term competitive advantages, as well as favouring their internationalisation. In this way, firms absorb competences and resources from the local environment that may contribute significantly to the creation of competitive advantages. In the same way, Huggins (2000) stresses the importance of co-operative activities and trustful relationships for achieving improved competitive advantages for business. Furthermore, social groups seem to be the most potent form of inter-firm network, and an initial informal structure is the best facilitator for this relationship. Then, this argument helps to realised how important it is to understand clusters and industrial districts as a 'social network topography' (Van Dijk and Sverrisson, 2003), considering the key elements of the social relationships or 'relational mix' (Lechner and Dowling, 2003), and not only using an economic geography perspective.

As stated previously in this chapter, informal relations, and the interaction between firms and their local environment are key issues for the development of trustful co-operation (Collinson, 2000; Huggins, 2000; Varamaki and Vesalainen, 2003). According to this, Minguizzi and Passaro (2001) focused their research on the relationships between the economic environment and the entrepreneurial culture in small firms where, according to the authors, the learning process is based on unplanned procedures and informal organisations (Chell and Baines, 2000). Therefore, "the individual culture of the entrepreneur is the critical element" (Minguizzi and Passaro 2001, p. 185). The learning process and co-operative arrangements in SMEs are mainly determined by interpersonal

relations, which are not always formal, but mainly informal, trusting and strongly related to social ties.

3.7.3.1 The paradox between co-operation and competition among local-embedded firms

As this stage of the literature review, the issues of co-operation, the importance of the social elements in inter-firm relations, as well as the concept of trust, have been clearly stated. However, companies located in close proximity do not only have the option of co-operation, but also the alternatives of strong competition. In this respect, Das (1998) studied the complex collective dynamisms and firm strategy in an industrial cluster located in a developing nation. The main conclusions of this research dealt with inter-firm relationships and competition, which is "an inevitable phenomenon of industrial clustering" (Das 1998, p.40).

The intense rivalry between firms to capture as much of the market demands as possible, it was one of the main characteristics of the industrial cluster studied by Das (1998). In terms of co-operation strategies, most of the respondents argued that the provision of raw materials, jointly shared transportation costs and benefits of bulk purchase were the most beneficial co-operative activities of SMEs within the cluster. Furthermore, another important instance of co-operation was the provision of short-term financial support during emergencies, informal and friendly relationships with other producers within the cluster and linking business activities with other firms as an advantageous position for competition. Finally, the Das (1998) concluded that "clustering as a specific form of industrial organization has generated tremendous possibilities for small firms to be able to respond to changing market conditions and even to compete globally" (Das 1998, p. 47).

Weikl and Grotz (1999) have also contributed with interesting research indicated that the success of an internationalisation process strategy depends on the methods of strategic

orientation and the specific company know-how. At the same time, according to Weikl and Grotz, SMEs are not willing to transfer their knowledge in the context of co-operative agreements. These results may indicate that co-operation is not an element *per se* in every organization (Vanhaverbeke, 2001) and that the effect of the country as well as the local culture may play a crucial role in the trust and co-operative processes.

A different perspective is found in Chell and Baines (2000), establishing close association between network activity and business performance. At the same time, according to their study, owners managers tend to use their trading contacts as sources of useful information within a networking. Although this research showed a positive correlation between networks and general business performance, it did not include the issues of 'active marketing externalities' and their relationship with inter-firm co-operation. Alternatively, Brown and Bell (2001) found in their research that externalities are important for the internationalisation process of the firms. Moreover, the authors stated that co-location in a cluster provides an environment where firms can develop knowledge about, and trust between, each other, providing a base for 'active marketing externalities'.

3.8 Externalities and Inter-firm Co-operation in Networks and Regional Clusters: A research methodology approach

This section is concerned with how empirical evidence has been collected and the different research methodologies used. According to Staber (2001) empirical studies of industrial districts networks tend to be more descriptive than analytical, not providing insights and depth of the causal mechanism of occurrence and the process of works.

Within the literature that focused on entrepreneurship and regional development, it is worth noting that studies in the area of inter-firm co-operation have used a variety of research methodologies. Some of them have used survey methods, usually questionnaires (Donckels and Lambrecht, 1996; Staber, 1997; Bennet, 1998; Freel,

2000; Mingunzzi and Passaro, 2001). Others have used quantitative analysis by means of econometric models (Donkels and Lambrecht, 1996; Mariotti and Piscitello, 2001) or analysis of existing databases (Bigarelly and Crestanello, 1994). However, more recently, this research methodology has been concentrated in a more qualitative analysis using interview-based descriptions, case study research (Collinson, 2000; Vanhaverbeke, 2001; Bianchi, 2001; Brown and Bell, 2001; Lechner and Dowling, 2003; Requier-Desjardins *et al.*, 2003) or a mixed of data collection methods (Das, 1998; Weikl and Grotz, 1999; Chell and Baines, 2000; Huggins, 2000; Varamaki and Vesalainen, 2003) (for a detailed analysis of selected studies, see table 3.4 at the end of the chapter).

Although some studies (e.g. Mariotti and Piscitello, 2001) presented good and interesting empirical approaches in the explanation of relationships between territorial externalities, internationalisation process of SMEs through co-operative arrangements and the issues of co-location, as an important element for inter-firm co-operation. They do not provide an in-depth look at the issues of marketing externalities as 'active' results of co-location and networking. Others, (e.g. Minguizzi and Passaro, 2001) have contributed with a rigorous theoretical and empirically based attempt to advance theory. However, the final objectives did not focus on SMEs located in regional clusters or industrial districts. Indeed, the sample taken included not only a single industry but also different firms in the 'traditional industries', which are not necessarily linked with the concept of agglomeration economies, issue that in the objectives of this thesis are addressed.

More recently, the emergences of multi-method approaches, using triangulation in the information analysis, have also contributed to advancing the theory development related to SMEs, inter-firm co-operation and externalities (e.g. Varamaki and Vesalainen, 2003). This type of research, using multi-method approaches, usually has involved a first exploratory-qualitative research-method, collected through unstructured and semi-structured interviews, participant observations, analysis of documents as well as a review of the literature. Lately, quantitative analyses have been used (see table 3.4 at the end of this chapter).

Veramaki and Vesalainen's research, presented an advance in theory development and conceptualisation of the different kind of inter-firm co-operation as well as an interesting mix of data collection methods. Therefore, it can be seen as a basis for future research focused on specific issues of collaborative arrangements, as this thesis aims to do by analysing the inter-firm co-operation in marketing activities within regional clusters and using a multi-method approach for an empirical research.

As stated previously in this chapter, Brown and Bell's (2001) research has an invaluable first contribution to the marketing externalities, contributing with the concept of 'active marketing externalities'. However, their research also presented certain limitations in the methodological approach. As a qualitative case study, it involved a relatively small number of firms and the results are only representative of this specific electronic cluster with difficulties for generalisation among other economic sectors. Thus, as Brown and Bell (2001) noticed, further studies need to test and verify these findings in different industries and locations. According to this, and in agreement with the research objectives, the present thesis investigates in-depths, in both qualitative as well as quantitative manners, the issue of marketing externalities and specifically regional clusters and their influence on the firm joint marketing activities (more details in chapter 6). In this way, this current study represents a new contribution to the topic of externalities that started at the beginning of a new century with the early contributions of Marshall (1910) and that they have changed according to the new times. As he noted, "Economic conditions are constantly changing, and each generation looks at its own problems in its own way" (Marshall 1929, p. v).

3.9 What is next in research?

Although the previous authors have researched the ties of local economic development, regional clusters, networking and externalities. Most of them have concentrated on the issues of economic externalities, economies of scale or scope, and the effects of knowledge diffusion or knowledge spillovers as Krugman (1991) call them. Besides, it

is difficult to find some of them concentrated in-depth into the theme of active *marketing externalities* (Brown and Bell, 2001) as a 'benefit' of geographic agglomeration, industrial districts, or more specifically, regional clusters. Therefore, it can be conclude that this represents an enormous gap in the current state of the literature and contributions to the knowledge that may imply further research not only analysing local clusters, but also doing cross-country studies in different industries and nations with dissimilar levels of local economic development.

3.10 Conclusions

This chapter has built the understanding of the marketing environment in which firms work within regional clusters. Moreover, it has provided outstanding persuasive evidence related to the importance of the social elements of co-location and networks in the development of inter-firm co-operation. At the same time, the role of cultural differences and how they may affect the cooperative behaviours of firms has also been stated.

The different types of externalities that regional cluster generate have also been presented, arguing that marketing externalities are one of the benefits that co-location produce. Moreover, a complete and integrative analysis of externalities in clusters may not be seeing the relationships of embedded SMEs in isolation. Therefore, their relationship and the role of MNEs in the cluster upgrading have been also presented.

During this chapter, many gaps in the literature have been recognised, especially those related to the lack of research on the issues of marketing externalities in regional clusters. Consequently, according with the previous necessity of further studies, the research of Brown and Bell (2001) offers a new perspective in this subject proposing the notion of 'active externalities', which is seen as different from the traditional

externalities commonly used in the economic literature[14]. As a result, this chapter contributed with new concepts that are used during the development of this thesis, which empirically analyses the influences of geographical co-location and social networking in inter-firm co-operation in marketing activities.

The next chapter presents the industry analysis, which is used for the development and specific settings of this study.

[14] The benefits (or costs) of which are outside the firm's control

TEXT BOUND INTO

THE SPINE

Table 3.4: Externalities and Inter-firm Co-operation in Networks and Regional Clusters: Evidence from current research

Reference Year	Authors	Purpose / objective	Cluster/Industrial district / area	Research Methodology Type	Primary Data Col.	Main Findings / Conclusions
1994	Bigarely & Crestanello	To describe changes of this industrial district including the economic relationships of firms outside the Carpi area and industrial policy in respect to Carpi firms	Knitwear/ Clothing industrial districts in Carpi, Italy	Study of historical data. Secondary data analysis	NA	Existence of several centres of strategic decisions and high number of active entrepreneurs. Quick circulation of information that helps to produce a right environment for innovation and change
1995	Courlet & Soulage	To review different studies based on the relationship between industrial dynamics and territory	General agglomeration economies	Literature review / critical analysis	NA	Share location of industrial districts stimulates the general development of industries and growth of external economies
1996	Donckels & Lambrecht	To analyses the impact of entrepreneurship and the elements in the external environment on the decision to expand a business area	Brussels Metropolitan area	Survey Long-linear econometric analysis	Telephone Survey n=551	SMEs that have contact with Universities and research institutes are significantly more inclined to consider expansion
1997	Staber	To test different hypothesis concerning to variations in the relationship between co-operation; competition and business founding	Textile clothing district in Baden-Wurttemberg, Germany	Survey	Questionnaire survey n=232 enterprises	Geographical proximity facilitates information, mutual regulation and external economies of scale
1998	Maillat	To study the importance of innovative milieu and regional policy for the transformation of territorial production systems	Regional Policy in Switzerland	Literature review		New regional policy highlight the importance of SMEs in playing an active role in the transformation of territorial production systems

Reference Year	Authors	Purpose / objective	Cluster/Industrial district / area	Research Methodology Type	Primary Data Col.	Main Findings / Conclusions
1998	Das	To understand issues related to flexibility – collectivist in SMEs	Tile industrial cluster in Morbi, India	Survey Non-structured interviews	Questionnaire survey n=20 units from 182 tile units Non-structured interviews with key survey respondents	Inter-firm relationships and competition is inevitable in industrial clusters. Clusters enable small firms to respond to changing market conditions and compete globally
1998	Bennet	To examine the relationship between SMEs and business association	Business Associations in UK	Survey	Survey with stratified random sampling to business association (Response rate: 26%)	It is important to differentiate associations by type of members because of their dissimilar objectives
1999	Ritsila	To describe the role of innovation as a tool of regional development	Finland rural and urban areas as an innovative milieu	Descriptive statistical analysis	Empirical analysis of regional statistical data	Regional co-operation of public sector is a part of a wider concept of local synergy with several forms of co-operation
1999	Weikl and Grotz	To study innovation strategy and technology transfer of SMEs and their impact on regional development	SMEs in some European countries in the context of cooperation	Survey and in-depth interviews	Postal survey N=1014 enterprises Response rate=22% In-depth interviews n=54 Germany n=36 UK n=18 Czech Republic	SMEs are not willing to transfer their knowledge in the context of co-operation agreements
2000	Chell and Baines	To study networking and micro-business behaviour related to business performance	Two urban English locations: Newcastle upon Tyne and Milton Keynes	Questionnaire survey and in-depth interviews	Q. survey n=104 own managers In-depth interviews n=34 own managers	There is close association between networking and business performance Own managers use their trading contacts as sources of useful information within a networking

Reference Year	Authors	Purpose / objective	Cluster/Industrial district / area	Research Methodology Type	Primary Data Col.	Main Findings / Conclusions
2000	Collinson	To study the influence of knowledge networks for innovation	SMEs software companies in Scotland	Case Study	In-depth case study of five high tech firms	Importance of high- tech clusters linked with local agglomerations of specialist knowledge Formal and informal networks play a key role in the support of new ventures in this industry
2000	Freel	To study external linkages and product innovation in small manufacturing firms	West Midlands' SMEs manufacturing (UK)	Survey	Questionnaire Survey. Random stratified sample n= 228 SMEs	Innovative SMEs are more likely that non- innovative SMEs to establish collaborative arrangements with external agencies
2000	Huggins	To investigate the process and causes of inter-firm network success and failure	Different inter-firm networks	Case study Survey In-depth interviews	Case study of four network initiatives + a postal survey and in-depth interviews	Importance for recognition among managing directors of co-operative activities and trust to achieve competitive advantage of their companies. Social groups as important form of inter-firm network (informal)
2001	Mariotti and Piscitello	Relationship of territorial externalities and internationalisation	Italian SMEs	Secondary analysis of statistics using econometric models	NA	SMEs absorbs competences and resources from the local environment, which creates a competitive advantage
2001	Vanhaverbeke	Relationship of corporative strategy and cluster firms	Furnishing cluster in south west Flanders, Belgium	Field research in different companies In-depth interviews	Case study In-depth interviews with industry experts and policy makers	Geographical concentration and business clusters does not imply an automatically competitive advantage for firms

Reference Year	Authors	Purpose / objective	Cluster/Industrial district / area	Research Methodology Type	Primary Data Col.	Main Findings / Conclusions
2001	Bianchi	Analysis of co-operative strategies	Two food processing industry in the southern Italy	Secondary data and Interviews	Semi-structured interviews with external experts and with n=20 entrepreneurs of each industry	Analysis of 'traditional sectors'. Call for further research
2001	Bellandi	To investigate the role of embedded large firms investments in local environments	General	Literature review		Knowledge exchange of local actors is more likely to happen if it is supported by local policies
2001	Brown and Bell	To evaluate the impact of geographic clustering on marketing activities	Electronic cluster in Christchurch, New Zealand	Qualitative case study approach	In-depth interviews n=27	Marketing externalities exists and this is important for the internationalisation process of the firms (positive marketing externalities)
2001	Mingunzzi and Passaro	To study the relationship between the economic environment and the entrepreneur culture in small firms	Southern Italian firms in the "traditional sector"	Questionnaire survey	Questionnaire survey n=104 70% response rate (multivariate analysis)	Learning process is mainly determinate by interpersonal relationships, trusts and social ties
2003	Lechner and Dowling	To explore how egocentric high-growth entrepreneurial firms in the IT industry, grow through the use of external relations (networks) and become competitive	Munich Information Technology (IT) cluster, Germany	Case study	Case study conducting interviews for 18 interview units	Both weak ties and strong ties are important for the growth of the firm since they fulfil different functions

Reference Year	Authors	Purpose / objective	Cluster/Industrial district / area	Research Methodology Type	Primary Data Col.	Main Findings / Conclusions
2003	Varamaki and Vesalainen	To accomplish a conceptualisation of different types of multilateral co-operation between SMEs and inter-firms co-operation	Industries located in the province of Vaasa, Finland	Exploratory and qualitative (Multi-method approach)	Literature review Case study, Interviews with 54 individuals across 50 SMEs, Observations	Co-operation leads to co-operation The prerequisites of successful co-operation are emphasized differently in different types of co-operation
2003	Requirer-Desjardins *et al*	To characterised local production systems and clusters linked to local agriculture as a *'local agri-food system'* (LAS) To identity the ways by which these clusters are integrated in commodity chains, whether at local, national or international levels	Local agri-food systems as food-processing clusters in three Latin-American countries	Case study	Case study in different agri-food clusters in Brazil, Colombia and Peru	'Passive agglomeration externalities' can contribute to the building up of specific assets in agri-food clusters. Clusters must be linked not only with some directly related institutions, but also to the whole set of institutions networking at local, national and international levels

Source: Author, derived from literature

Chapter 4: Industry Analysis

The Salmon Farming Industry in Chile and Scotland

4.1 Introduction

This chapter analyses the industrial sector - regional cluster - which has been selected for the empirical analysis.

This particular industry has been chosen for diverse reasons, including: (1) the similar characteristics in two countries with different levels of economic development and culture; (2) it is located in specific geographical regions, contributing directly to the local economic development of rural-remote areas of each country; (3) it is possible to find inter-connections in the value chain activities through their processes. Then, it constitutes an 'industrial district' or a 'cluster' in both countries. Thus, it allows comparability; and (4) Chile[1] and Scotland, are the second and third largest producers as well as exporters of farmed salmon in the world (after Norway). Then, they are important players in the global market of salmon farm products.

In this chapter it is important to state that the sources, style and quality of the information are different in both countries under analysis. Nevertheless, there are also some common data sources such as FAO publications, which are assimilated from national sources, as most global datasets. At the same time, the researcher has tried to have similar structures and sections which allow comparability between the two countries under study, helping this to the understanding of their industry organisation and cluster policy environment in which there are insert on.

[1] Chile has succeed with some value-added agriculture clusters, such as wine and salmon, which together these days account more than 10% of national export revenues, from virtually nothing 10 years ago (Perez-Aleman 2000; Financial Times 2003)

4.2 Industry Overview

As the international seafood and aquaculture industry grows and diversifies, worldwide consumption is in the increase, as the benefits to human health become better known (Seafood International, 2004; Seafish, 2004; Scottish Quality Salmon, 2004). This new pattern and consumption trend is moving towards more convenient ready-to-cook and ready-to-eat products. To satisfy this new market tendency more fish and shellfish are being farmed and new species are continually being added to the aquaculture portfolio (FAO, 2004). This also involves the development of new marketing strategies in a sector that has been considered a player in a *quasi* commodity market.

The extent of regional and international trade in aquaculture products is difficult to analyse. Trade within countries in many aquaculture products is not yet well documented in the main producing countries. Whereas information on exports and imports are easer to find mainly thought global databases of the Food and Agriculture Organisation of the United Nations (FAO) and fisheries information centres. In addition, international trade statistics often fail to distinguish wild from farmed salmon products. This is expected to change gradually, as producer associations emerge in main producing countries (Lem, 1999; FAO 2004), requiring more sophisticated production and marketing information for differentiating their products in an every day more competitive market (Young and Smith, 2002a; Bradner, 2003). In this respect, it is worth mentioning MASMANAP research projects, which intend to identify and evaluate data for aquaculture producers including the customer/market interface and new product development, among others (see Young and Smith, 2002a, 2002b).

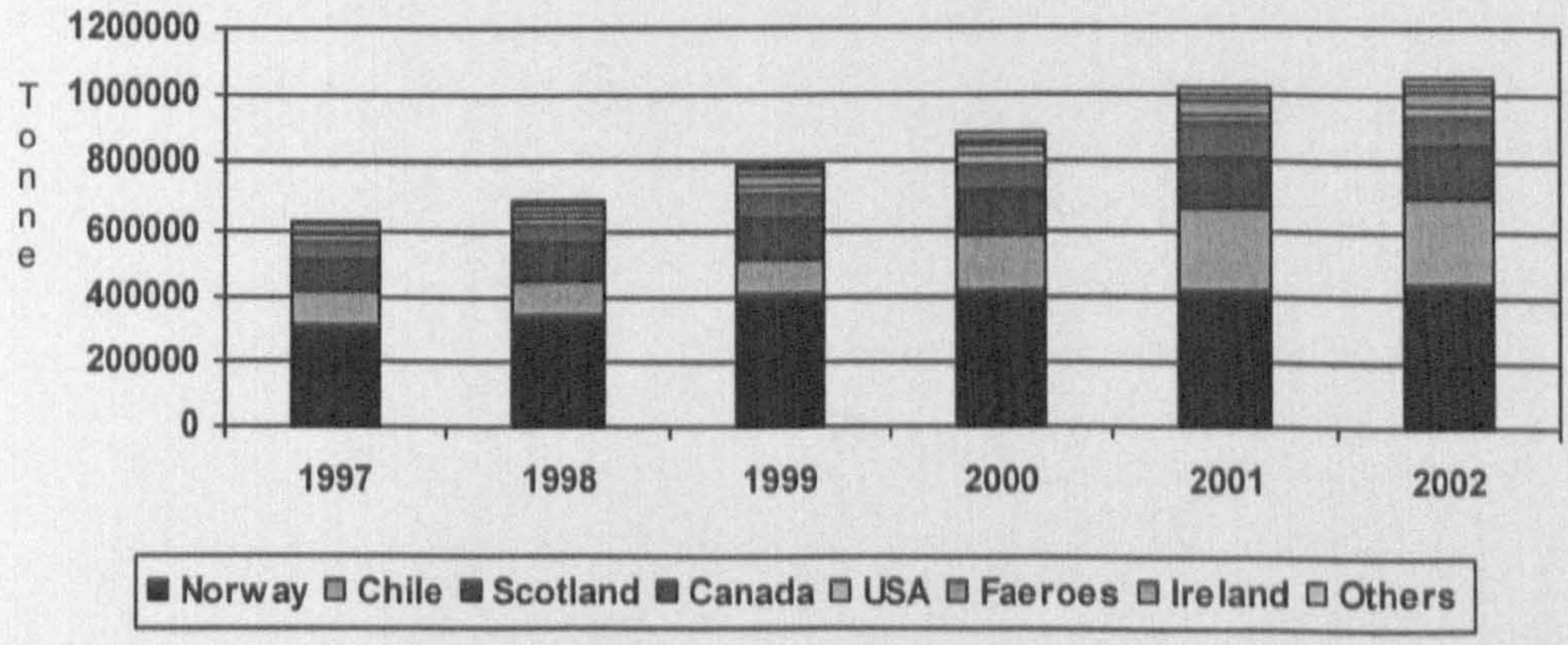
This section is concerned with the global development, trends and main characteristics of the salmon farming industry, a sector that represents an important part of the wider aquaculture worldwide business. The main competitor countries are briefly described, as well as their importance, as a growing economic section of the global food industry.

4.2.1 Global production and the main competitor countries

The international markets for salmon have developed enormously over the last few decades. Total global supply of farmed and wild salmon has increased from 550,000 tonnes in 1980 to more than 2 million tonnes in 2002. The main cause of the supply increase is a rise in aquaculture production from less than 15,000 tonnes in 1980 to an estimated 1.3 million tonnes in 2002. Since 1997, supply from aquaculture has been higher than from wild salmon fisheries (Bjørndal, Knapp and Lem, 2003).

According to Bjørndal, Knapp and Lem (2003) and El Mercurio (2003), during 2000 the main farmed salmon producing countries were Norway (412,700 tonnes approx.), Chile (271,500 tonnes approx.) and Scotland (120,000 tonnes approx.). These three countries accounted for 80% of the global supply of farmed salmon (see graph 4.1). Furthermore, Norway increased its production by 160% from 1990 to 2000, while Chile did so by 900% in the same period (Maggi and Vidal, 2002; Phyne and Mansilla, 2003). This increase in production at a global scale, has made the salmon farming industry the fastest growing food producing sector worldwide (Pijls, 2001; Maggi, 2002; Bjørndal, Knapp and Lem, 2003). At the same time, the industry has also become more international, with ownership structures and interest across national borders, clearly seen by the location of Norwegian and Dutch companies, with processing plants vertically integrated, in countries with lower labour cost like Chile.

Graph 4.1: Growth of Annual Atlantic Farmed Salmon Harvest Volumes by Country



Source: Adapted from Rackham 2002

Different factors have influenced the increase in demand for farmed salmon over the last decade (Young and Smith, 2002b). This could be attribute to changes in the consumer lifestyle and market preferences from 'red meat' to 'white meat' as part of a healthier diet and the benefits of 'omega 3' found in salmon (Waissblunth, 2000; Correa, 2002; Seafood International, 2004; Seafish, 2004; Scottish Quality Salmon, 2004). Price also has played an important role in salmon demand, as international prices for it have declined over the last decade (Rackham, 2002). At the same time, increase availability of farmed salmon led by large supermarket chains in both frozen and fresh types has had a key role in the distribution channels to final consumers (Young and Smith, 2002b).

The previous trends in demand are important. However, the industry must also be aware of the pressure of the environmental groups, which have direct influence in media and consumer decisions (Fundación Terram, 2002; Claude and Oporto, 2000; La Tercera, 2003; Salmon Farm Monitor, 2004). Consequently, marketing strategies and collectivistic efforts from producers should consider these different forces of the market and the environment (see table 4.1). This includes forecasting carefully changes in growth prospective, price and exchange rates fluctuations, new import barriers and dumping accusations, as well as emergence of new competitors at country and company levels.

Table 4.1: Summary of growth prospects for the main salmon farming producing countries

Country	Negatives for Growth	Positives for Growth	Growth Prospects
Norway	Norway EU Agreement (and follow - on agreement) (2001-2002) Feed quotas Slow release of new sites	Plenty of sites Government support – but constrained by EU Agreement	++++
Chile	Disease Distance to market Financial status of players US action against Chile and EU action in 2005	Plenty of sites Government support Entrepreneurial attitude Trade agreements with the USA, EU, and Corea (2003-2004)	++++++
Scotland	SEPA biomass constraints & other restrictions Environmental pressures Financial status – high cost producer Site availability	Current Government strategic review Improved treatments Collaboration between trade associations	++

Source: Author, adapted from Rackham, 2002

Table 4.1 summarises the growth prospects, in volume terms, for the leading salmon farming producing countries. There, it can be see that Chile offers a better growth prospective, compared to those in Norway and Scotland. This may be achieved due to its better economies of scale, new trade agreements with the USA and the European Union, which open new and better trade possibilities lowering trade tariffs, and a good entrepreneurial attitude which is supported with neo-liberal free-trade policies. On the contrary, Norway and Scotland offer lower growth prospects due to problems with feed quotas, higher environmental pressures as well as less competitive production costs.

Finally, with growing output from the main producing countries, prices on salmon have shown a long-term decline, although price fluctuations from year to year may be significant, due to short-term swings in supply. Furthermore, production costs in aquaculture have also decreased, in certain countries, thanks to economies of scale, improved technology and better feed management (Bjørndal, Knapp and Lem, 2003).

4.2.2 Global consumption

The most important markets for salmon are the European Union, Japan and the USA (El Mercurio, 2003; Bjørndal, Knapp and Lem, 20 03). At the same time, new salmon markets are developing in Central and Eastern Europe, South East Asia and China, and in South America. Moreover, salmon consumption is increasing in most of these markets as new product variations and value-added products are being introduced (Young and Smith, 2002a, 2002b; Bjørndal, Knapp and Lem, 2003). Industry observers expect consumption of salmon to grow further, although at lower growth rates than experienced so far (Pijls, 2001; Maggi, 2002; Bjørndal, Knapp and Lem, 2003).

According to Hosoda (2001) and Johnson (2001), the consumption of salmon within the European Union grew by 14% each year during the period 1995-2000. At the same time, the consumption in the USA grew by 20% each year. However, for the period of 2005-

2010, decreased increments are expected in global consumption. It is expected that new competitive marketing and branding strategies from the producers' countries, as well as, new forms of co-operative agreements among the different actors of this industry, will be key issues for the future, as a result. This is not an easy task for salmon farmed producers, as association and collaboration among producing countries are difficult long-term achievements that the industry as a whole must face from now on, using a clear long-term strategy. At the same time, strong competition both among and within counties will demand more efforts for survival strategies, especially for SMEs playing in a considered a q*uasi* commodity industry.

According to the supply and demand structure of the industry, Overton (2003, p. 29) states that "there is almost no other animal protein being produced internationally where only five or six countries in the world can produce it, but which is demanded in fifty plus countries around the world". These factors make the salmon farming business global, but with the unusual characteristics being that there are only a few places in the world where this can be done, like in Chile or Scotland. These issues are likely to be repeated with other 'new' fish species, such as cod, as global competition of farmed salmon producers increase, and as consequently prices decrease, changing 'traditional' aquaculture products toward new product development and diversification of fish products is the direct consequence of these competitive markets trends.

4.3 The Salmon Farming Industry in Chile

Agriculture and fisheries are major economic sectors in Chile, representing almost 20% of the gross national product (GNP) (Phyne and Mansilla, 2003; El Mercurio, 2003). In the last few decades the country has experienced a spectacular growth in the production of fruits, wine and salmon, among other products, due to the remarkable natural conditions, incorporation of science and technology in the production chain and a favourable political and economic environment (Fundacion Chile, 2003).

Aquaculture exports represent 55.6% of the total value and about 26% of the total volume exported by the Chilean fisheries sector (IntraFish, 2003d). Moreover, the salmon industry leads the exports and production of Chilean's farmed aquaculture products (IntraFish, 2004d).

The salmon farming industry in Chile is a relatively new successful commercial and export activity, which grew to a global scale at the beginning of the 1990s (Barrett *et al.*, 2002). According to Vidal (2002), 87% of this industry is concentrated in the *'Región de los Lagos'* or also called *'Xth. Region'* employing, directly or indirectly, as many as 40,000 people, which represents by 25% of the total working force in the area. At the same time, this industry contributes to the production capabilities as well as to the local economic development of the region (Infante, 2002; Maggi, 2002).

This increased production has occurred in the context of neo-liberal free trade policies, deregulation in the fishing zones, privatisation of companies, and the infusion of massive foreign investment into aquaculture (Berrett *et al.*, 2002; Phyne and Mansilla, 2003). Furthermore, the national government has supported an export-led strategy in this economic sector, which has led to foreign investment booms. During the period 2001 and 2002, the export returns of this industry were approximately US$1000 millions, representing 70% of the total regional exports (Maggi, 2002). Furthermore, the salmon farming industry has more than doubled its national export participation from 3% in 1990 to 6.4% in 1999 (See table 4.2).

Table 4.2: Salmon Farming Production in Chile

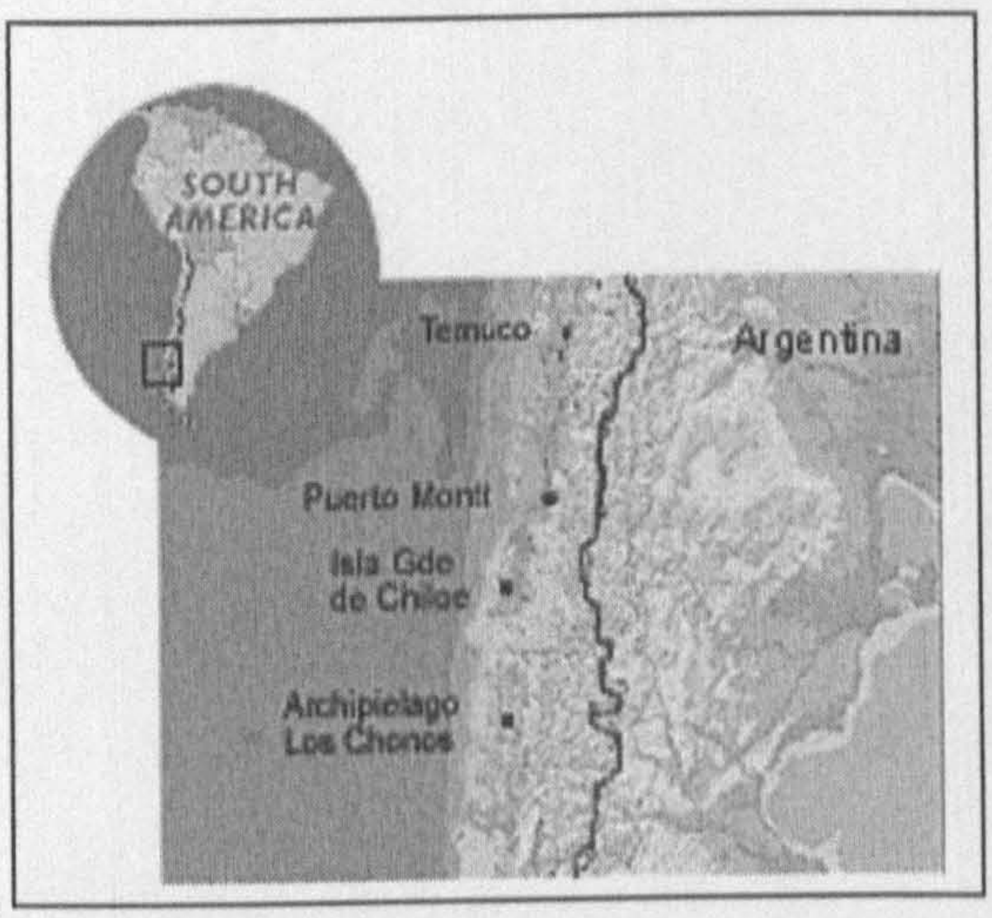
Year	Chilean Production Salmon and Trout (Thousand ton.)	Chilean Production as a % of world production	Total Chilean exports (Salmon and Trout) (US$ mill. FOB)
1981	...	...	...
1984	...	...	...
1987	2	1,5%	8,0
1990	26	7,9%	140,0
1993	69	17,1%	291,4
1996	165	24,4%	525,0
1999	201	22,1%	817,8
2001	405	32,4%	964,3

Source: Adapted from Maggi (2002)

4.3.1 Geographical Territory and Local Economic Development

Most of the production process is concentrated in the *'Region de los Lagos'* and mainly in the provinces of *'Llanquihue'* and *'Chiloé'*. This area is located 1000 km south of Santiago, occupying a territory of 200km2 between the latitudes 42° and 43°30′ south (see figure 4.1). The regional capital and the main urban town is Puerto Montt, which has 210,000 inhabitants[2].

Figure 4.1: Location of the salmon farming industry in southern Chile



Source: Aquachile.com

Geographical location, far away from the main consumer markets of the USA, Europe and Asia, is not an advantage to Chile's market position. However, less environmental regulations, compared to those in Europe, lower transportation costs, compared to those in the United States or Canada, and low labour costs compared to Norway and Scotland, make this industry one of the most competitive in a global scale (IntraFish, 2000; Bernett *et al.*, 2002; Phyne and Mansilla, 2003; Olson, 2005). Apart from these factors, the devaluation of the Chilean peso against the dollar during the last few years (1997-

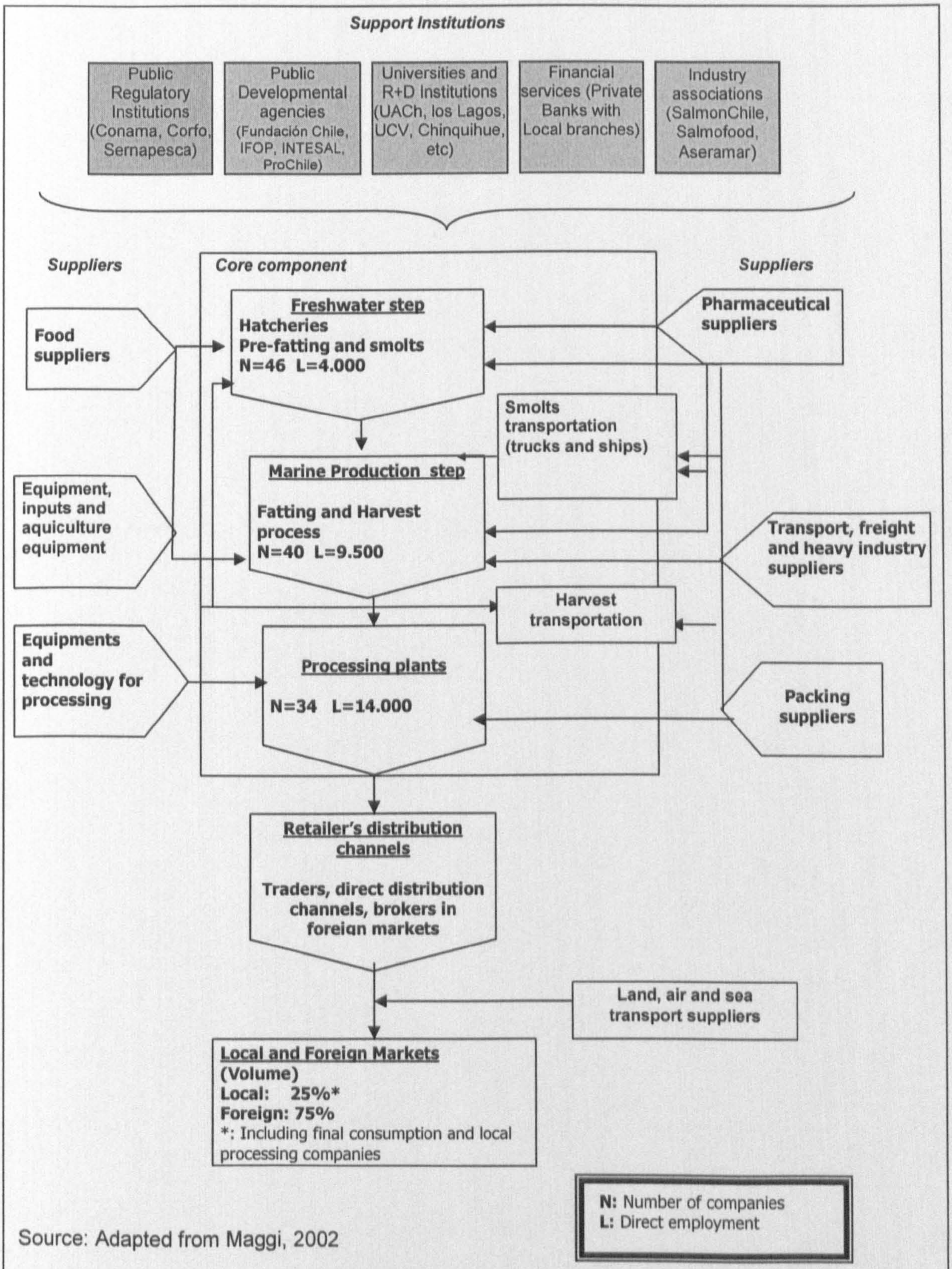
[2] The population of Puerto Montt has grown by 35% in the last ten years, achieving the highest population growth in Chile due to economic impact of the Salmon farming Industry (Intrafish 2003)

2002), has also helped to improve the competitiveness of the Chilean salmon industry in foreign markets. Furthermore, it can be concluded that exchange rates are, and they will be, a major impact on global salmon trade.

During the last ten years, the southern province of the *Xth. Region* or *'Region de los Lagos'* has experienced an increase in the offer of financial services, new laboratories, transport companies, as well as professional and educational services (Pijls, 2001). This expansion has been noticed mainly in urban areas like Puerto Montt, Puerto Varas and Chiloé (Pietrobelli, 1998; Correa, 2002; Vidal, 2002; Maggi, 2002). However, as a 'buyer-driven industry' (Kaplinsky, 2000; Phyne and Mansilla, 2003), facing growing concentration in supermarket chains, salmon farming companies are often locked into tight production schedules from dominant export markets. This issue has social consequences for class and gender relations in the industry. For example, Barrett *et al.* (2002) estimate that 80% of all plant workers are low-paid females working in part time basis in order to process food for export markets. At the same time, according to Phyne and Mansilla (2003) some low-paid workers are employed for long hours (up to 12 hours) especially during the key harvesting period from November to March.

As stated previously, the Chilean salmon industry provides direct and indirect jobs for around 45,000 people (IntraFish, 2003). According to Maggi (2002), the vast majority of direct employment is concentrated in the processing plants (by 50%), followed by feeding plants (by 33%) and hatcheries (by 15%). On the other hand, indirect employment is largely in supply services concentrated around the processing plants (see figure 4.2).

Figure 4.2: Salmon Farming Value Chain (Southern Chile)



Source: Adapted from Maggi, 2002

4.3.2 Structure and Competition in the industry

According to Maggi (2002) the value chain activities of the salmon farming industry, consists of three sub-systems: (1) core component, (2) industry suppliers and (3) support institutions, which account for 210 firms distributed between the core component and industry suppliers (see figure 4.2). At the same time, there are about 100 organisations, which contribute in an indirect way to the cluster firms[3].

As figure 4.2 shows, the *core component* of the value chain is based on the three main steps of the production process:

(1) *Salmon Eggs, Fry and Smolts production*, which is carried out in freshwater and hatcheries.

(2) *Marine Production* (Feeding and harvesting in seawater), which can take from nine to fifteen months, according to the type of product.

(3) *Processing*, this is the final part of the process carried out in processing plants.

The industry *suppliers* are composed of:

(1) *Salmon food suppliers*, which include fish oil and fish food among others, being the main component of the production costs of farmed salmon.

(2) *Equipment, general inputs and aquiculture equipment*, including special lights and oxygen, among others.

(3) *Equipment suppliers for processing plants*, which include weighing machinery, ice machinery and filleting machineries, among others.

(4) *General pharmacy and animal health care suppliers*, including veterinary clinics and professional services.

(5) *Transport, freight and heavy industry suppliers*, which help with fish transportation (by land, sea and air).

(6) *Packing suppliers*, in a variety of forms and volumes.

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[3] This includes specialised financial institutions, services companies, professional consultancies, etc.

The *support institutions* sub-system includes:

(1) *Regulatory organizations:* 'Sernapesca', 'Conama', 'Directemar', among others, which help to build the right regulatory environment for the fish and aquaculture sectors. They also deal with the environmental regulations and control the 'clean' production process of the industry.

(2) *Developmental and promotional agencies:* 'Corfo', 'Sence', 'ProChile' and 'Fundacion Chile'. These organisations deal with the export promotion (ProChile), training capabilities (Sence), attraction of foreign investment (Corfo) and research and development capabilities at country and regional levels (Fundación Chile). Here, Fundación Chile, which is a private foundation established in 1976 by the Chilean government and the American multinational IT&T, deserves special attention as it principal objective at the beginning of the Chilean salmon industry was to aid in the transfer of communication and aquaculture technology from Scotland and Norway to Chile (Phyne and Mansilla, 2003). Since then, it has played a key role in the R&D of this industry, as many others in the country.

(3) *Regional Universities:* 'Universidad Austral de Chile', 'Universidad de los Lagos', which help the industry with specialised training and postgraduate programmes and joint research opportunities.

(4) *Research and Development (R&D) institutions:* 'INTESAL'. Intesal is the technical institution of the trade association, which deals with research projects, specific training capabilities to the industry and technical information diffusion.

(5) *Financial institutions*, including local branches of national and international banks

(6) *Industry Associations:* 'SalmonChile', which is the trade association of the salmon farming industry comprising 45 companies at the different stages of the value chain. 'Arasemar', which is the local trade association of marine boats.

Table 4.3 shows the distribution of firms, including both independent and integrated ones. There, one can see the importance and tendency of firms to integrate in the core components of the industry. On the contrary, direct suppliers tend to remain independent.

Table 4.3: Number of Firms and Employment in the Chilean Salmon Industry

Sub-system	Industry	Independent firms	Integrated firms	Total	Employment (Dec 2001)
Core component of the value chain	Hatcheries	5	19	24	4.000
	Pre-fatting	10	31	41	9.500
	Harvest centres	9	31	40	14.000
	Processing	6	28	34	1.000
	Sub-total	**30**	**36***	**66***	**28.500**
Direct suppliers	Food Suppliers	3	2	5	800
	Equipments and Hatcheries	50		50	3.300
	Pharmacy suppliers	20		20	900
	Processing equipment	30		30	3.200
	Packing suppliers	12		12	1.000
	Transport suppliers	30		30	3.300
	Subtotal	**145**	**2**	**147**	**12.500**

Source: *Maggi (2002) based on* SalmónChile and Sernapesca information
Employment: Maggi (2002) based on Infante (2002) and Vidal (Cepal, 2002)
(*): Integrated firms are those that concentrated two or more processes of the value Chain. Furthermore, integrated companies are those that share property with other companies in the value chain

Finally, according to the 'Chinquihue Foundation'[4], 76% of the total employment in the processing plants is based on people with low levels of education. Furthermore, the professional / highly specialized technician rate is 6/1, which is the complete inverse to the situation with Norwegian or Scottish producers (Maggi *et al.*, 2000; Pijls, 2001; Maggi, 2002).

[4] Japanese co-operative support institution in Chile

4.3.2.1 The role of suppliers

According to Maggi (2002), the salmon food supply firms are highly specialized and during the last few years, they have experienced a high concentration of, and control from foreign capital. For example, during the early 1990s, there were 22 suppliers, but today there are no more than five, which is the product of fusions and bankruptcy. Furthermore, four out of five belong to foreign capital, mainly Norwegian and Dutch (Intrafish, 2002). Accordingly, these companies have access to good R+D facilities in Chile and they actively participate in governmental projects for further development in biotechnology and other food-science related areas (Pijls, 2001). Hence, these companies use, in a good way, all the opportunities that the local environment and the 'industrial atmospheres' (Marshall, 1920) produce, and from there, they gain a competitive advantage in the cluster as a whole.

Table 4.4: Industry Suppliers in the Salmon Farming Industry (Southern Chile)

Industry suppliers	N° of firms		
	FDI	large [5] National	SMEs [6] National
Food suppliers	1	4	--
Equipment, general inputs and aquiculture equipment	15	5	30
Equipments and technology for processing	10	3	17
Pharmaceutical suppliers	9	2	9
Transport, freight and heavy industry suppliers	--	5	25
Packing suppliers	3	3	6
Total	**41**	**19**	**87**

Source: Adapted from Maggi, Montero and Parra (2000), Universidad de los Lagos (2001), Aquanoticias (2002) and Maggi (2002)

Table 4.4 shows the importance of local SMEs to the supplier side of the salmon farming industry, where more than 60% of those firms belong to this category.

[5] Large national firms includes those with 200 or more employees and national capitals
[6] National SMEs includes those firms with less that 200 employees and national capitals

4.3.2.2 The influence of foreign capital in the industry

The vast majority of production companies in the industry have some levels of vertical integration in value chain activities (Phyne and Mansilla, 2003). This is part of a global tendency and not an isolated issue for a specific producing country. It was possible to find more than 600 processing firms during 1994, compared to less than 280 firms in 1999 (Correa, 2000).

Foreign capital, in the Chilean salmon producing firms', accounts for approximately 36% of the total investment (Infante, 2002; Phyne and Mansilla, 2003). However, if supply businesses are considered this amount is bigger. For example, within the food supply companies 4 out of 5 firms are Norwegian and Dutch (El Mercurio, 2003; Olsen, 2005). As discussed in chapter 3, this shows the influence of multinational companies (MNEs) in the cluster strategy, as well as in the local economic development at global, country and regional levels (Young, Hood and Peters, 1994; Peters, 2002; Dunning, 2002; Dunning, 2003).

Regarding the sources of capital investment, it is possible to find three principal kinds of processing firms within the cluster:

(1) Six firms with average annual production of approximately 25,000 tonnes and sales of approximately US$50 million or more. They are completely vertically integrated, from the very beginning of the production process to the sale and commercialization of the final product. Among them, the largest is 'Marine Harvest', originally Scottish, later acquired by 'Trouw-Nutreco', a Dutch group. Others are 'Aqua Chile' and 'Multiexport', which mainly have Chilean capitals, and 'Fjord Seafood', which have US, Japanese and Norwegian capital. 'Mainstream S.A.[7]', with Norwegian capital, and finally 'Camanchaca S.A.', which is an open company with mainly Chilean capital.

[7] Since 2003, Ewos-Chile and Mainstream S.A. are part of the same Norwegian conglomerate 'Cermaq'

(2) Six companies, with only Chilean capital, produce to international levels between 15,000 and 25,000 tonnes a year, and with average sales between US$20 and US$40 million. Moreover, they are part of multi-sector consortiums, among them, 'Invertec', 'Unimarc', 'Aguas Claras', 'Los Fiordos Ltda.' Other companies that traditionally belonged to this sector: 'Linao' and 'Tecmar' were acquired by 'Fjord Seafood', a Norwegian group.

(3) The final group corresponds to more than twenty firms, which can be classified as medium sized companies, according to international production standards. They depend on regional and national capital. As a result of the vertical integration process and acquisitions, the average size of these firms is larger than the one found five or ten years ago (for detailed analysis see table 4.5).

Table 4.5: Main Companies: Salmon Farming Cluster (Southern Chile)

COMPANY NAME/ GROUP	PRODUCTION, (LOCALIZATION)	SALES VALUE/ EXPORT. 2001 (US$ MILL. FOB)	CAPITAL ORIGEN
Trouw-Chile Group (Nutreco- Hol.)	Food supplier (Osorno). Pisciculture, harvest, process and commercialization (Lgo.Llanquihue, Pto.Montt, Chiloé)	240,0	Multinational Corporation: Trouw-Chile (food supplier) and Marine Harvest (Salmon producer). Nutreco Group acquired processing companies in Norway, Scotland (Marine Harvest) and Chile (Mares Australes).
Ewos-Chile (Nor)	Food supplier (Chiloé y Coronel,VIII Región).	115,0	Multinational Corporation. Mainly Norwegian capitals: Cermaq. It also has R+D facilities in Chiloé.
AquaChile Group (Chl-USA)	Piscic., harvest, Process and Comer. (Gala, Pto. Cisnes, Chiloé, Pto. Montt)	100,0	Holding with national and USA capitals. Initially was a Joint venture between Pacífico Sur (Chile) and Aquafarms (USA). During 1998 bought AquaChile and in 2000 bought Salmopack (processing plant). In 2004 it acquired Aguas Claras
Camanchaca S.A.	Piscic.,harvest and Proces. (Pto.Montt, Chiloé)	75,0	National capitals. Open society
Multiexport S.A. (Chl-Jap)	Piscic., harvest, Process and Comer. (Pto.Montt, Chiloé)	60,0	Holding with national capitals. Strategic alliance with Mitsui Co.Ltd. (Jap)
Salmofood S.A.	Food supplier (Chiloé)	60,0	National and regional capitals: Aguas Claras, Invertec, Aucar y Tecmar. Invertec is the biggest investor
Mainstream S.A.	Pisc., harvest and Proces. (Chiloé)	56,3	Cermaq – Norway
Fjord Seafood Chile (Nor-Chl)	Piscic., harvest, Proces and Comerc. (Aysén, Chiloé, Pto.Montt)	53,6	Norwegian capitals. Acquisition of : Tecmar Ltda. and Linao Ltda.

Alitec (Hol)	Food supplier (Pargua, Chiloé)	50,0	Dutch capitals: 'Provimi group'
Salmones Antártica (Jap)	Harvesr and Proces. (Aysén y Chiloé)	45,0	Created by Fundación Chile in 1981. Now belong to a Japanese group
Biomar S.A.(Chl-Nor)	Food supplier (Pto.Montt)	42,0	Mainly Norwegian Capitals
Cultivos Marinos Chiloé	Harvest and process. (Chiloé, Aysén)	40,0	National capitals. Holding structure
Aguas Claras S.A.	Pisc, harvest and proces. (P.Montt).	37,0	National capitals. Belongs to Antarfish (national holding)
Invertec-Mar de Chiloé	Pisc, harvest and Proces. (Chiloé)	35,0	National capitals. Family owned.
Los Fiordos Ltda.	Piscic., harvest, Proces., and Comer. (Chiloé, Aysén)	35,0	National capitals. Belongs to a national holding: Agrosuper. Part of the production is for the local market. "Super salmón" national brand.
Ventisqueros	Piscic., harvest and Proces. (Pto.Montt)	25,0	National Capitals
Trading Unimarc	Harvest, Proces. and Comerc. (Chiloé)	25,0	National Capitals

Source: Adapted from Maggi (2002) and SalmonChile (2003)

The previous description of processing plants, according to the sources of capital, demonstrated the influences of foreign direct investment (FDI) in the Chilean industry. Furthermore, the lower production costs' advantage has increased the possibility of foreign companies choosing Chile as a key location for their production process in the salmon farming industry. Chile continues being the only developing country with substantial supplies of salmon farming (Phyne and Mansilla, 2003).

Multinationals that specialise in grow-out sites have also been active in acquiring Chilean firms (Phyne and Mansilla, 2003). However, a remaining question is where does Chilean capital fit into the process of an industry that becomes more reliant on foreign capital? As described in table 4.5, Chilean companies largely consist of 'old' capital from the agro-export, fisheries, manufacturing and services sectors (Intrafish, 2000; Salmonicultura, 2001).

4.3.3 Marketing and sales distribution

The industry exports more that 75% of its production and 95% of the total value to foreign markets. Furthermore, the export value has grown from US$140 million in 1990, to US$973 million, during the year 2000 (Maggi, 2002; El Mercurio, 2003).

The increased availability of this product through different distribution channels, improved presentation of the final product and changes in the consumer preferences have resulted in a rise in demand for farmed salmon (Tisdel, 2001; Bradner, 2003; Seafish, 2004; Scottish Quality Salmon, 2004). For example, the consumption of farmed salmon in the USA grew more than tenfold from 1987 to 1999. The farmed salmon consumption in the EU grew more that 14% in the same period. Furthermore other foreign markets, such as China, Taiwan, Hong Kong, India, Singapore and Mexico have started to show growing importance as new export markets, presenting a growth rate of around 28% for Chilean salmon farming (Maggi, 2002; Vidal, 2002; Fish Farming International, 2002).

Today, Chilean farmed salmon is exported to 62 different countries. However, Japan and the USA represent a concentration of 84% of the total export value of this product. Understandably, this dependence presents a big threat to the exporters when there are economic crises in these two main markets. To expand and diversify exports in foreign markets represents a challenge for the industry, which presently needs to work together in a more cohesive cluster strategy to implement more collaborative arrangements. The increased expansion of the EU market represents new challenges to the industry as Chilean salmon may be used as competitive raw material for the European smokehouses (Intrafish, 2004). However, a new protectionist trade measure in February 2005, from the EU (Scottish and Irish producers) against Chilean salmon producers, has delayed these expectations.

The Chilean Salmon Producers Association 'SalmónChile', together with the national export promotion bureau 'ProChile', have tried to promote and firmly establish Chilean salmon in foreign markets (Correa, 2002; Vidal, 2002; IntraFish, 2003b). However, according to Infante (2002) the international marketing strategy to promote the country of origin of the salmon in foreign markets has not been strong enough. The total marketing investment of the industry is around US$10 million, which represents approximately less than 1% of the total sales. A relatively low figure compared to other food industries worldwide (Maggi, 2002). The main marketing activities carried out by this industry include: trade fairs' participation, promotion in hotels and restaurants as well as in different markets, adverting at the point of sale and advertisements in specialized magazines, among others. Apparently, these activities concentrated mainly in the short-term do not include a clear long-term international marketing strategy for the industry. One of the main weaknesses for the commercial sustainability and development of marketing activities of this industry.

4.3.4 The Cluster strategy in the Chilean salmon industry

Taking into account the Chilean business and economic context, it is not possible to find a 'top-bottom[8]' industry cluster approach. On the contrary the cluster strategy, or the development of this 'geographically concentrated industry', has been led by the companies (locals and multinationals) as well as the entrepreneurial spirit of its people. According to Maggi (2002), the 'cluster development' of the salmon farming industry in Chile came about amid the following industrial challenges:

(1) ***Growing stage (1978-1985):*** During this period, the investors in this new industry tried to capture the comparative advantages of the natural environment that allowed them to establish the production processes. The fist 1,000 tonnes for foreign markets

[8] This means a governmental or regional developmental body approach for a long-term clusters strategy

were produced in 1985. The following year, the 'Salmon and Trout Producers Association'[9] was created with the participation of 17 companies.

This initial development of the industry was carried out thanks to the public-private co-operation, a collective learning process, growing demand from foreign markets and a national export promotion strategy led by ProChile.

(2) ***Industry development (1986-1995):*** The main objective of this new step was to achieve globally competitive production levels. This implied changes in the industrial production capacity and the creation of new distribution channels. *Salmoexport* was created in 1990, with the participation of 13 producer firms, with the aim of developing international marketing strategies for the industry. Although this association was in the market for only three years, it created new opportunities for the Chilean salmon farming industry in foreign markets.

This growing stage ended with the impact of the 'Asian crisis' and the accusation of *dumping*[10] from the Alaskan producers. The final outcome was concerned with the pressure of keeping the cost of production low, and at the same time increased levels of production (Correa, 2002; Maggi, 2002).

(3) ***Industry globalisation (from 1996):*** After the previous economic crisis, only some producers continued. These were mainly the larger companies, for example, those having a good market share and position in foreign markets, or those possessing foreign capital.

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[9] Asociación de Productores de Salmón y Trucha. Now, it is called *'Asociación de Industrias del Salmón (SalmonChile)'* having 32 associated producing companies, which represents approximately 70% of the total industry production. Since 2002 some supply firms have been participating in this association.

[10] Dumping involves selling a product at below the cost of production and below the price in the domestic market.

The previous three steps in the 'cluster development' of the salmon farming industry in Chile (for a detailed summary see table 4.6), show how co-location of companies based on natural resources evolved over time, from simple 'agglomeration economies' (von Thünen, 1842; Marshall, 1920; Weber, 1929), to a more organised system of interrelations and collaboration. These issues are related to the concepts defined in chapter 2 of 'industrial atmospheres' (Marshall, 1920), 'collective learning process' (Keeble and Wilkinson, 1999) and 'collective efficiency' (Schmitz, 1999), which at the end are transformed into a 'regional cluster' (Porter, 1990; Baptista & Swann, 1998; Porter 1998; Enright, 2000). The former concept, involves the creation of support institutions, interrelations in the value chain activities, as well as a significant impact in the local-regional surroundings. The importance and role played by MNEs has also been incorporated in this last stage of cluster development. These issues are also related to the arguments presented in chapter 3, which explained how MNEs contribute to the cluster upgrading strategy (Birkinshaw, 2000; Enright, 2000; Dunning, 2003).

Table 4.6: Salmon Farming Cluster in Chile: three main steps

	CLUSTER FORMATION **From 1978 (50 ton) to 1985 (900 ton)** **Price: US$ 9 – 10 / kg.**	***Growing stage*** **From 1986 (1350 ton) to 1995 (143000 ton)** **Price: US$ 4 -5 / kg.**	**GLOBALISATION** **From 1996 (150.000 ton) until now (400.000 ton)** **Price: US$ 2,8 - 4,5 / kg.**
Main objective	• Fish survival	• To increased levels of production	• To increased productivity • To diversify foreign markets
Target Markets	• Only elite markets	• Japan, USA	• Japan, USA, European Union and new emerging markets
Distribution Channels	• Direct sales and co-operatives	• Foreign brokers • National producers association (*Salmoexport*)	• Supermarkets • Strategic alliances or vertical integration with distributors in foreign markets
Public Policies	• Regulation • Technology transfer • Research and Development	• Infrastructure • International marketing in foreign markets • Research and Development with food suppliers	• Environmental management • Productivity improvements • Technological visit in foreign markets • Biotechnology
Company characteristics	• Small and Medium Sized	• SMEs • Some Foreign Companies	• Large Companies, vertically integrated
Suppliers companies	• Only few without adequate resources	• Major outsourcing local companies	• Specialised SMES • International Specialised Companies

Externalities	• Demonstration to others companies	• Suppliers access	• 'Good practices' Benchmarking
Competitive Factor	• Production	• Standardized Quality	• Efficiency: cost of production
Social Capital	• Entrepreneurship	• Associability	• Global value Chain participation

Source: Adapted from Maggi *et al* (2000) and Maggi (2002)

According to Maggi *et al.* (2000) and Bjørndal (2002), the rapid growth of the salmon farming industry in Chile comes from a combination of 'natural competitive advantages' and 'acquired external economies'. Among the former are the following:

(1) ***Natural production conditions:*** Hydrographical, climate and adequate water temperature for salmon production. At the same time, there is a different production seasonal cycle compared to the producers in the northern hemisphere, which helps in the export of 'fresh' products to this market.

(2) ***Environmental conditions:*** The production process is carried out far away from the urban areas, which help to prevent contamination of the water supply. Furthermore, the availability of more natural light in winter helps the natural process of production, compared to those located in the northern hemisphere.

(3) ***Availably of raw materials:*** Fish oil and meal are the principal raw materials for the farmed salmon industry, which can be found at 500km north in the VII Region. Chilean companies have the advantage of paying 'local prices' and not 'international commodity prices' as is the case with other competitors around the world. This advantage also helps the global competitiveness of the Chilean salmon industry.

Among the *'acquired external economies'* are:

(1) ***Availability of specialised human resources:*** Regional universities have contributed to the development of new academic degrees and specialised programmes for this

industry[11]. At the same time, local non-specialised human resources that are familiar with the fish industry can be found in the region, offering a good cost/production relationship to the salmon farming industry.

(2) ***Local and national support institutions:*** A good and supportive public and private system, which contributes to the development of the industry. Among them:
Fundación Chile, which deals with the process of Research and Development
ProChile, which contributes to the generic commercial campaigns in foreign markets
Instituto de Fomento Pesquero, which helps with the regulatory environment for the development of the industry.

(3) ***Entrepreneurship capabilities:*** The first generation of investors, contributing to the development of the salmon farming industry, were national and regional (1982-1986). At the same time, they took the risk of creating and developing a new industry in the country.

Although the industry presents a good combination of 'natural' and 'acquired' external economies, they are not enough for the future success and long term development of a competitive industry on a global scale. The future commercial sustainability will depend more on the support from the national and local governments, as well as, the new collectivist entrepreneurial spirit, for the formation of new formal and informal networking associations, which facilitate the diffusion of knowledge[12] among firms, promote 'flexible specialisation' (Perez-Aleman, 2000), and promote collective learning throughout the sector. Furthermore, new institutional frameworks and capabilities will be required for the transfer of commercial knowledge and upgrading from large multinational firms to small – embedded local firms. This will encourage innovation by

[11] For example, Universidad Austral de Chile has created a new postgraduate programme in Aquiculture during 2004, in partnership with some Norwegian Universities
[12] This includes commercial and marketing knowledge

balancing cooperation and competition among the participating firms of the salmon-farming cluster in Chile.

4.3.4.1 Is there any collective efficiency in the industry?

Apart from the external economies mentioned previously, there are certain collective actions that have helped the development of the salmon farming cluster in Chile (Maggi, 2002) (for a detailed analysis see table 4.7):

(1) *Collective organization and capacity,* achieved by the creation of the first trade association in 1986. More recently, this association has gone under the name of 'SalmonChile' and includes the producers, as well as, the supply firms of the industry. The main objective of this association is the representation of their associates, in order to discuss governmental regulations and policies for the industry, as a national and international body that represents the interests of the industry.

(2) *Technological learning,* which includes the development, acquisition and sharing of new technologies related mainly to the food processing industry.

(3) *Local development of new services and products for the industry,* involving new ideas that help the growth and support of the industry.

(4) Human resources development, which includes collaboration and partnerships with local universities and research bodies for the creation of specialized academic programs and joint research.

Table 4.7: Collective actions: Firms, Local Institution and Government

Stage	Collective actions and actors involved	Main Result
Initial learning	National Producers: **Salmoexport creation**	They closed the association after 5 years. The objective was positioning Chile as an export producer in foreign markets
Initial learning / Growing	**Regulatory bodies co-operation**	The industry has some regulatory framework
Growing	Salmon Producer Association and ProChile: **Generic Marketing campaigns in the USA to final consumers. Joint-marketing with producers from Canada and Alaska**	Final consumption of farmed salmon grew 20% during the last few years. The co-operation's activities in marketing finished by 1997, after achieving their objective
Growing	Salmon Producers Association: **Founded the technological institute for salmon research and development, INTESAL (1994)**	For diverse reasons, INTESAL has not worked as a research and development research institution. Then, has been concentrated in labour training for the food industry
Growing / Globalisation	Five producing companies founded **Salmofood** (food salmon supplier)	Salmofood is the only national company supplying food for the national salmon farming industry. Good positioning in the market
Globalisation	Salmon producers Association: Collective defence for **dumping accusation (USA, Scotland and Ireland)**	Satisfactory results.
Globalisation	INTESAL, Producers and Universidad Austral de Chile: **Water monitoring and control**	Good joint collaboration for environmental protection
Globalisation	SalmonChile, Regional Universities and Chilean Government: **General Agreement for Environmental protection**	Started in Dec. 2002

Source: Adapted from Maggi (2002)

Table 4.7 shows that there are collaborative activities among the different players in this industry. At the same time, they are part of a specific geographical region. Therefore, it can be concluded that this industry has the characteristics of an industrial district or cluster, according to the definitions presented in chapter 2. However, the question that still remains is: do these firms collaborate in marketing activities? In other words, is there any inter-firm co-operation in joint marketing at both local and international levels? The answers to these questions are discovered in the empirical analysis of this research (chapters 7, 8 and 9).

4.3.4.2 Collaboration or Inter-Firm Dependence?

The collaborative activities have procured some 'positive externalities'[13] to the whole industry as well as the geographical region, where the economic activity is located (Tisdell, 2001). However, the evolution, globalisation and the influence of FDI with foreign companies have changed the nature and forms of co-operation. According to this it might be suggested, as discussed in chapter 3, that large companies with foreign capitals help, in some manner, the up-grading and technological capabilities of smaller firms (see table 4.8). However, there is no empirical evidence in the salmon farming industry to reinforce this suggestion. Thus, one of the research questions of this thesis focused in the influence of multinational companies in the development of inter-firm cooperation in marketing. Hence, the issues of cluster upgrading and the interrelationship between subsidiaries of foreign companies and locally embedded SMEs may be explored.

Table 4.8: Is it Collaboration or Inter-dependence?

Step	**Type of collaboration**	**Actors**
Initial learning	Collaborative network	International buyers (commodity Brokers)
Growing	Collaborative network / *quasi*-Hierarchy	Producers (Different distribution channels)
Globalization	*Quasi* - Hierarchy Collaboration	International companies (integrated in the value Chain activities and with foreign distribution channels)

Source: Adapted from Maggi (2002)

4.3.5 Summary and outlook of the Chilean Salmon Farming Industry

As previously stated, the Chilean salmon industry has developed with minimal government intervention. Thanks to the favourable environmental conditions, low labour

[13] For a variety of definitions see chapter 3

and feeding costs. The Chilean companies, local entrepreneurs and trade associations, have implemented the cluster strategy from a 'bottom – up' approach. This means, the industry itself has led their cluster strategy. Thereafter, the government and local bodies have supported this approach.

The open economy, with no restrictions on foreign ownership at country or regional levels, and especially in the salmon industry, have allowed foreign investment from Canada, Japan, Norway and Holland represented through joint ventures or fully-owned subsidiaries. However, the vast majority of the supply section continues with a strong and dominant presence of SMEs.

Although product differentiation within the salmon farming industry is not an easy task for many producing companies, the future of the industry, and its relationship with other important producer countries, will be carried on in the differentiation and specialisation of their production, offering innovative food solutions to current and new foreign markets (Seafish, 2004). Moreover, the use of Internet as a new distribution channel in the fish industry may imply new marketing strategies for promoting salmon products (Bradner, 2003). The development of new marine species, such as cod, trout and haddock, also represent new commercial opportunities for diversification in this industry (Seafish, 2004; BBC, 2004; Intrafish, 2004). As such, the marketing strategy, collaborative arrangements among producers, partnerships and joint marketing activities, among all the participants in the value chain activities, will be key issues for the next few years (Tisdel, 2001; Bradner, 2003).

At public policy levels, the issues of reinvestment policies from foreign companies (MNEs) at national and regional levels may be seen as key elements for the long-term development, growth and sustainability of this industry in Chile and Scotland.

4.4 The Scottish Food and Drink Cluster

It is not possible to describe the Scottish Salmon Farming Industry in isolation, without providing background on the special business, economic and political contexts in which this key Scottish industry has settled down as an integral part of a wider system: *The Scottish Food and Drink Cluster.*

The Scottish Executive launched in 1999 the *Scottish Food and Drink Cluster Strategy,* as a long term policy for the improvement of various economic sectors in Scotland, by taking all the advantages of external economies enjoyed by industrial clusters and co-location (Scottish Enterprise, 2003; Shaw and Tait, 2002). Furthermore, this strategy aims to engender and facilitate a better networking strategy and quality of contacts among others, which may facilitate inter-firm co-operation in marketing and the better management of all the value chain activities among participating companies of a particular industry (Tisdell, 2001; Scottish Executive, 2004). This is especially important for those small and medium sized firms, which may face resource constraints (Siu and Kirby, 1998; Carter and Jones-Evans, 2000). Thus, international competitiveness, better marketing skills and an entrepreneurial culture may be achieved for Scotland (Shaw and Tait, 2002).

The Scottish food and drink sector represents a very heterogeneous industry with products ranging from lightly processed fish and meat to high value-added products such as whisky and prepared meal. Generally speaking, the Scottish food manufacturing industry makes a significant contribution to the Scottish economy, accounting for 17% of Scottish manufactured output in 1998 (Shaw and Tait, 2002).

Changing lifestyles have led to growing demand for prepared products and a wider variety of products. Apart from this, niche markets requiring specialised quality products with regional/national identities have also grown (Shaw and Tait, 2002; Marketing

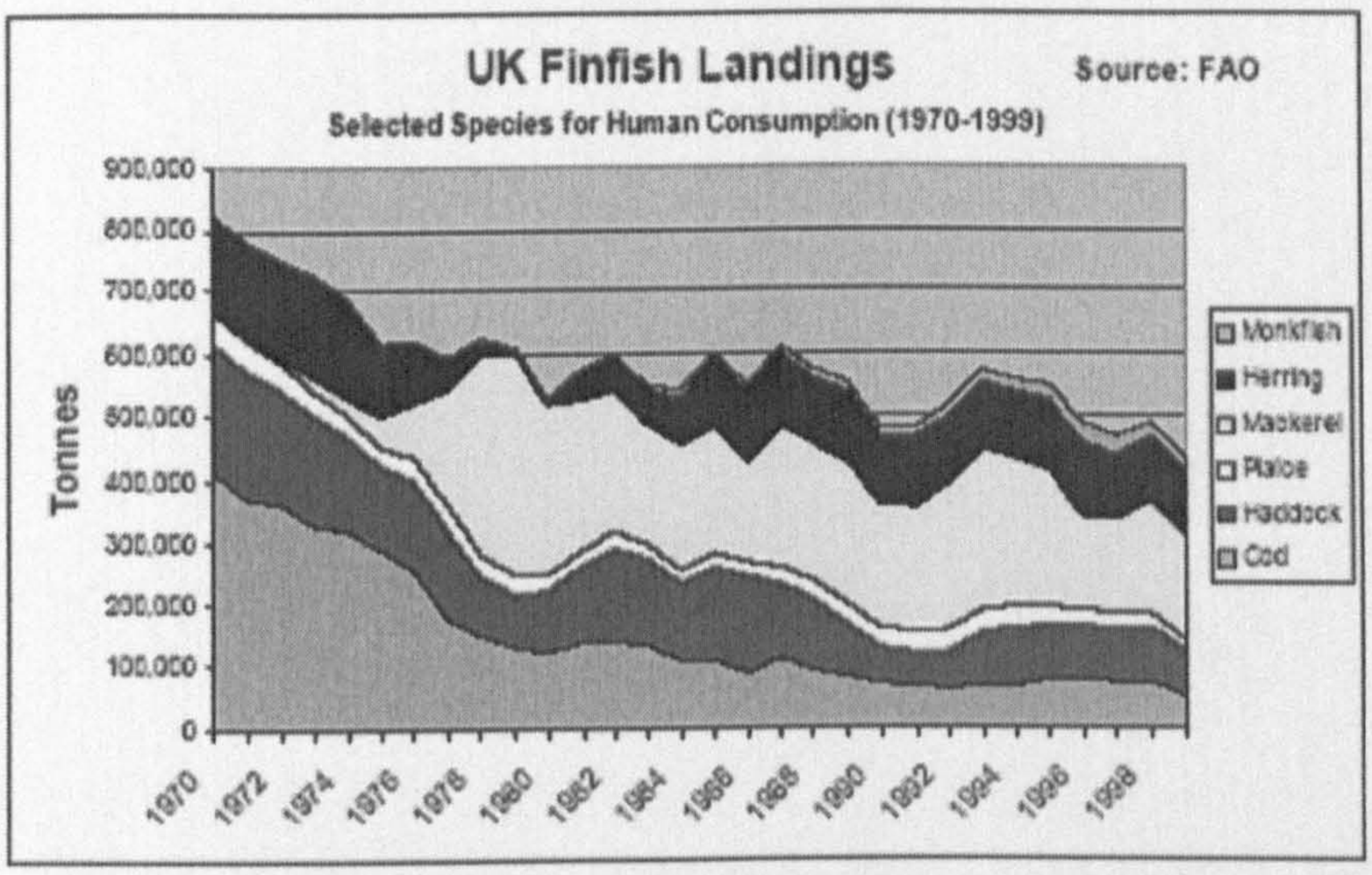
week, 2004). All these factors have led to a re-think of the whole food and drink cluster strategy for Scotland, in which the fish and salmon industries are an integral part.

4.5 The Salmon Farming Industry in Scotland

The UK fish and aquaculture sectors have had significant structural recent changes (Mac Dubhghaill, 2001; Seafish, 2004). For example, until the year 2000, the UK substantial fish processing industry of around 550 businesses, which employed more than 22,000 people, went into crisis losing 300 workers only in the North-East of Scotland. Consequently, it is expected that the processing industry in the UK will consist of fewer, larger companies. The ones who survived will be those, who are committed and able to carry out continuing investment in plant, processes and people, adding value, developing new products and competing in an increasingly globalised market. At the same time, they will be those which can adapt quickly to changes in the market and, in particular, to changes in the supply of fish (MacDubhghaill, 2001).

According to Fish Industry (2003), the total export of seafood products in the UK in 2001 amounted to 321,045 tonnes, an increase of 4.5% compared to the previous year. However, the UK market has become, and will become increasingly reliant on imports to satisfy increasing local demand. For example, import volumes have increased by 31% from 1991 to 2002 (Seafish, 2004)

Graph 4.2: UK Finfish Landing

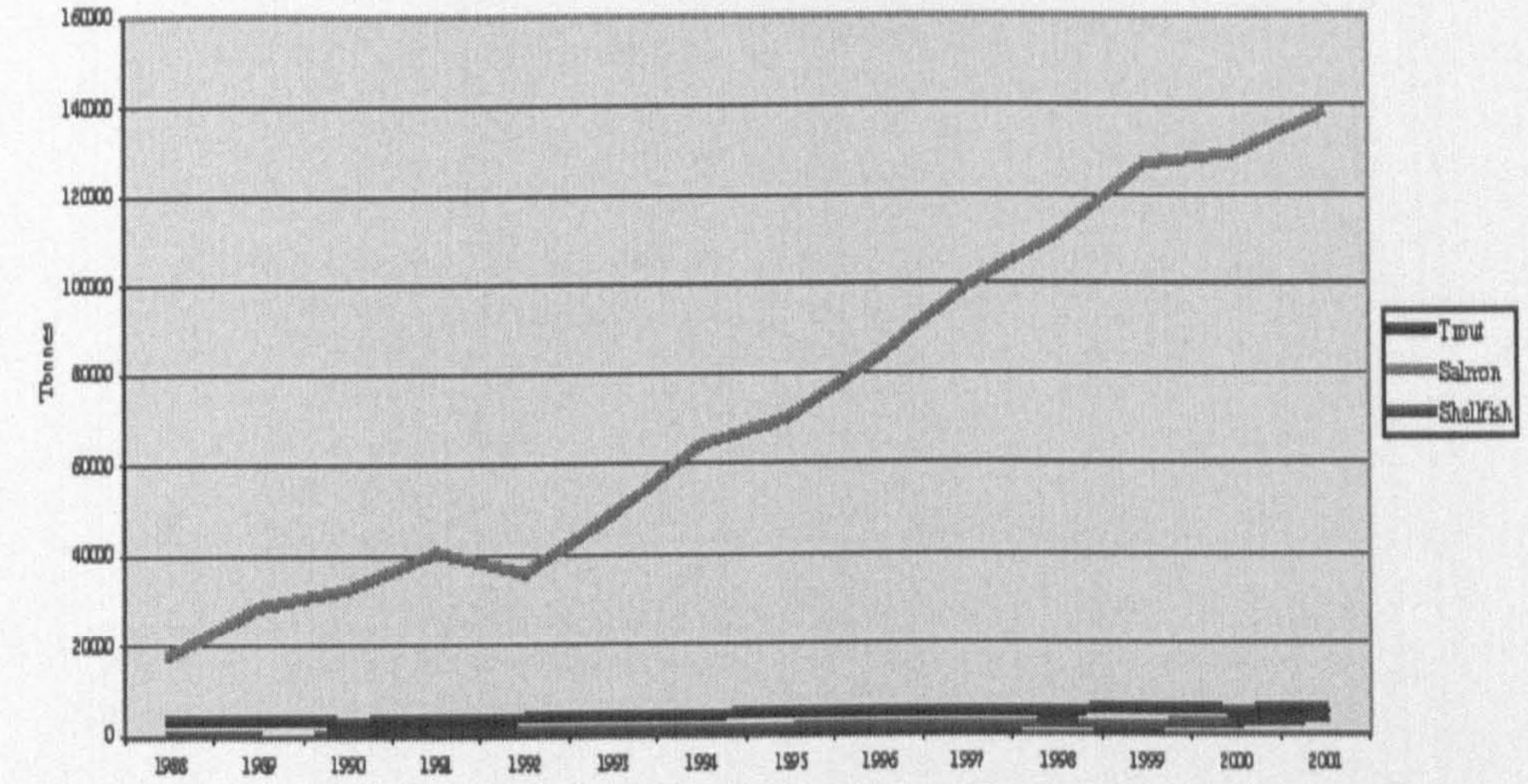


Source: FAO, 2004

The FAO analysis above shows that UK landings of 6 key species of finfish are down by almost 50% since 1970. However, consumption of seafood is still high, being second only to poultry, in terms of protein eaten at home, with four out of five households in the UK consuming seafood at least once a month (Seafish, 2004). Accordingly, farmed salmon and trout now have 25% value of all retail sales of chilled and frozen seafood in the UK (Federation of Scottish Aquaculture Producers, 2002). This analysis, apart for other wider global trends in the seafood industry, shows that in the future UK supplies of seafood will increasingly come from aquaculture.

According to DEFRA (2003) and Fisheries Research Services (2003), there are over 1,000 fish and shellfish farming businesses in the UK operating on 1,500 sites directly employing more than 3,000 people. The main fish species farmed are salmon (139,000 tonnes mainly in Scotland) and rainbow trout (16,000 tonnes) (see graph 4.3). There is also limited production of other species, such as carp and brown trout, shellfish and new species of aquaculture such as turbot, halibut, cod and arctic char, which have produced encouraging results.

Graph 4.3: Production of farmed fish, Scotland, 1988 to 2001



Source:FRS

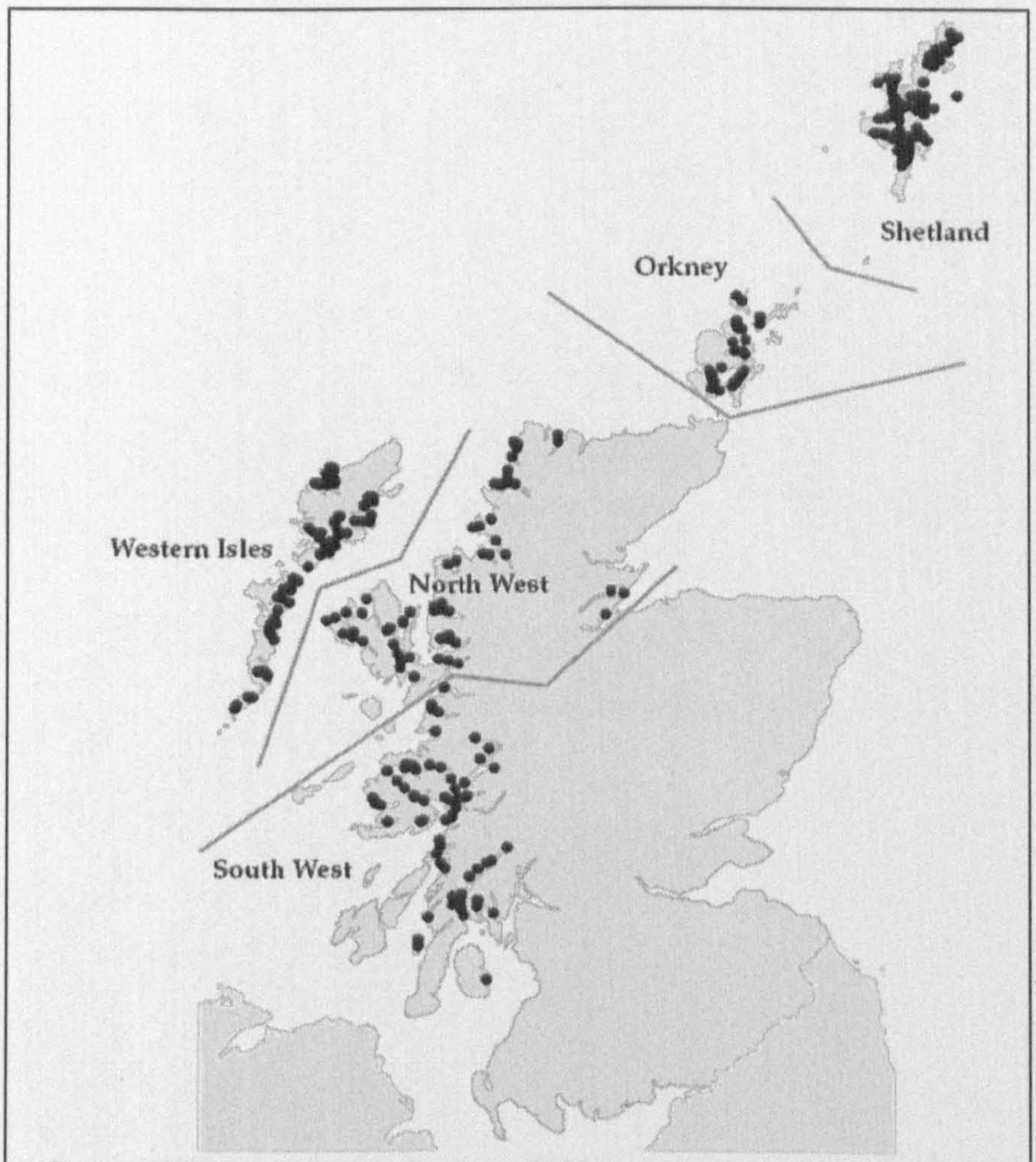
Apart from the supply trends, consumers are also becoming more aware of the need for seafood in the diet obtains 'omega-3' oils (Seafish, 2004). Moreover, the Food Standard Agency has recommended to final consumers the consumption of more oil-rich fish, such as herring, mackerel, sardines and salmon (Seafish, 2004; Scottish Quality Salmon, 2004). Also new aquaculture products are increasingly becoming more appealing and trendy for the younger generations worldwide (Intrafish, 2004c; Overton, 2003). This includes the ready-to-eat fish products found today in British supermarkets chains, where in some cases, the appearance of the fish is more influential than its taste, when the consumer is deciding what to buy (IntraFish Industry Report, 2003; Price, 2004).

According to Fisheries Research Services (2003) and Scottish Executive (2004), between the years 1987 and 2002, the output growth in farmed salmon production growth averaged 21% per annum, but the general trend has been for the rate to slow over time. Between 1987 and 1994 it averaged 33% pa, reducing to 15% pa between 1995 and 1999 and again to 5% per annum between 2000 and 2002. Furthermore, such trends are typical of a new industry that expands from a small base and then moves into a more mature stage of development. This implies changes in the industry structure from SMEs dominated to a higher concentration of ownership, larger companies and a wider presence of subsidiaries of multinational companies.

4.5.1 Geographical Territory and Local Economic Development

Fish farming is one of the most important industries in the coastal regions of Scotland, employing thousands of people in some of the most remote and economically vulnerable parts of Scotland (see figure 4.3). Most of the sites are located on the west coast (including Western Isles), producing 67% of the harvest and the remaining 33% is produced on the Orkney and Shetland Islands (Bjørndal and Knapp, 2003).

Figure 4.3: Geographical distribution of the salmon farming industry in Scotland



Source: Fisheries Research Services, 2000

The salmon farming industry has experienced substantial expansion in the past two decades, and has become an important contributor to job creation and local economic development in the remote parts of the country (Stirling Aquaculture, 1998). The industry accounts for 40% of Scottish food exports, valued at around £300 million, exporting more farmed salmon than beef and lamb combined in the highlands (Scotland on Sunday, 2002; SQS News, 2002; Shaw and Tait, 2002). However, the competition in this industry has also intensified, particularly with the biggest producers and direct competitors: Norway and Chile (Financial Times, 2003). Indeed, new pressures on production costs, environmental standards and new local and international marketing strategies, are the challenges the industry needs to deal with, especially after salmon farms have been widely and heavily criticized for their ecological effects (see Hites, *et al.*, 2004).

Table 4.9: Comparative estimated costs of Kilo of Farmed Salmon: Chile and Scotland

	Feed costs	Labour costs	Machinery depreciation costs	Other costs*	Total cost of production per Kilo
Chile	57p	14p	5p	17p	93p**
Scotland	74p	25p	13p	46p	£1.58

*Includes purchasing of *smolts*
** 60 to 70p of freight costs to the main international markets must be added
Source: Author, based on Overton (2003) estimations

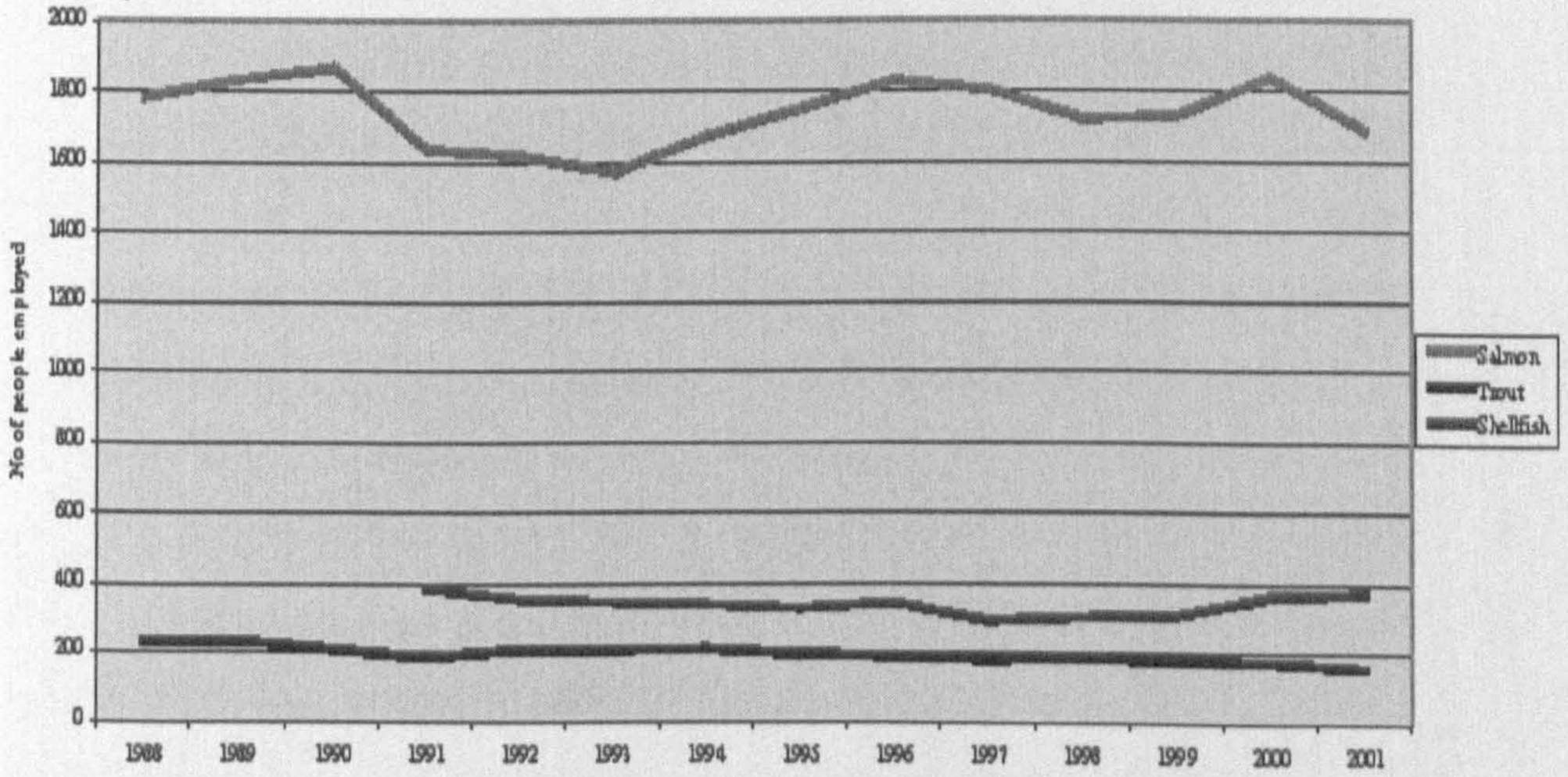
Table 4.9 shows the importance for the Scottish industry to take in to consideration the comparative cost of production of their main competitors. Scotland's aquaculture industry must pay attention to how its strategy will impact on the cost of production (Overton, 2003).

There is no doubt that the salmon farming industry in Scotland makes a very important contribution to the Scottish economy being, together with the whisky industry sector, one of the most important economic development in the Highlands and Islands for the past 30 years, employing directly and indirectly over 6,500 people (see graph 4.4), 70%

of whom live in remote rural areas and inject about £2 million every week into rural communities as wages (Stirling Aquaculture, 1998; Scottish Salmon Development Project, 2003; Scottish Executive, 2004). A high proportion of these jobs are created directly in salmon farming and processing plants, having skilled management and semi-skilled jobs. This means that the Scottish salmon industry has firstly a key role in the local economic development of rural and remote Scottish areas, where alternative job opportunities tend to be limited, and secondly in the future of the Scottish economy.

The previous facts are important in highlighting the economic implications of the industry. However, a more critical analysis in the recent trends of the sector may suggest that there is also a downturn in skills levels within the industry as it expands and transnational companies dominate. This impact has also been felt in the loss of embedded local SMEs, which contribute directly to the people of remote areas of Scotland. These trends will influence the future changes and structural adjustments of the salmon farming industry, not only in Scotland, but also in countries like Chile, where foreign direct investment is growing in this sector.

Graph 4.4: Farmed fish and shellfish direct labour, Scotland, 1988 to 2001



Source: FRS Annual Production Survey (2002)

4.5.2 Structure and competition in the industry

Compared to Alaska, Faroe Isles or Chile, among others, Scotland and Norway are the only producers of farm salmon which is not distant from its main markets (Overton, 2003). This geographic distance to the market has different implications for producers according to their product specialisation. For example, distance has a different economic and commercial implication for fresh and frozen salmon, where the latter can be transported for longer until it reaches its final market. This issue also impacts the Scottish salmon industry, which has an important and strong local market, compared to producers in Chile.

The Scottish salmon industry underwent a radical transformation in January 2000, in response to the changing industrial structure. The organisation that emerged was Scottish Quality Salmon (SQS), a Trade Association that represents nearly 60% of the industry (Bjørndal and Knapp, 2003). The main objective of SQS is to certify and guarantee specific quality standards for its associates. This strategy is communicated via the 'Tartan Quality Mark' for the local UK market, and the 'Label Rouge' for the French market (see table 4.10). Apart from that, SQS certifies the quality of its associate producers through blind tasting carried out by Queen Margaret's University College in Edinburgh (Scottish Quality Salmon, 2004).

Table 4.10 shows that the local UK market still remains an important growing market for Scottish Salmon. Consequently, continuous improvement in the local market and collaborative generic marketing strategies through the 'Tartan Quality Mark', are the only alternatives to maintaining a long-term the market position and growth for these products in the UK. On the other hand, 'Label Rouge' offers a good growth potential in the French market, which must be increased in the near future with the use of a coherent international marketing strategy.

Table 4.10: Scottish sales with 'Label Rouge' label

Scottish Sales Outlets - Estimated Sales 2002, 2003 Total Volume and Label Rouge				
Sales Organisations *In Round Weight*	**Estimate 2002 Volume**	**Estimate 2002 Label Rouge**	**Estimate 2003 Volume**	**Estimate 2003 Label Rouge**
Marine Harvest	36.000	2.500	36.000	2.500
Scottish Sea Farms	24.000	1.500	25.000	1.800
Panfish Sales UK	11.000	500	15.000	500
Hjeltland	12.000		15.000	
Sea Products of Scotland	6.500	200	9.000	300
Scotia Marine	4.000		3.000	
Hebrides Harvest	2.000	300	1.500	300
Salmon Management Company	3.800	600	3.200	600
Salmac	12.000		15.000	
Salwell Sales	5.000		5.000	
Loch Duart	1.500	1.000	1.500	1.000
Allan and Dey	3.500	200	3.000	200
Scotfish Supplies	5.000		5.000	
Wester Ross Salmon	1.500	100	1.500	100
Framgord	3.000		4.000	
Stolt Seafarm	7.000		8.000	
WISCO	6.000		6.000	
Aquascot	8.500		11000	
Others	5.000		5.000	
Totals	**157.300**	**6.900**	**172.700**	**7.300**

Source: Rackham, 2002

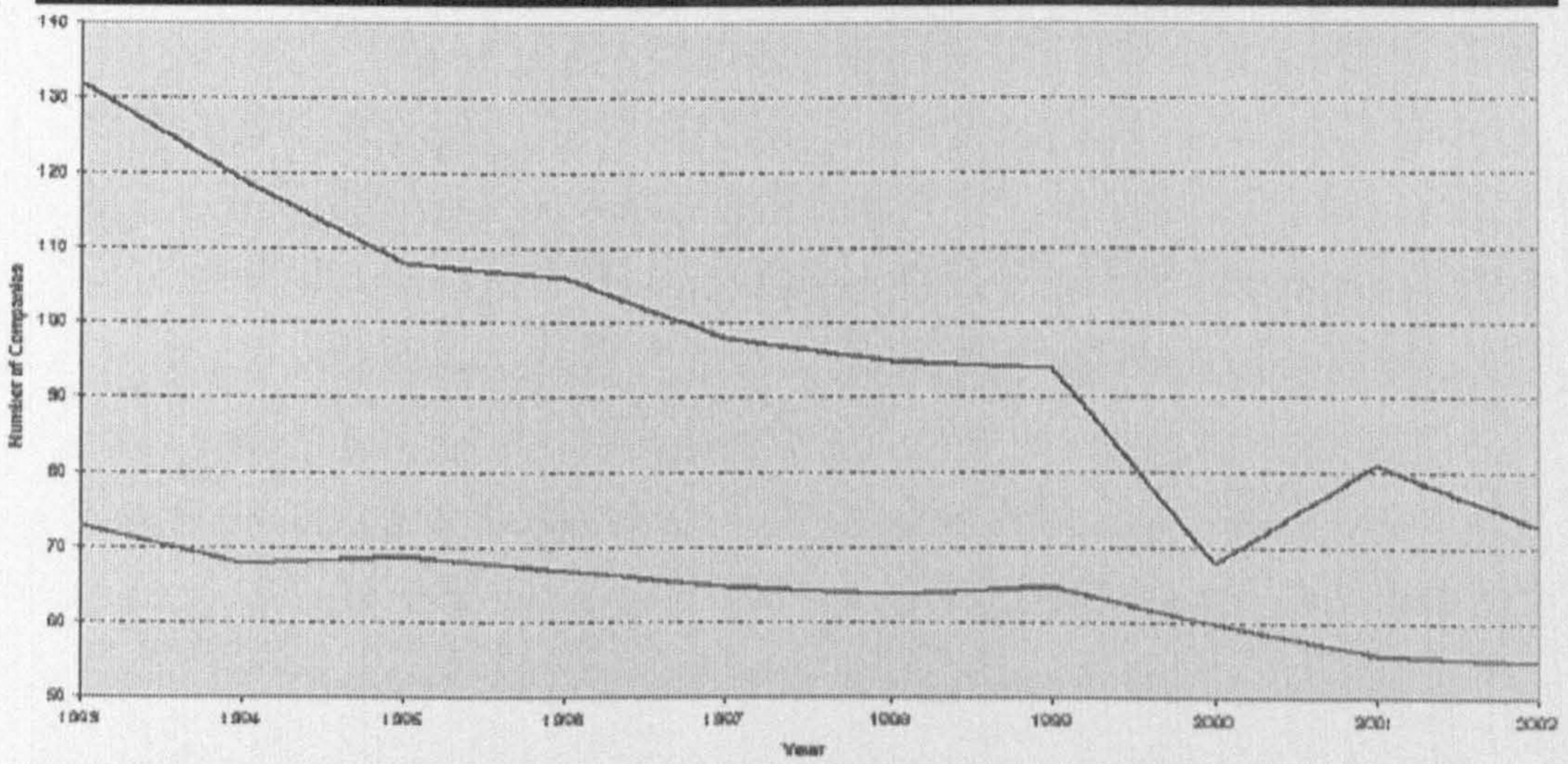
The commercial development of the Scottish industry are also complemented with the growing demands of organic products and the use of information and communication technologies for selling products from anywhere globally, which gives opportunities for small and niche oriented companies. Alternatively, large companies have the advantages of operating with better economies of scale, creating competitive advantages for cost focused products. These different strategies give space for more competition among

companies. Thereafter, it is expected better care for improvements in the company's ´traceability´ process (IntraFish Industry Report, 2004) as well as in their commercial strategies for differentiated markets.

4.5.2.1 Salmon producers

The industry structure is highly concentrated with 15 companies accounting for 70% of the total production[14] (see table 4.11). The main reason for concentration is increased merger and acquisition activity driven by pressure to reduce costs and strengthen the market position of individual firms. This has led, in the last few years, to a reduction of 45 per cent in the number of salmon producing companies and 25 per cent in the case of smolt producers (see graph 4.5). The concentration of companies, however, corresponds to an international tendency of this industry for vertical integration across all the processes in the value chain activities (Stirling Aquaculture, 1998; Scottish Executive, 2004).

Graph 4.5: Number of Active Salmon and Smolt Producing Companies



Source: FRS Annual Production Survey (2002)

[14] In 1997 there were 113 salmon farmers in the industry and over 60 *smolt* producers. In contrast, in 2001 there were 81 active companies engaged in production of salmon

Table 4.11: Main Characteristics and Prospects for Different Status Groups In Scotland

Status	Characteristics	Companies	Prospects
Large Integrated	• Large integrated operations selling in excess of 10,000 tonnes • All are foreign owned - mainly Norwegian • No local ownership • Production driven • Sales outside the UK are increasingly being sold by market based offices of from Norway • Access to market intelligence • Account for 54% of the total estimated volume sale	• Marine Harvest Scotland • Scottish Sea Farms • Stolt Sea Farm • Panfish/Lighthouse • Hjaltland	• Will continue to dominate and be the drivers of rationalisation • Profits will be hard to achieve - have to compete in the commodity sector against Norway and Chile
Small Integrated	• Integrated with a small production base • Locally owned businesses • Sell a single product - whole farmed salmon • More market focused than large integrated but not differentiated • Markets are the major processors • No attempt to differentiate from the large producers • Majority of sales in the UK • Account for 5% of the total estimated sales volume	• Salmon Management Company • Scotfish Supplies	• Small, non differentiated operations competing directly with the main producers • Will have to merge, or sell to, a major producer or switch to becoming a Niche Integrated sales organisation • Scottish fish Supplies have a unique position - trading in Orkney salmon with a "strong" owner
Traders	• Margin and volume focused • Mainly local businesses • Owner operators • Do usually have a wider range than just farmed salmon • Profitable • About 60% of sales in the UK • Account for about 26% of the total estimated sale	• Sea Products of Scotland • Scotia Marine • Salmac • Salwell • Allan and Dey • Others	• Will continue to be squeezed as production becomes more rationalised • Unable to meet the increasing demands of the main buyers - integration essential
Niche Integrated	• Market focused • Own small production operations • Local businesses • Differentiated - fish grow "differently", further processed products, sustainable, organic salmon • Product diversification • High profile operators - focus on projecting brand awareness • Use regional branding • High cost but high prices	• Loch Duart • Wester Ross • Hebrides Harvest	• Will survive but can't get much bigger • Always a market for specialist food products • Have opportunity to further differentiate from the main players as main producers develop further away from "quality" position

	• Strong supporters of SQS • Strong supporters of Label Rouge • Profitable • Account for 4% of the total estimated volume sale		• Need a trade association and some element of common marketing
Fully Integrated	• Market focused • Foreign owned • Innovative • Use regional branding • Majority of product processed into consumer products • Profitable • Account for 9% of the total estimated sale	• Aquascot • WISCO Processing	• Both operators are part of larger operations and will survive - unless Fjord or Cermaq fail • New species development is a long-term investment and risky

Source: Adapted from Rackham, 2002

Large conglomerates and foreign ownership are also common characteristics of this industry, accounting for some 47% of salmon output in 1996 and by 85% in 2002 (Rackham, 2002). Furthermore, there has been a trend towards partnerships and collaborative arrangements among firms (Highlands and Islands Enterprises, 1999).

Past studies (Stirling Aquaculture, 1998) commissioned by the Highlands and Islands Enterprise Board, concluded that the main competitive threats are likely to come from larger producers with 200 or more employees, which are mainly multinational companies[15]: 'Marine Harvest', 'Aquascot', 'Panfish/Lighthouse', and 'SSF'. At the same time, as described previously in table 4.9, the cost structure of the industry is perceived as highly sensitive with feed and fish food accounting by 37% of the total farmers' costs, followed by staff costs at 14%.

Apart from the above characteristics of the industry, the rapid technical progress has required heavy spending on Research & Development (R&D) work and investment in plant & equipment. Consequently, the capital requirements have steadily increased. This has given rise to economies of scale with larger companies being best placed to

[15] Mainly with some participation of Norwegian capitals

undertake the R&D and investment in new technology (Scottish Executive, 2004). In addition, larger companies have the ability and better capabilities to negotiate longer term contracts with main large retails buyers, giving them more stable prices and less reliance on the spot market (Highlands and Islands Enterprises, 1999; Scottish Executive, 2004).

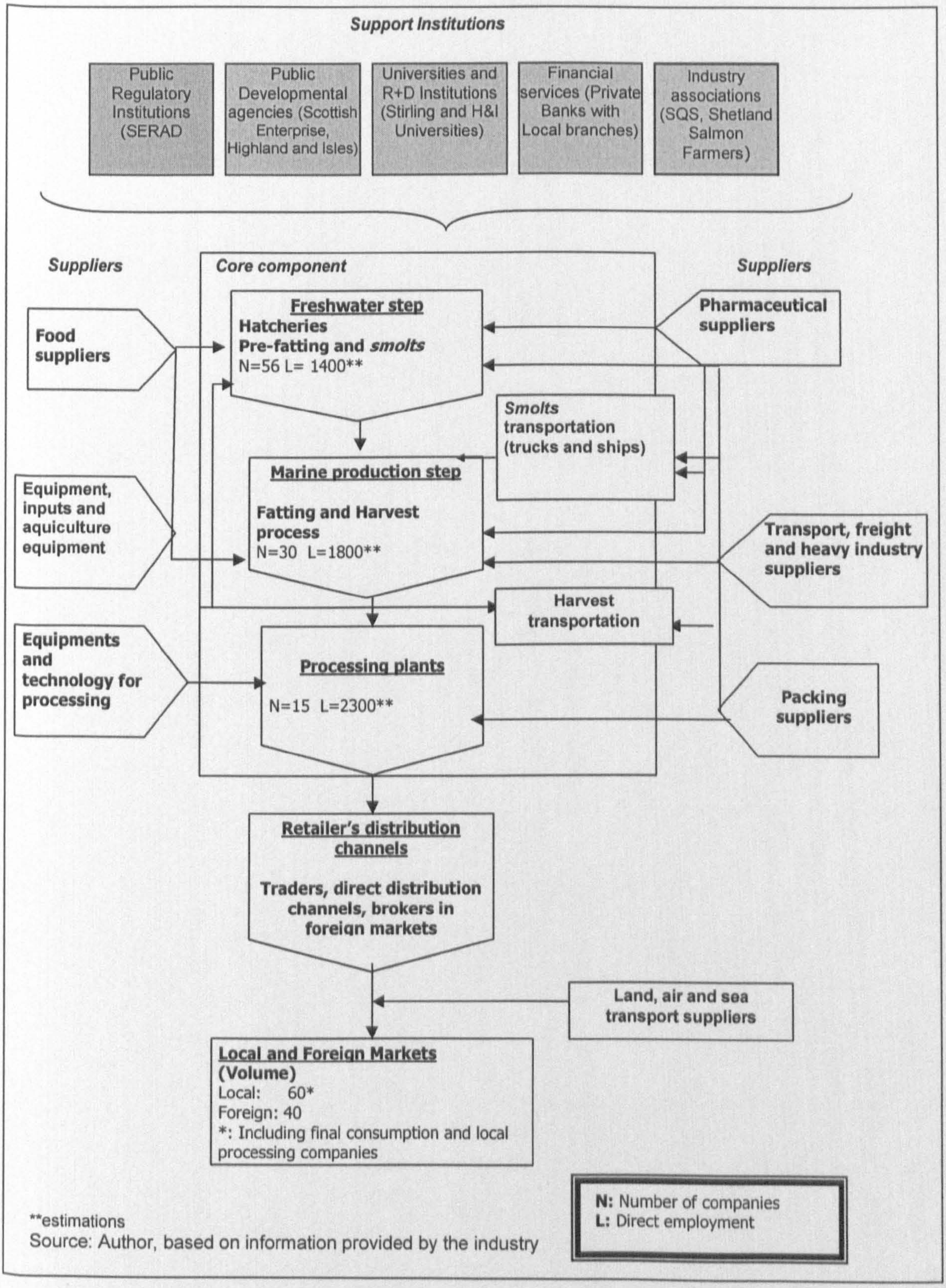
The increase in economies of scale has also allowed larger companies to gain market share at the expense of smaller ones, with the result being that while production has grown the number of companies has declined as the industry has consolidated. As a result of this, there has been a reduction of 45% in the number of salmon producing companies and of 25% in the case of smolt producers (Scottish Executive, 2004). As a consequence, production is now concentrated in larger and fewer firms, operating relatively bigger farms than before.

4.5.2.2 The role of suppliers

Many of the specialist companies supplying the salmon sector are classified as small to medium sized enterprises (SMEs). The largest companies are mainly four feed suppliers owned by non-Scottish companies. At the same time, vertical integration is relatively limited in the supply sector. Moreover, most of the research and technical developments of the supply side come from Norway (Stirling Aquaculture, 1998).

Among the main direct suppliers of the industry is possible to find: Pharmaceutical companies; Transport, Freight and Heavy industry; Packaging and Feeding specialised corporations (see Figure 4.4).

Figure 4.4: Salmon Farming Value Chain (Scotland)



4.5.3 Marketing and sales distribution

Scotland is the only major producer of farmed salmon with a large domestic market. Nevertheless, exports are also considerable and represent for 50% of the output, going to France, Belgium, Switzerland, Germany, Spain, USA and Japan, among others (Bjørndal and Knapp, 2003). According to Stirling Aquaculture (1998) and Grocer (2002), most of the farmers participate in a marketing programme. However, individual firms, and especially the largest, make their own sales and distribution arrangements. Others farmers either sell directly to a small number of processors, or use the services of an agent. Furthermore, there are three co-operatives that both sell and process salmon, and around three independent selling agents in Scotland.

The transportation structure includes ferry services from the Islands, which transport 40% of the Scottish salmon production. Furthermore, about 26 companies are involved in road distribution, carrying products to distribution centres located in Aberdeen, Inverness and Bellshill. On the other hand, intermediate buyers of salmon include processors, wholesalers, traders, caterers and retailers. About 8 food-retailing chains, which stock salmon or salmon products, account for 65% of retails sales (Fish Farming International, 2003). Others minor players in this point of the value chain includes independent fishmongers, markets stalls and other retail outlets (Ewos, 2003).

At Trade Association levels, there are some joint efforts, which started in May 2001 under the 'Scottish Salmon Development Project 2001-2004'. Here, 'Scottish Quality Salmon', 'Shetland Salmon farmers' association', 'Highland and Isles Enterprise' and the 'Crown Estate' work together to help and secure the future of the industry in remote rural areas, enhance product quality, expand existing and new markets and develop value added value salmon based products (Scottish Salmon Development Project, 2003). Apart from these efforts, the industry works in close partnership with different stakeholders, including: 'Food Standards Agency'; 'Local Authorities'; 'Scottish

Environmental Protection Agency' and 'Scottish Executive Environment and Rural Affairs Departments', among many others.

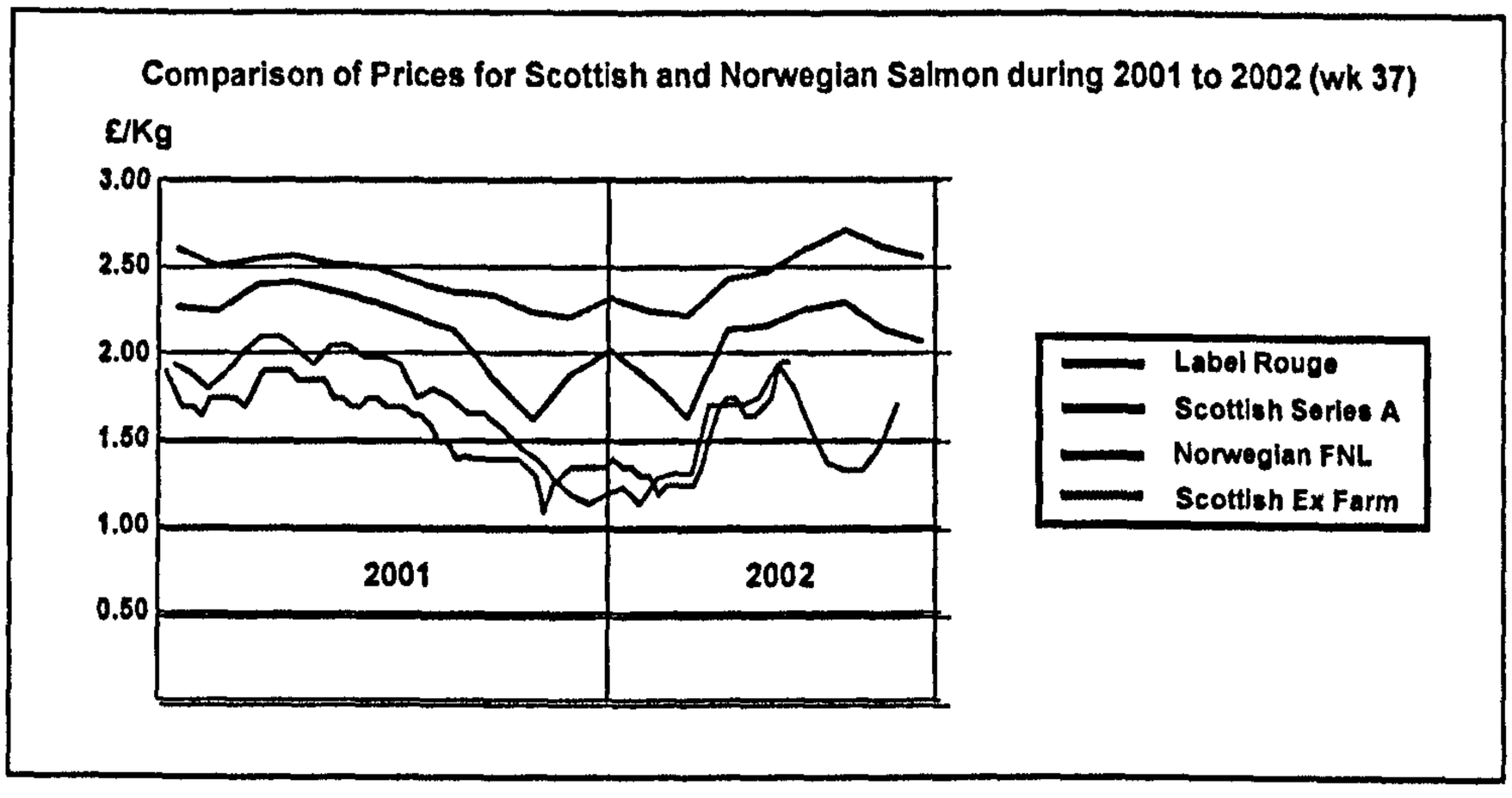
Scottish producers are largely price-takers due to the fierce international competition from Norway and Chile. However, price is not perceived by farmers to be as important as quality of products for both fresh and processed salmon (Stirling Aquaculture, 1998). Scottish producers have increasingly oriented themselves to an emphasis upon quality, rather than high volume with a lower price (Bjørndal and Knapp, 2003).

It is worth mentioning the efforts to promote 'Scottish salmon' as a brand, with a superior quality image that seem to be effective, giving additional reassurance to most customers (Rackham, 2002). For this marketing strategy, the use of the 'Tartan Quality mark' on packaging and the 'Label Rouge' label for the French market have been important distinctive element of differentiation, achieving premium prices by 25% (see graph 4.6). Furthermore, only salmon producers under the strict standards of the 'Product Certification Schemes' can display the 'Tartan Quality Mark' in the UK. At the same time, other unique characteristics of 'Scottish Quality Salmon' abroad, is that it has been the first non-French product to achieve the accreditation of 'Label Rouge', which demonstrates a unique support by the French authorities and consumers (SQS, 2003, 2004).

According to SQS (2003), for smoked products, the process is to some extent set by Danish processors. However, there is more opportunity for product differentiation. Levels of competition ensure that price and quality remains important factors in the marketing mix (Bradner, 2003). Furthermore, generic promotion of the product represents the majority of marketing activity within the industry, and high promotion of retail packs of salmon are sold as 'own-label' brands of the multiple retailers (IntraFish Industry Report, 2003; IntraFish, 2004c). Here, the role of supermarket, their brand image and attempts to differentiate within the common store brand adding, for example,

'Tesco finest', 'Tesco value', etc. are important marketing issues that affect and may be expected to continue to affect marketing activities of this buyer-driven industry.

Graph 4.6: Price trends 'Label Rouge' vs. others



Source: Adapted from Rackham, 2002

The Scottish salmon farmers had a particular difficult year during the first semester of 2004 in terms of contradictory public relations and media press caused by a negative report published by the US journal *Science* (see Hites, et *al.*, 2004), which suggested health concerns in consuming farmed salmon and particularly Scottish farmed salmon. The industry reacted by launching in July a marketing and media campaign with the aim of reassuring customers about the welfare of farmed salmon and its real effects in the environment (Marketing Week, 2004). This may have represented a good opportunity for creating instances of inter-firm collaboration among companies, trade association and the Scottish Executive, among others.

Apart from all the previous marketing trends of the Scottish industry, large and mainly multinational corporations are looking forward to have more collaboration among them (Rackham, 2002). Accordingly, during 2004 they have started working for free market

access through a new organisation called 'Salmon of Europe[16]', its main objective being to improve the flows of information among all EU companies engaged in production, sales and processing in the aquaculture business (IntraFish, 2004b). This means, in an industry which has become increasingly internationalised, co-operative strategies among 'similar' and 'close proximity', producing countries will be the trend for the future survival and sustainability of this business sector.

4.5.4 The cluster strategy in the Scottish salmon industry

As stated previously, the salmon farming industry in Scotland is an integral part of the Scottish food and drink industry, which makes an important contribution to the whole economy currently facing many challenges in an increasingly competitive marketplace. Furthermore, this sector has also been criticised for lack of innovation, in the face of changing demand preferences (Shaw and Tait, 2002). Thereafter, the Scottish Executive benchmarked the competitive position and performance of this industry with countries that have similar land area and agriculture exports, such us New Zealand and Denmark. It concluded that among the main weaknesses are the low levels of co-operation and collaboration, which if present would strengthen the value chain and offset the problems of small size in increasing national and international markets (Scottish Enterprise, 2003).

Although the aims and long-term vision of the strategic framework for Scottish aquaculture seems to be positive for the development of the industry, they need to be seen with a critical and more sceptical perspective, as the final success of the industry will depend in micro, at company levels, and macro factors (economical factors), and not only in a governmental led project. Nonetheless, it is important that public policy supports a more coherent cluster and well defined cluster strategy for the sector.

[16] The Americas have established SOTA: Salmon of the Americas, which includes Chile, Canada and the United States

4.5.4.1 Strategic Framework for Scottish Aquaculture

According to the previous weaknesses of this economic sector, the Scottish Executive launched in March 2003 the *Strategic Framework for Scottish Aquaculture.* This provides a long-term balanced framework which will allow sustainable development of the industry through a targeted series of economic and environmental actions (Scottish Executive, 2004). According to The Scottish Executive (2003, p. 3) "aquaculture should be enabled to make a positive contribution to the Scottish economy through being internationally competitive in the marketplace and economically viable at national level."

Apart from the above strategies, Scottish Enterprise, the developmental agency for Scotland, has stated certain goals for the cluster strategy to be achieved by 2010 (Aquaculture news, 2003). Among them: (1) To have a clear integrated role for all the participant sectors with a new commercial and entrepreneurial focus; (2) Upgrading institutions, having an innovative approach and positive effect in the supply chain management; (3) New and powerful relationships with both existing as well as new customers and consumers, both in the UK and overseas; and (4) Strengthening of networks, link and communications as an integral part of the cluster strategy.

Figure 4.5: The Industry vision for 2010:

- Scottish Aquaculture being positioned nationally and internationally as a commercially competitive core industry (alongside whisky) delivering products reputed for their quality and sustainability
- Employment increasing from 7000 to 9000, permanent and skilled
- Ex-farm sales value increasing from £310m to £510m per annum
- 5 Start-up companies per annum
- Species diversification increasing from 5% to 15%
- £10m of technology transfer pa
- £25m of inward investment pa
- 100% commitment to sustainability, collaboration and partnership as well as social commitment to training and local communities

Source: Adapted from the Federation of Scottish Aquaculture Producers (2002)

The success of the Scottish new aquaculture strategy will depend, *inter alia,* in the understanding of the issues of global competitiveness in the industry, species diversification and new product development, as well as recognising the importance of healthy commercial environment. Therefore, these issues cannot be achieved only with a 'top-down' approach, but also with the entrepreneurial effort of every local-embedded company that participate of this cluster strategy in every regional territory.

4.5.4.2 A unique 'top-down' cluster approach

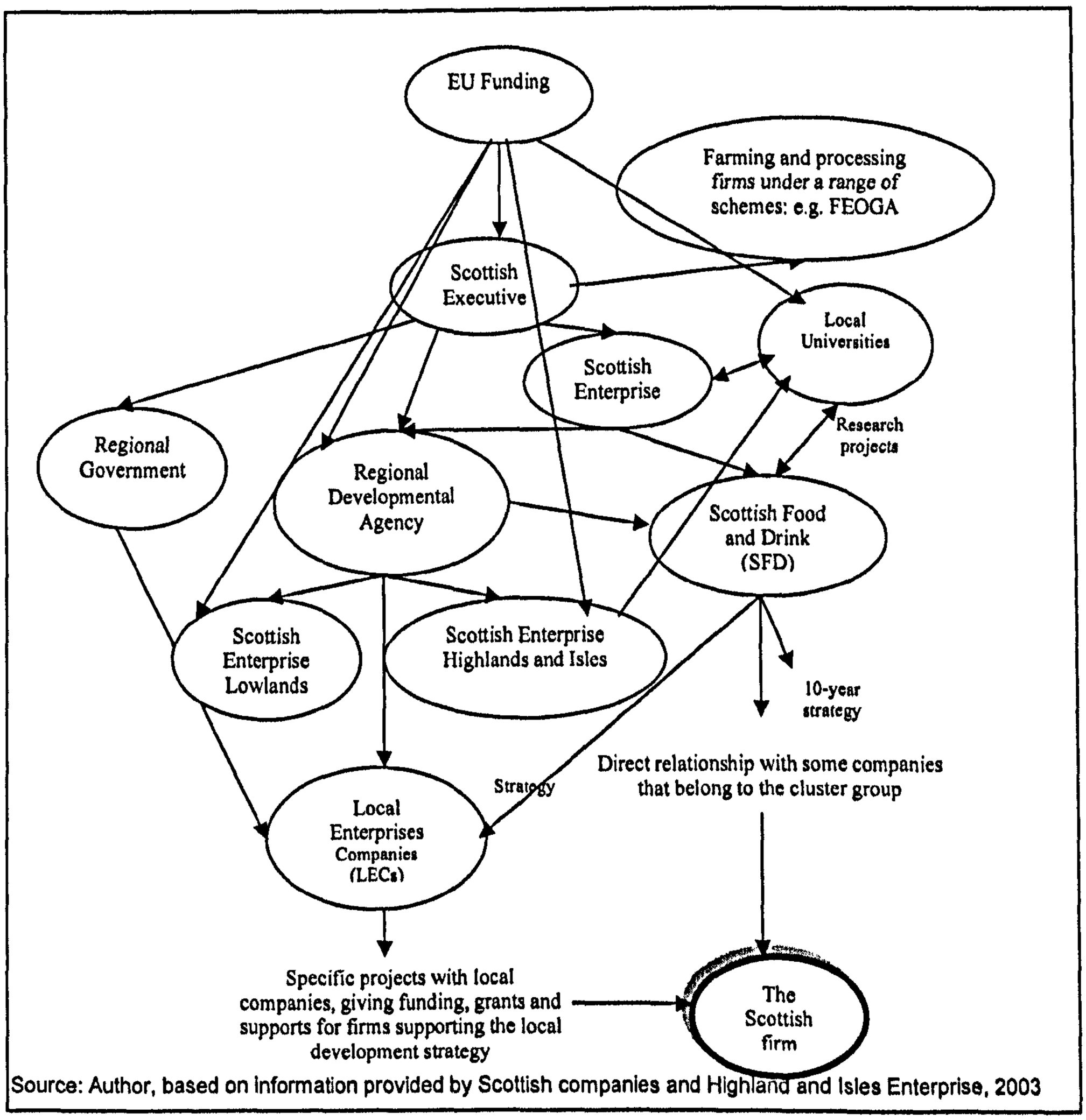
Unlike the Chilean Salmon Industry with a 'bottom-up' cluster approach, the Scottish Industry is part of the 'Food and Drink Cluster' which, at the same time, is a component of the global cluster strategy developed by the Scottish Executive and the Developmental Agency for Scotland: Scottish Enterprise. At public policy levels, there is a strong commitment and clear strategy for the development of this sector by 2010. It is intended, to create an integrated role of agriculture (including aquaculture) in the cluster strategy, having a new commercial and entrepreneurial focus for this sector. Apart from that, the innovative processes, upgrading institutions and new technology throughout the cluster should be effectively coordinated in all areas of supply chain management. Then, new and more powerful relationships with both existing and new customers, both in the UK and overseas must be achieved (Scottish Enterprise, 2003).

The previous issues are important, however, the question that still remains is: to what extend can the current and future structure of the Scottish salmon sector be attributed to the cluster strategy? To answer this question, companies, researchers and the public policy sector need to remember that the cluster strategy for this sector only began in 1999. This is over 25 years after the emergence of salmon farming in Scotland. Thus, it seems that there is a danger for all the mentioned sectors that too much blame will be lay at the cluster strategy. This may have negative implications for the creation of a more entrepreneurial spirit for new venture creation and restrict the capacity of problem-

solving at company levels, issues that as discussed before in the Chilean industry with its bottom-up approach has learned to deal with.

Figure 4.6 shows that there are many regional projects and grants to support companies that contribute to the local economic and social development of remote-rural areas of Scotland. 'Local Enterprises' are the public bodies which have direct communication and support to local companies located in specific local authorities of Scotland. However, although there is funding and grants to support local firms, there seems to be no specific funding to encourage inter-firm co-operation in marketing activities.

Figure 4.6: Public policy in the salmon farming cluster strategy



Source: Author, based on information provided by Scottish companies and Highland and Isles Enterprise, 2003

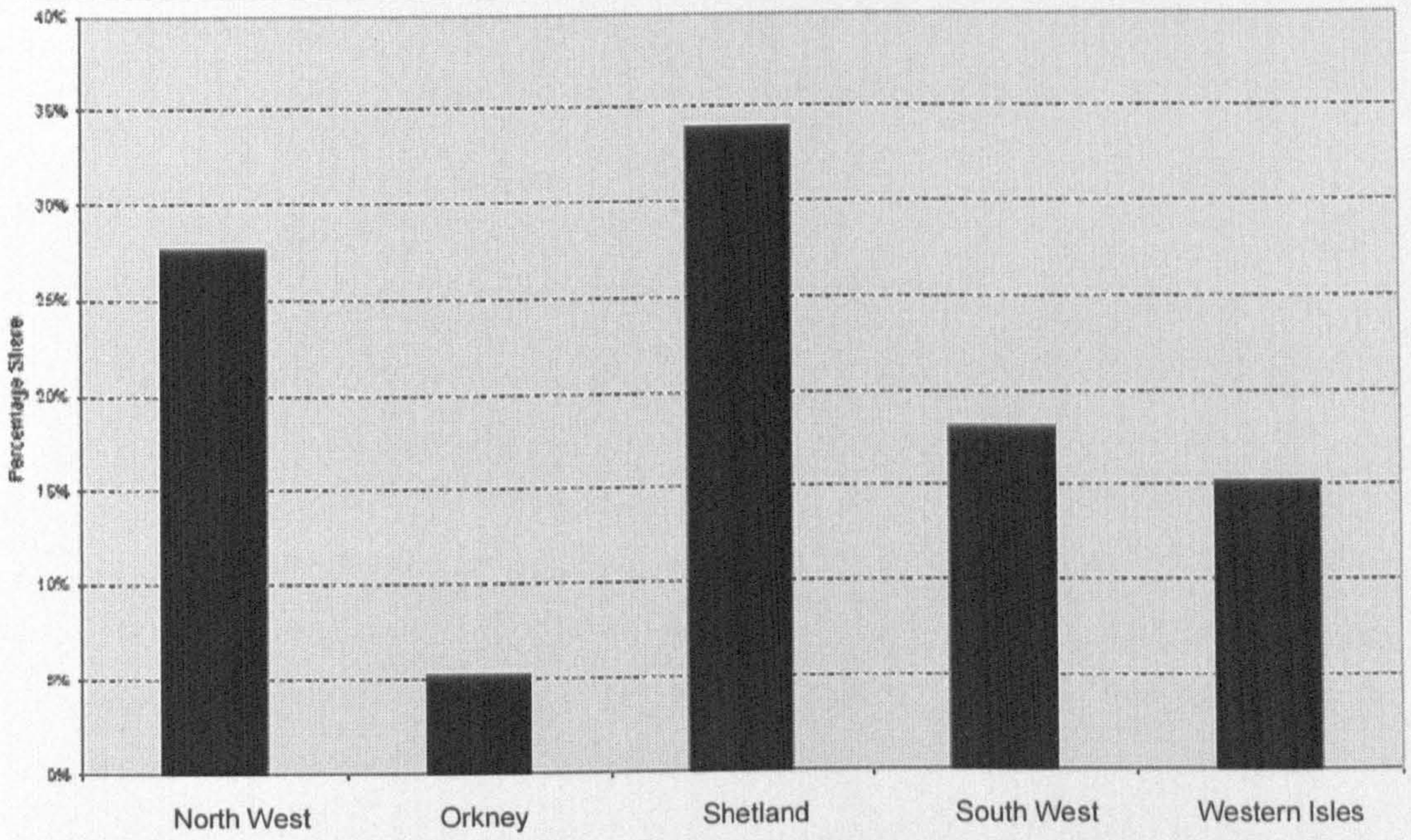
4.5.5 Shetland: The case of a remote cluster

Shetland is one of the communities most heavily dependent on fishing within Europe. The islands have a long tradition of fishing and fish processing and, within the last 15 years, have developed an impressive aquaculture industry largely based on farming Atlantic salmon. Shetland seafood (whether caught, farmed or processed) is worth around £170 million per year. Over 2500 people are directly and indirectly employed in the seafood industry; a figure which represents around a quarter of the workforce. Perhaps the best indication of how the seafood industry dominates the Shetland economy is the fact that over 80% of all Shetland's exports consists of fish and fish products (Goodland, 2003).

For the special characteristics of its location, particular embedded local culture, and important contribution to the Scottish salmon industry, this sub-section presents a brief example of the salmon farming industry in the remote location of Shetland.

The Shetland Islands stretch far to the north of the Scottish mainland, between Orkney and the Faroes. The islands' capital, Lerwick, is closer to Bergen in Norway than it is to Edinburgh. During 2002, Shetland produced 45,000 tonnes of Atlantic salmon – almost a third of Scotland's total (Infrafish, 2003c). Furthermore, taking into consideration the regional distribution of farmed salmon production, Shetland is considered the most important salmon growing region in Scotland and has been the largest producer since 1996. It currently accounts for 34% of Scottish output followed by the northwest Highlands with 28%. By contrast Orkney only produces 5% of the output, with between 15% and 20% of output each coming from the South West region (basically Argyll & the Inner Hebrides apart from Skye) and the Western Isles (Scottish Executive, 2004).

Graph 4.7: Regional Distribution of Farmed Salmon Production 2002



Source: FRN Annual Production Survey (2002)

The salmon farming industry in Shetland is a vital part of the local economy, and it is embedded in the local community, as the major private sector employer. The industry provides 1,147 direct[17] and indirect jobs, which is more than 15% of the working population in the islands, and sales of £69 million every year (Salmon: the benefits to the Shetland, 2002; Intrafish, 2003c). At the same time, it provides economic significance for other sectors in the local economy, including transportation companies, environmental agencies, box manufactures, veterinary surgery, engineering services, ice suppliers, plant hire, private consultants and tourism, among others (Salmon: the benefits to the Shetland, 2002; Scottish Salmon Development Project, 2003)

The Shetland Salmon Farmers' Association is the representative body of this industry in this geographical region. The membership figures in 2002 comprised of 46 salmon farms

[17] Direct Jobs accounted by 389 people. A further 758 people were employed by companies with a direct association with the industry, including packing stations, sales organisations, engineering services, transportation companies, and so on.

and 6 *smolt* hatcheries, representing 100% percent of the production in Shetland (Salmon: the benefits to the Shetland, 2002). As feed companies play a key role in the value chain activities of this industry, there are three feed companies and three sales companies associated during 2002. Furthermore, the trade association strongly believes that there is more scope for adding value to the islands' salmon production and such developments must came with the right entrepreneurial spirit (IntraFish, 2003c).

Some of the interesting features of the Shetland industry are the levels of cooperative efforts. For example, it is possible to find in the Shetland Salmon Group (SSG) – a cooperative of 15 independent farms that has made great strides in production over the last few years producing about 15,000 tonnes of Atlantic Salmon during 2002 (Fish Farming International, 2003). SSG membership includes SMEs which enables them to achieve better economies of scale and coordination, thereby maintaining in-house production, control and ownership. SSG promotes and sells their products through 'Salmac Sales Ltd', and exclusive sales agent based in Aberdeen[18], which accounts for 70% of their sales in the UK market, and 30% for export markets[19]. A further important aspect of cooperation in the Shetland case is the closer synergy with the fish catching and processing sector in Shetland. For example, promoting the region of origin in foreign markets and taking advantage of economic externalities provided by close proximity. However, due to structural problems that have emerged in the industry during 2004 this cooperation has been not as strong as it used to be.

Local producers face the problems of high freight costs, compared to the companies located on the Scottish mainland. However, they are very close, compared to the Chilean producers, to the EU market – one of the biggest and important markets for farmed salmon. Furthermore, two shipping companies – Northlink and Norse Island Ferries serve the local producers of the Shetland isles, which account for 20% of their trade being the biggest singe item (Intrafish, 2003c).

[18] Salmac Sales is an small-family run company
[19] Mainly France, the USA, Spain, Germany, Switzerland, Belgium

Taking all of this into consideration and the international competition coming mainly from Norway and Chile, the Shetland salmon industry estimates that production in 2004 will drop by 19.6%. Employment has already dropped with both direct and ancillary job losses (Shetland Salmon Farmers' Association, 2004; IntraFish 2004b). For this reason, the Shetland Salmon Industry started to co-ordinate a new market-led approach, which looks to improve the quality perception of their main products in key foreign markets as well as inter-firm co-operation (IntraFish, 2004e).

In addition to a focus on markets and quality, diversification is also likely play a role in the industry's survival. "No industry is secure, particularly if it relies on one product. Therefore, the recent diversification into other species such as cod, haddock, halibut, sea trout, mussels, oysters and scallops has to be actively encouraged" (IntraFish, 2004e).

4.5.6 Summary and outlook of the Scottish Salmon Farming Industry

The Scottish Salmon Industry, now part of an increasingly competitive environment, must seek differentiation and niche strategies mainly at local and European levels. They cannot compete in mass production against Norway and Chile, as these producing countries have relatively better competitive and natural advantages for this strategy.

The issues of 'cluster upgrading' and a real participation in the overall strategy of the 'Food and Drink cluster' of Scotland are important problems that the industry must face, if they want to have a better competitive advantage in a global market. Furthermore, collaborative arrangements and joint marketing activities, using all the advantages of country and region of origin, not only among producers, but also between trade associations and other primary producers, are key aspects that the industry should develop further during the next few years.

4.6 Conclusions

This chapter reviewed the main characteristics, trends and main competitors' countries of the salmon farming industry, a sector that makes a substantial contribution to the rural-remote and regional economies of both Scotland and Chile. This industry was chosen for the empirical analysis of this thesis because of the lack of research into cluster and social networks. The theoretical implications of these two concepts were explained in the previous chapters 2 and 3.

The salmon farming industry is becoming a global industry, with the increasing participation of multinational companies who are investing heavily in new technologies and R&D facilities in countries which present better performance levels. Furthermore, the unusual characteristics of this industry mean that there are only few places in the world where production can take place, like Scotland and Chile.

The analysis of these two competitor countries, which have high levels of Norwegian and Dutch investments, was conducted. The main common characteristics among them include increasing concentration of companies, due to mergers and acquisitions. This in part corresponds to the international tendency of this industry for vertical integration across all the processes in the value chain activities. A further characteristic is that most of the companies are 'price takers', in a market where product and service differentiation are difficult to maintain as part of a long term-strategy.

From a marketing and sales point of view, Chile and Scotland are evidently different (see table 4.12). The Chilean industry concentrates more than 95% of its sales in foreign markets, mainly the USA and Japan. One important competitive advantage in Chile is lower production costs and higher production capabilities, compared to Scotland. While the Scottish industry concentrates its marketing activities and sales in both, the local UK market and European countries. Within the EU market, France remains its key target, using the 'Label Rouge' mark as a strong promotional tool of generic marketing.

The 'cluster strategy' is also different in Chile and Scotland. The former has a 'bottom-up' approach, being led by the local companies with minimal or no governmental intervention. The latter uses a clear 'top-down' approach, being the industry an integral part of the Scottish Food and Drink Cluster, which is led by the developmental agency for Scotland: Scottish Enterprise.

Cultural factors are also highly relevant in the analysis of this industry. For example, in Norway there was a tradition of co-operation which helped the industry in its early years; in Chile the industry started and continues with big business interests whereas in Scotland there was huge hostility in the early years between the smaller independents and multinational companies. Shetland is perceived different from mainland Scotland and it seems to have a more cohesive sense of identity and a greater tradition of co-operation.

Finally, as the industry has become increasingly internationalised and highly competitive, new co-operative strategies among 'similar' producing countries, as well as joint marketing activities among producers from a particular country, are expected to be the norm for the future survival and sustainability of this business sector.

Chapter 5 develops the research propositions, which are tested using as a reference this industry sector in Chile and Scotland. Chapter 6 presents the methodology, which was employed to undertake the empirical study. Later, the results are presented in chapters 7, 8 and 9.

Table 4.12: Comparative summary of Chile and Scotland

Characteristic	Chile	Scotland (UK)
Economic figures: GDP (US$ bn; PPP) GDP per head (US$;market exch.rate) GDP per head (US$; PPP) Population (Mill)	 156.1 4,414 10,373 15	 1,595 25,992 26,518 60
No. of co. main value chain activities	125	104
Main markets	USA and Japan	Local market (UK) and Europe
Cluster approach	Bottom-up approach led by an entrepreneurship spirit of private companies, not governmental intervention	Top-down approach led by Scottish Enterprise. Attraction of EU funding and role of local government important
Main strengths	1. Liberal economic policy for creation of new business and attraction of FDI 2. Plenty of sites for production 3. Competitive (low) production costs 4. Producer of feeding locally (fish meal and fish oil), taking the advantage of paying local prices 5. Territory for expansion 6. Commercial agreements with the USA, EU and Corea 7. Excellent cooperation with Norway in technology transfer	1. Country and regions of origin effect (Scotland and Shetland as brands) 2. Specialisation in organic and value add products 3. Some cooperation with other primary producers 4. Important local market with high levels of income and new trends for buying value-added sea food products
Main weaknesses	1. Far away from the main export markets (high transportation costs) 2. Lack of public policy and funding support for small and family business	1. Strong environmental regulation 2. Not many sites and territory for expansion 3. High and not competitive production costs
Future projection and forecast	1. Continue growth, taking over Norway as the main producer and exporter of farm salmon in the world. 2.Concentration in high volume at lower cost 3. Enter the EU market with frozen products and row salmon for European smoke houses. 4. Industry concentration due to mergers and acquisitions	1. It will remain being strong in the local market (UK) and Europe 2. Niche player with value added seafood products 3. Diversification to new species (e.g. Cod) and organic products 4. Industry concentration in only few survival niche players

Source: Author, based on economic figures of The Economist (2004) and Industry analysis reports (2004)

Chapter 5

Research Propositions

5.1 Introduction

One of the purposes of exploratory research is to discover new ideas and insights, which are better attained via propositions formulation (Selltiz *et al.*, 1976). This chapter presents the propositions derived and justified from the literature review (chapters 2 and 3) and taking into consideration the particular characteristics of the industry (chapter 4).

Based on the literature review and industry analysis, the main topics covered by the propositions are: (1) Inter-firm networks and co-location; (2) Social networking; (3) The role of informal contacts in inter-firm co-operation; (4) Company size and structure of the industry; and (5) Cultural influences in inter-firm co-operation.

5.2 Inter-firm networks and co-location

The new trends toward globalisation have not eliminated the importance and relevance of local regions in the context of home-based competitive advantage. A new growing interest in localized networks and inter-firm relations has emerged; deriving support and competitive advantage through highly localised inter-firm relationships, place specific history, economic factors, values and culture (McNaughton and Bell, 1999; Brown and McNaughton, 2001, 2002). In this research, the term inter-firm relationships or inter-firm alliances refer to collaborative arrangements between independent firms to share resources on an ongoing basis (Ahuja, 2000).

Brown and McNaughton (2001) argue that the early establishment of firms at a particular location is as much a matter of historical accident as anything else. The

subsequent attraction of more firms depends on the final economies of scale and positive externalities that this territorial agglomeration (co-location) may offer. This brings the concept of 'lead firms' as the starting focal point in cluster and networking development (Humphrey and Schmitz, 1996; Porter, 1998; Scott, 1998).

Inter-firm interaction or networks in localised clusters cannot be seen in isolation. Moreover, companies need to consider the aspects of social structures (Gulati, 1999; Ahuja, 2000), social capital, referring to the social structures that determine *who* is going to interact (Gulati, 1999; Davidsson and Honing, 2003), as well as the notions of embeddedness (Granovetter, 1985; Aldrich and Zimmer, 1986; Gulati, 1999; Ahuja, 2000; Jack and Anderson, 2002), which represent the mechanism whereby an entrepreneur, firm or organisation becomes part of the local structure involving the creation of social ties with the local environment (Jack and Anderson, 2002). These concepts constitute what Porter (1998) acknowledges as *'social glue'*.

Although a single definition of inter-firm networks is problematic, it can be seen as a group of firms using combined resources to co-operate on joint projects (Akoorie, 1998; Ceglie *et al.*, 1999). Furthermore, it has been suggested that the entrepreneurs who choose to develop and maintain ties and inter-firm networks with other entrepreneurs are likely to outperform those who do not (OECD, 2000; Shaw and Conway, 2000; Bianchi, 2001; Akoorie and Pavlovich, 2003; Davidsson and Honig, 2003). Benefits that SMEs can accrue from effective networking include: (1) *Information gathering* (Camagni, 1991); (2) *Knowledge acquisition* (Romijin and Albu, 2002; Soh, 2003); (3) *Skill transference* (Grabher, 1993); and (4) *Marketing Networking* (Gilmore *et al.*, 2001; Coviello *et al.*, 2002), where SMEs may have limited available resources. Thus, a firm can use inherent networks such as personal contact networks of the owner-manager (Dubini and Aldrich, 1991; Ostgaard and Birley, 1994; Davidsson and Honig, 2003), social networks, industrial networks and marketing networks to carry out their marketing activities globally.

In each of the potential benefits of SMEs networking, trust can be seen as a key element in the cooperation relationship (Bucklin and Sengupta, 1993; Hoang and Antoncic, 2003; Hoang and Antoncic, 2003). This allows partners to respect the

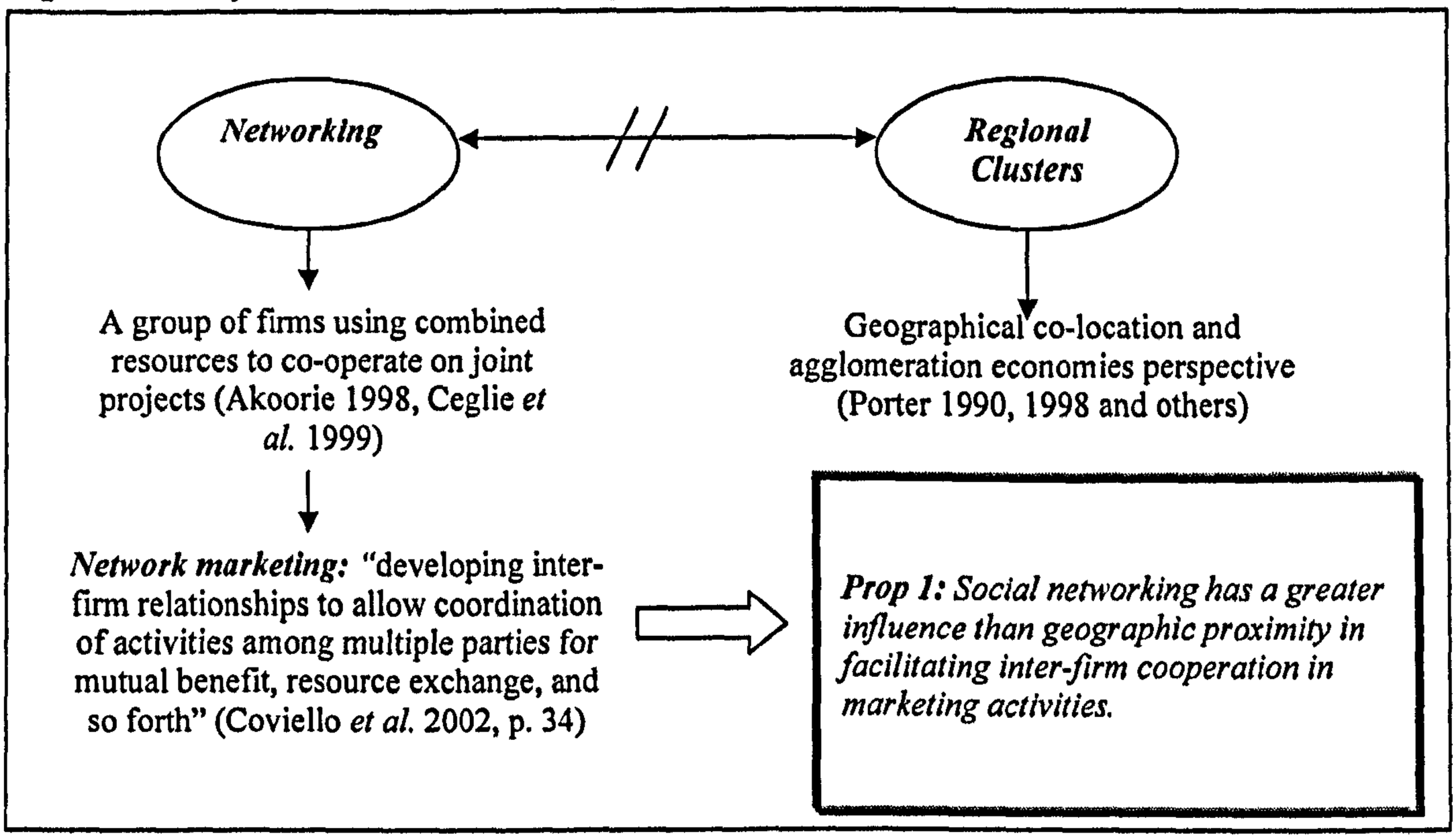
assumed commitments among the firms in the specific network (Joly and Mangematin, 1996). However, the threat of opportunistic behaviour, or free-rider problems, by one or more partners is a risk that may be present all the time (Bucklin and Sengupta, 1993; Gulati, 1999; Ahuja, 2000). Finally, networks do not have to be geographically concentrated as clusters (Brown and McNaughton, 2002). As soon as trust among players has been established together with the strategic direction agreed upon, the operational dialogue and communication can then be made possible by electronic means.

Maskell *et al.* (1998) and Maskell (2001) suggest that the social process of learning and innovation in inter-firm co-operation work best when the partners involved are close enough to one other to allow frequent interaction and effective exchange of information. At the same time, this social process embedded in regional communities that share a *common knowledge base and culture* may be the best facilitator for inter-firm collaboration (Cooke, 1998; McKelvey *et al.*, 2002; Wolfe, 2003). Furthermore, this close proximity at a regional level facilitates frequent face-to face interaction in both, formal and informal settings (Birley, 1985). This process creates a common language or code of communication through repeated interaction over time[1] (Patel and Pavitt, 1994), which leads to the creation of regional institutions that help to reinforce the right environments for inter-firm interaction (McKelvey *et al.*, 2002; Wolfe, 2003).

Huggins (2000) stressed the importance of co-operative activities and truthful relationships for achieving better competitive advantages for business. Furthermore, Huggins stated that social groups seem to be the most potent form of inter-firm network, and an initial informal structure is the best facilitator for this relationship. This argument stresses the importance of clusters and industrial districts as a 'social network topography' (Van Dijk and Sverrisson, 2003), considering the key elements of the social relationships or 'relational mix' (Lechner and Dowling, 2003), and not only using an economic geography perspective.

[1] Sometimes call 'tacit knowledge'

Figure 5.1: Key Definitions and Concepts for Proposition 1



Source: Author, derived from the literature

Proposition 1: *Social networking has a greater influence than geographic proximity in facilitating inter-firm cooperation in marketing activities.*

For the operationalisation of the above research proposition, the following definitions and measurements are proposed:

Networking: "A group of firms using combined resources to co-operate on joint projects" (Akoorie, 1998; Ceglie *et al.*, 1999). Then, for this research, networking is understood as the co-operative process which is independent of a particular geographical location or region.

Network Marketing: The development of "inter-firm relationships to allow coordination of activities among multiple parties for mutual benefit, resource exchange, and so forth" (Coviello *et al.* 2002, p. 34). Specifically for this research, keeping in mind the above proposition, the coordination of activities and resource exchange refer to the marketing[2] and sales activities that firms and organisations perform. Network marketing activities are also seen as being independent of a particular geographical location or region.

[2] Specially those activities related to the marketing mix

Regional Cluster: "A cluster is a form of network that occurs within a geographic location, in which proximity of firms ensures a certain form of commonality and increases the frequency and impact of interaction" (Porter 1998, p. 226). Thus for this research, as well as considering the structure of the selected industry explained in chapter 4, the concepts of 'geographic location' or 'geographic proximity' are seen as specific regions within a country. In the particular case of Scotland these are: Central belt, South West, North West, Western Isles, Shetland and Orkney[3]. In the case of Chile these are: The IXth and Xth Regions and Isle of Chiloé.

Inter-firm co-operation in marketing, joint marketing activities or co-marketing: For this research, these concepts are seen as synonymous. Consequently, they can be understood as: *A group of firms or organisations (two or more) using combined resources, in a formal[4] (contractual) or informal[5] (non-contractual) basis, to co-operate in marketing and/or sales activities at local and/or international levels.*

The previous concepts may also involve the cooperative agreement between firms, or coordination among partners, in one or more aspects of marketing. At the same time, this may be extended to research, product development or even some aspects of production (Bucklin and Sengupta, 1993; Gulati, 1999). Moreover, generally this relationship may be between firms at the same level in the value chain, representing a form of 'symbiotic marketing' (Adler, 1966; Vardarajan and Rajaratnam, 1986; Bucklin and Sengupta, 1993).

As there is a gap in the body of knowledge concerned with the influences of geographical co-location in developing joint marketing activities, and not many scales of measurement have been previously reported in published academic journals, the scales of measurement and questions for operationalisation of proposition 1 are taken from the 'case study' research conducted by Brown and Bell (2001). The scales developed by Brown and Bell, measured in a five point Likert scale (1= extremely useful to 5= not at all useful) the usefulness of membership to the Christchurch electronic cluster in New Zealand in developing 'active marketing

[3] For further details about the structure and location of the industry see Chapter 4
[4] Manly with other companies at contractual levels
[5] Mainly with friends, family, colleagues and business contacts (not at contractual levels)

externalities' to the participant firms. Furthermore, the question includes the issues of 'traditional externalities', which are mainly described in the economic literature, and 'active marketing externalities', which requires the active participation of the firm for the creation of these externalities (see chapter 3 for a complete review of the concept *externalities*).

Brown and Bell (2001) scale[6]:

How useful has membership of the Christchurch Electronics Cluster been in providing the following opportunities for your firm?

(Circle the appropriate number on the scale below where 1 is extremely useful and 5 is not at all useful.)

Access to a skilled labour pool
Selling intermediate goods to other manufacturers
Buying intermediate goods to other manufacturers
Providing access to new technology
Greater local market demand
New customers finding you
Enhanced reputation or credibility
Finding new customers in new markets
Greater market information/knowledge
Greater innovation and new product development
Joint trade fair participation with other firms
Joint marketing delegations to clients
Joint trade missions to new markets
Joint market information research
Inter-cluster referrals to your firm
Inter-cluster referrals from you to other firms

Although the context of research is different (industry specificity, particular culture of the country, etc.), the use of similar scales allows comparability of the results. Furthermore, based on the literature review and particular characteristics of this thesis, new items and questions[7] are added to measure proposition 1.

[6] The researcher thanks Peter Brown (Christchurch, New Zealand) for providing the complete scales of his research. The gratitude is extended to Professors Rod McNaughton (Canada) and Jim Bell (Ulster, Northern Ireland) for their further comments in these scales and concept.
[7] For further discussion of scales used please see chapter 6: Research Methodology

5.3 Social networking

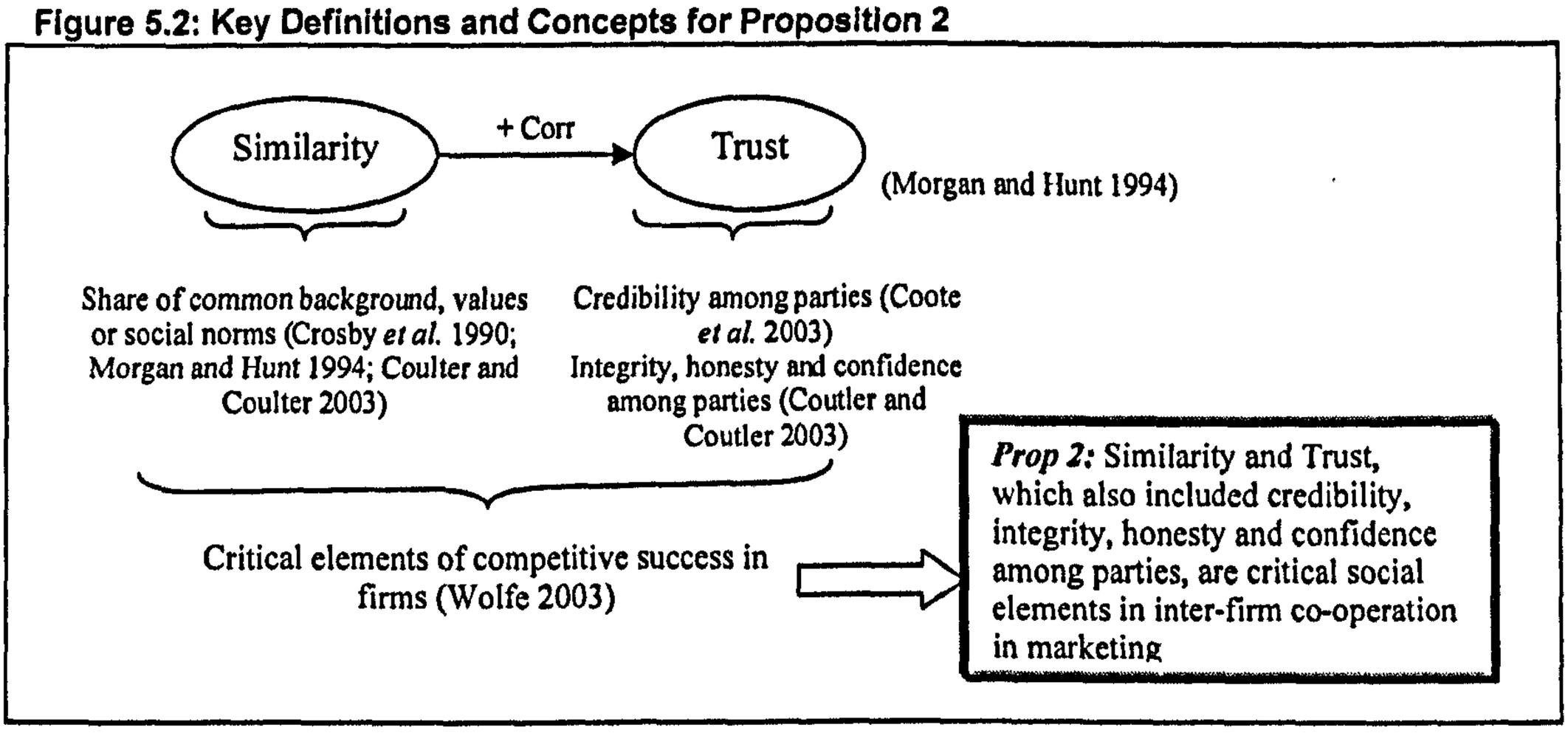
Social capital and social relationships in inter-firm networks are key issues in the relationships, at organisational and personal levels, in embedded local firms (Birley, 1985; Dubini and Aldrich, 1991; Ahuja, 2000). At the same time, they can become the basis of a rich information exchange network that enables firms to learn about new alliance and market opportunities with reliable partners (Birley, 1985; Powell *et al.,* 1996; Gulati, 1999; Ahuja, 2000). The development and gradual building of such networks and social capital implies a degree of mutual trust among partners (Gulati, 1999; Hoang and Antoncic, 2003).

According to Coutler and Coutler (2003), *trust* may be seen as a complex construct that includes integrity, honesty and confidence that one party places in another. This also involves the issue of credibility among parties (Coote *et al.,* 2003). This implies an active participation of the 'soft social elements' of any inter-firm co-operation, when one firm trusts the other. Consequently, trust is an important influence on interpersonal and inter-group behaviour (Golembiewski and McConkie, 1975; Gulati, 1999; Coulter and Coulter, 2003; Hoang and Antoncic, 2003) as well as a critical element of competitive success in firms (Wolfe, 2003). Accordingly, *similarity* is related to the extent to which firms or individual participants share a common background, values or social norms (Crosby *et al.,* 1990; Morgan and Hunt, 1994; Coulter and Coulter, 2003) (See Figure 5.2).

Time variable and length of the relationship may be important concepts related to trust, and may influence it. According to Coutler and Coutler (2003), *knowledge* and *familiarity* will increase over time as firms conduct business knowing each other. However, "this knowledge and familiarity is *independent* of the length of time that the customer has been in a relationship with its *current* service provider" (Coutler and Coutler 2003, p. 34). Consequently, issues related to relationship quality may affect the long-term commitment (See Figure 5.3). Coote *et al.* (2003), defined *relationship commitment* as a long-term exchange between partners's that desire to maintain a valued relationship. Commitment can be seen as an important element for developing and maintaining a successful relational exchange among firms, enhancing efficiency and effectiveness of marketing relationships. Furthermore, it predicts

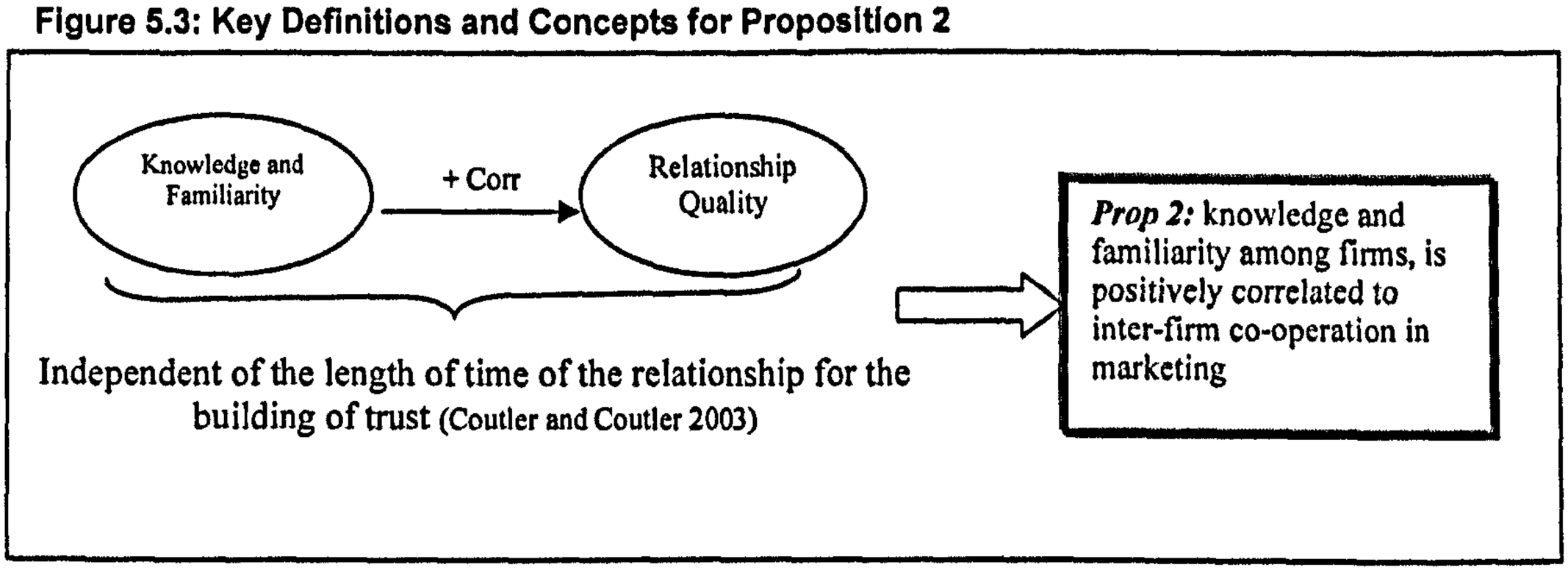
willingness to cooperate (Morgan and Hunt 1994). These issues may also affect the quality and intensity of marketing externalities in inter-firm cooperation (see figure 5.4).

Figure 5.2: Key Definitions and Concepts for Proposition 2



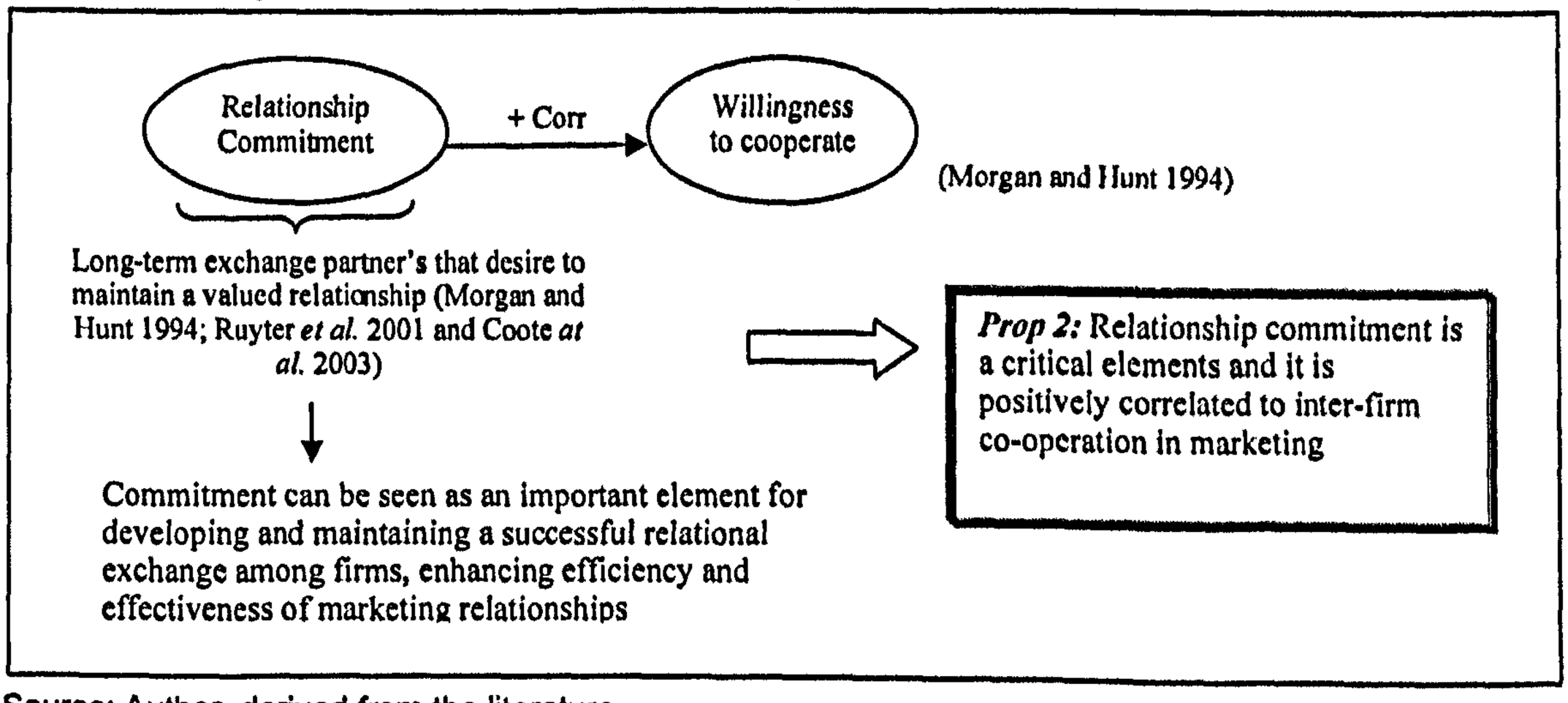
Source: Author, derived from the literature

Figure 5.3: Key Definitions and Concepts for Proposition 2



Source: Author, derived from the literature

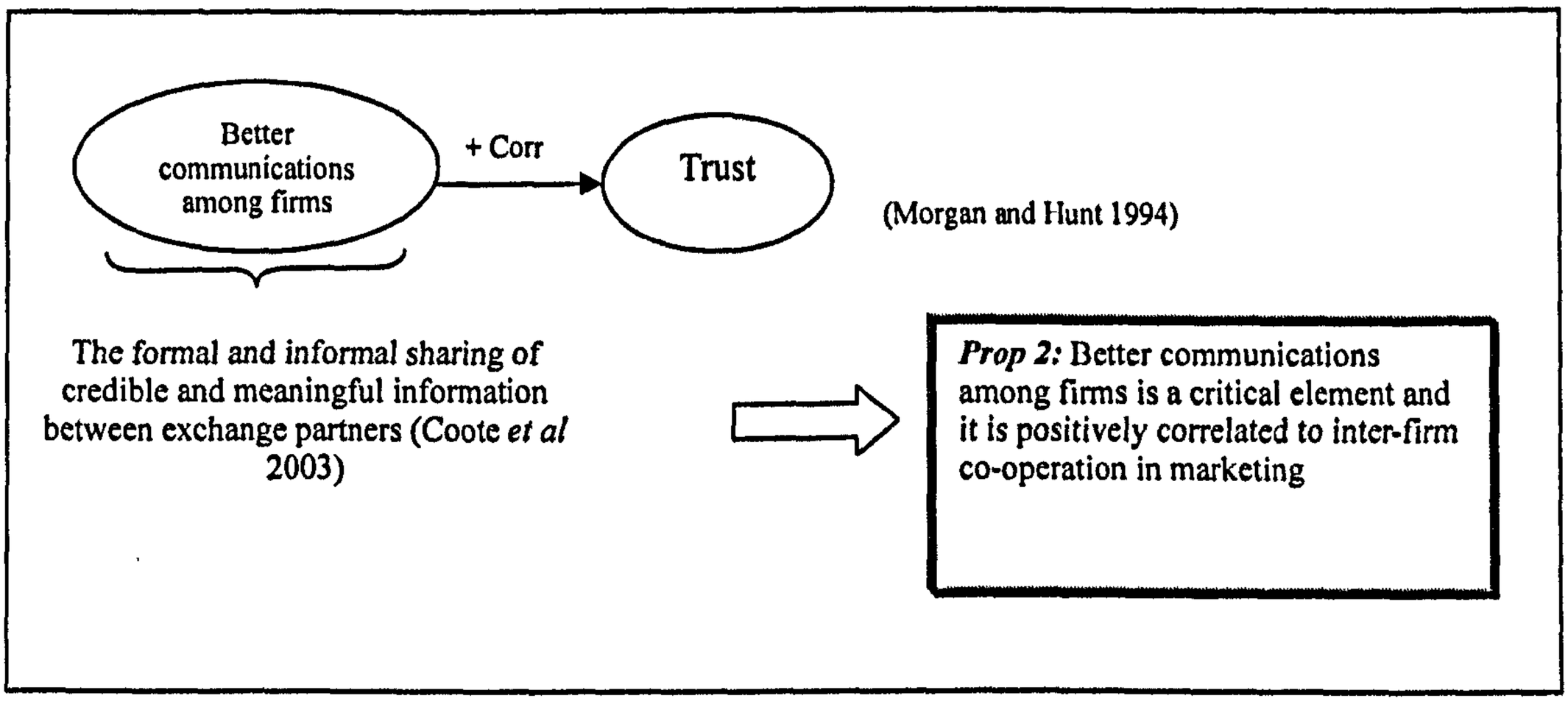
Figure 5.4: Key Definitions and Concepts for Proposition 2



Source: Author, derived from the literature

Another important issue for building trusting relationships is *communication*, which is defined as "the formal and informal sharing of credible and meaningful information between exchange partners" (Coote *et al.*, 2003). Relevance and timelines of information exchange, rather than the volume, affect the quality of communication (Lusch and Brown, 1996; Coote *et al.*, 2003). Furthermore, Morgan and Hunt (1994) in their research found a positive correlation between communication and trust. These issues may also affect the quality and intensity of marketing externalities in inter-firm cooperation (see figure 5.5).

Figure 5.5: Key Definitions and Concepts for Proposition 2



Source: Author, derived from the literature

Proposition 2: *The social elements of networking*[8]*, are positively correlated to the development of inter-firm co-operation in marketing.*

According to the research objectives and proposition 2, this study considers the definitions of *relationship commitment* used by Morgan and Hunt (1994) and Coote *et al.* (2003). Hence, this research understands *relationship commitment in marketing activities* as: *Partners and potential partners, trying to maintain and enhance a value relationship for the development of a better inter-firm co-operation in marketing activities at local and/or international levels.*

[8] This includes similarity, trust, credibility, integrity, honesty, knowledge and familiarity, commitment, better communications among firms, as well as confidence among parties

As well as commitment, the concept of *trust* has been described as an important element that influences inter-firm co-operation. Based on the definition by Morgan and Hunt (1994) and Coote *et al.* (2003), this research understands the *elements of trust in marketing* as:

Willingness to rely, be confident and have credibility in a partner[9]*, or potential partner, when developing inter-firm co-operation in marketing activities at local and/or international levels.*

To be consistent with previous research, the scales used by Morgan and Hunt (1994); Coote *et al.* (2003); Coulter and Coulter (2003) are the basis for measuring similar concepts. However, new items and proxies are added, which are related to the specific research context of this study[10].

Coote *et al.* (2003) use multi-item Likert scales anchored from 1 (strongly disagree) to 5 (strongly agree), to measure the issues of: commitment, trust, communication, conflict and similarity in the context of industrial marketing relationship and supplier relationship. Here the issues of *similarity*[11] are adapted to the context of this research. Furthermore, Coote *et al's* scale achieved a high reliability (construct reliability=0.88; variance extracted=0.64).

Coote *et al.* (2003) scales of *Similarity:*

The items that Coote *et al.* (2003) uses are based on previous research (Crosby *et al.* 1990; Doney and Cannon 1997) and they were measure in a five point Liket scale from 1 (strongly disagree) to 5 (strongly agree).
Items included were:
My supplier has similar social background to me
My supplier has a similar economic background to me
My supplier is very similar to me
My supplier has a similar ethnic background to me
(Construct reliability=0.88; variance extracted=0.64)

[9] Partner is understood as a any firm or organisation (e.g. Trade Associations, individual firms, etc.)
[10] For further details see chapter 6: Research Methodology
[11] Similarity: the extend to which the parties share social and economic characteristics (Coote *et al.* 2003)

Coote *et al.* (2003) scale of *Trust:*

Coote *et al.* (2003) measure in a five point Likert scale the issues of *Trust* using Morgan and Hunt (1994) scale, which includes:

Promises made by my supplier are reliable

My supplier is honest and truthful

My supplier has a high degree of integrity

My supplier is open in dealing with me

I have great confidence in my supplier

(Construct reliability=.88, variance extracted=.59)

Coulter and Coulter (2003) used a 10-point Likert scale for their research, in the context of the effects of industry knowledge on the development of trust. Among the items they measure are *trust* and *similarity*, reporting a reliability measure of α=0.90 and α=0.93, respectively.

Coutlet and Coutler (2003) scale of *Trust:*

Coutler and Coutler (2003) also measure the elements of Trust in a ten-point Likert scale, including the following items:

My service provider...
1. is trustworthy
2. keeps my dealing with him confidential;
3. is honest
4. has a great deal of integrity
5. brings high standards to his/her work
6. is a person with principles

(Reliability measure: α=0.90)

Coutler and Coutler (2003) scale of *Similarity:*

Coulter and Coulter (2003) also measured Similarity using the following items:
My service provider....
1. has values and beliefs similar to mine
2. has tastes and preferences similar to mine
3. is quite a bit like me

(Reliability measure: α=0.93)

Morgan and Hunt (1994)[12] employed a 7-point Likert scale using *inter alia*, from not at all cooperative to very cooperative; strongly agree to strongly disagree; and much better to much worse.

[12] Morgan and Hunt (1994) paper does not provide the complete scales. The researcher whish to thanks Professor Morgan for providing the complete scales after personal communication.

Morgan and Hunt (1994) scale of *Trust:*

TRUST: (Scale anchors: 1=Strongly disagree, 7=Strongly agree)
In our relationship, my major supplier:
...cannot be trusted at times
...is perfectly honest and truthful
...can be trusted completely
...can be counted on to do what is right
...is always faithful
...is someone that I have great confidence in
...has high integrity

(Reliability measure: α=0.947)

Morgan and Hunt (1994) scale of *Communication:*

COMMUNICATION[13]: (Scale anchors: 1=Strongly disagree, 7=Strongly agree)
In our relationship, my major supplier...
1. keeps us informed of new developments.
2. provides us with frequent positive feedback on our performance.
3. offers us very poor recognition programs.
4. communicates well their expectations for our firm's performance.

Measures of reliability and validity were not reported.

Morgan and Hunt (1994) scale of *Commitment:*

COMMITMENT[14]: (Scale anchors: 1=Strongly disagree, 7=Strongly agree)
The relationship that our firm has with my major supplier:
...is something we are very committed to
...is very important to my firm
...is of very little significance to us
...is something my firm intends to maintain indefinitely
...is very much like being family
...is something my firm really cares about
...deserves our firm's maximum effort to maintain

Reliability was reported at 0.895

Morgan and Hunt (1994) scale of *Cooperation:*

COOPERATION[15]: (Scale anchors: 1=Not at all cooperative, 7=Very cooperative)
How would you characterize the cooperation between you and your supplier regarding the following activities?
1. Local/regional cooperative advertising
2. Dealer advertising
3. Warranty reimbursements
4. Dealer discounts
5. Inventory levels

Measures of reliability and validity were not reported.

---

[13] Morgan and Hunt (1994) and other studies of communication between firms have used multi-item scales of inter-firm communication, which this thesis utilized in. Morgan and Hunt (1994) used four items taken from a scale developed by Anderson, Lodish, and Weitz (1987) to operationalised relationship communication in marketing relationships

[14] Morgan and Hunt (1994) used modified items from previous organizational commitment scales to develop a seven item scale of relationship commitment for their 1994 study.

[15] Morgan and Hunt used a five-item scale of relationship cooperation specific to the industry which they sampled (i.e. tire dealers). This scale will be modified to allow its use in a multiple industry format.

5.4 The role of informal contacts in inter-firm co-operation

As stated in chapter 3, the role of informal networks in regional clusters has received particular attention in the literature since the late 1990s. The concept of *informal networks* has an important role in inter-firm co-operation, acting as channels of knowledge flow (Birley, 1985; Bengtsson and Kock, 1999; Feldman, 1999; Melo, 2001; Dahl and Pedersen, 2003; Soh, 2003). At the same time, informal relations, and the interaction between firms and their local environment are key issues for the development of trustful co-operation (Collinson, 2000; Huggins, 2000; Varamaki and Vesalainen, 2003). Furthermore, knowledge spillovers through informal contacts can be considered as one of the externalities that Marshall (1919) and Krugman (1991) argued to be the main forces behind industrial clustering: *technological externalities* or *knowledge spillovers.* Companies located in a cluster, or industrial districts share a set of common values and knowledge which is part of the *'local industrial atmosphere'* that Marshall described. In this way, firms are linked together by specific informal relations in a complex mix of co-operation and competition (Becattini, 1989; Brusco, 1990; Porter, 1998; Feldman, 1999; Dahl and Padersen, 2003).

Maskell *et al.* (1998), explain that the creation of informal networks goes through several phases, from relations between two individuals to entire networks, where companies transfer knowledge among them. Furthermore, these relationships are both vertical and horizontal, where regular understanding and trust are the common features (Maskell, 2001).

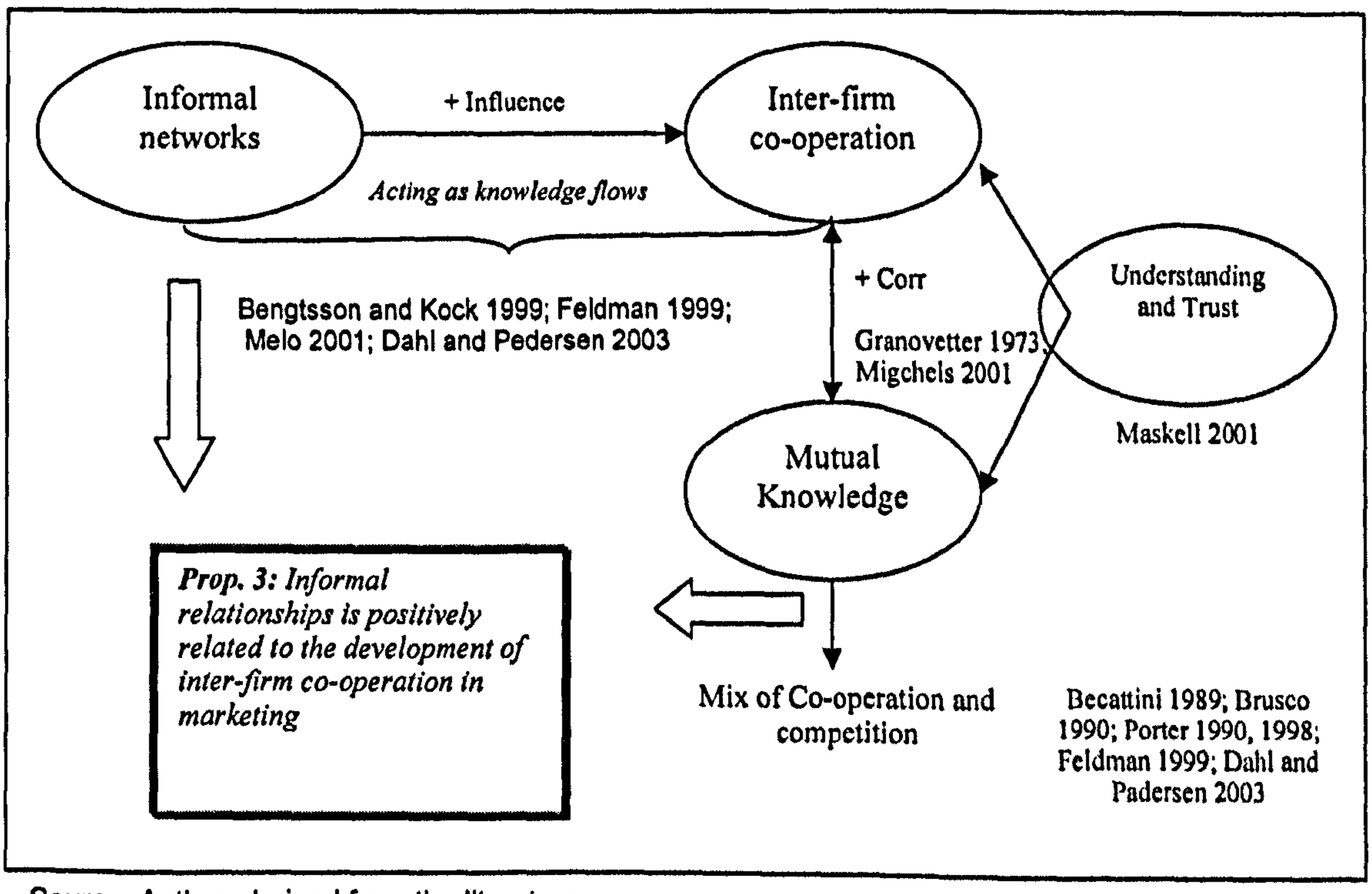
According to Granovetter (1973) in the analysis of interpersonal networks the notion of 'strength' deals with the combination of the amount of time, the emotional intensity, the intimacy, and the reciprocal services, which characterise the ties among firms or individuals. Stronger ties involve larger time commitments, stronger sentiments of friendship for one another, stronger feeling of similarity, and therefore, a better sense of community. On the other hand, being a member of business networks such as Chamber of Commerce, Rotary or Lions, other private clubs, special schools and social registers also offers good opportunities for the

development of ties, in which the maintenance of 'weak ties' is a consequence of such meetings (Granovetter, 1973; Birley, 1985; Ostgaard and Birley, 1994; Migchels, 2001; Davidsson and Honig, 2003). Moreover, the development of these weak ties is useful in obtaining information that would otherwise be unavailable or costly to locate (Davidsson and Honig, 2003). "Co-operating partners must find one another in a world of incomplete information, and this process of search is largely influenced by their primary relations with other firms as well as by the relations of other firms to one another" (Grabher 1993, p.15).

Other streams of the literature suggest that informal networks are more likely to share 'small ideas' rather than strategic knowledge (Breschi and Lissoni, 2001) and that inter-personal communication is relatively more important for sharing knowledge with customers than with competitors (Schrader, 1991; Lissoni, 2001).

Proposition 3: *Compared to formal relationships, informal networks are positively correlated with the development of inter-firm co-operation in marketing activities.*

Figure 5.6: Key Definitions and Concepts for Proposition 3



Source: Author, derived from the literature

According to the previous research proposition, key concepts are important:

Informal networks: *Non-contractual relationships that may involve not only business matters, but also friendship, trust and the sharing of social elements independent of the location of the parties involved.*

Strong ties: Informal relationships that involve *larger time* commitments, stronger sentiments of friendship for one another, stronger feeling of similarity, and therefore, a better sense of community. The participation and membership of a firm in a trade association may be considered in this category.

Weak ties: Informal relationships that involve *shorter time* commitments, generally developed in meetings, conventions, private clubs, special schools and social events.

Personal network: All those persons with whom the owner-manager has direct face-to-face relations (e.g. partners, suppliers, distributors, trade associations and family members).

Extended networks: Collective result of personal networks (this includes all the people who work in an organisation and other members from other organisations) (Dubini and Aldrich, 1991).

To be consistent with previous research, the scales of measurement[16] are based on past research, namely Granovetter (1973) and Coviello *et al.* (2002).

Granovetter (1973) scale

Granovetter (1973) used the following categories for frequency of contact (in the job market context):
Often= at least twice a week
Occasionally= more than once a year but less than twice a week
Rarely= once a year or less

[16] For further details, see chapter 6: Research Methodology

Coviello *et al.* (2002) used a five-point Likert scale anchored by (1) 'never' and (5) 'always' to measure the different items of their research on marketing practices in the context of organizations and their primary customers.

Coviello *et al.* (2002) scales:

Our marketing activities are principally indented to...
1. Attract new customers
2. Retain existing customers
3. Create two-way technology-enabled dialogue with our customers
4. Develop co-operative relationships with our customers
5. Co-ordinate activities between ourselves, customers, and other parties in our wider marketing system (e.g. key suppliers, service providers and other organisations with which we interact through our marketing activities)

Our organization's contact with our primary customers is....
1. Not personalised
2. Somewhat personalised (e.g. by direct mail)
3. Interactive via technology such as the internet
4. Interpersonal (e.g. evolving one-to-one interaction between people)
5. From not personalised to interpersonal across firms in the broader network

In our organisation, marketing activities are carried out by....
1. Functional marketers (e.g. product/marketing manager, sales manager, major account manager)
2. Specialist marketers (e.g. customer service manager, loyalty manager)
3. Marketing specialists with technology specialists and possibly senior managers
4. Many employees (across functions and levels)
5. The Managing Director and CEO

When people from our organisation meet with our primary customers it is....
1. Mainly at formal, business level
2. Mainly at formal level, yet personalised via database technologies
3. Mainly at formal level, yet customised and/or personalised via interactive technologies
4. At both formal level and informal level on a one-to-one basis
5. At both a formal business level and informal level in a wider organisational system/network

Our marketing resources (i.e. people, time and money) are invested in...
1. Product, promotion, price and distribution activities (or some combination of these)
2. Database technology to improve communication with our customers
3. Operational assets (IT, website, logistics) and functional systems integration (e.g. Marketing with IT)
4. Establishing and building personal relationships with individual customers
5. Developing our organisation's network relationships within our market(s) or wider marketing system

Coviello *et al.* (2002) cluster the items in the categories of: 'transactional marketing'; 'database marketing'; 'interaction marketing' and 'network marketing', achieving a Cronbach's alpha of 0.62; 0.62; 0.71; and 0.77 respectively. Items are adapted according to the context and objectives of this thesis.

5.5 Company size and structure of the industry

According to Young, Hood and Peters (1994), multinational companies (MNEs) possess the potential for providing several benefits at global, national and regional levels. As a result, inward direct investment, improvement of efficiency in local areas[17] and better competitiveness, are just some of the contributions to local economies (Dunning, 1993, 2002). However, this is conditional on the regional incentive policies ability to attract and stimulate international investments in local economies (Young *et al.,* 1994; Hood and Young, 1999; Gray and Dunning, 2002, 2003; Peters, 2002).

Through the literature in chapter 3, the concept of 'location' and how companies can create a firm-level competitive advantage have been identified as critical issues for the development of MNEs in foreign countries (Porter, 1990; Storper, 1995; Frost and Zhou, 2000). Moreover, the link between companies and locations has been based on the assumption that learning and innovation depends crucially on what happens outside the firm (Frost and Zhou, 2000). Furthermore, these also help in the formation of new sources of competitive advantage (Dunning, 1993; Birkinshaw and Hood, 1998; Sölvell and Ghoshal, 1989) and thus, "more attention needs to be given to the importance of location *per se* as a variable affecting the global competitiveness of firms" (Dunning 1998, p. 60).

An emerging theme of research related to MNEs in regional economies, is how foreign companies influence the upgrading and evolution of industry clusters (Birkinshaw, 2000; Enright, 2000). Although there is relatively little literature specifically concentrated on the benefits to MNEs making investment into regional clusters, Birkinshaw and Hood (1998) suggest that foreign companies located in clusters tend to be more internationally oriented compared to those not located in such clusters. On the other hand, Enright (2000) proposes a model of interdependences between MNEs and regional clusters, which is characterised by a "strong or dominant presence of foreign companies, as well as a strong contribution

[17] This includes: higher productivity, better technology and improvement of technical efficiency, among others

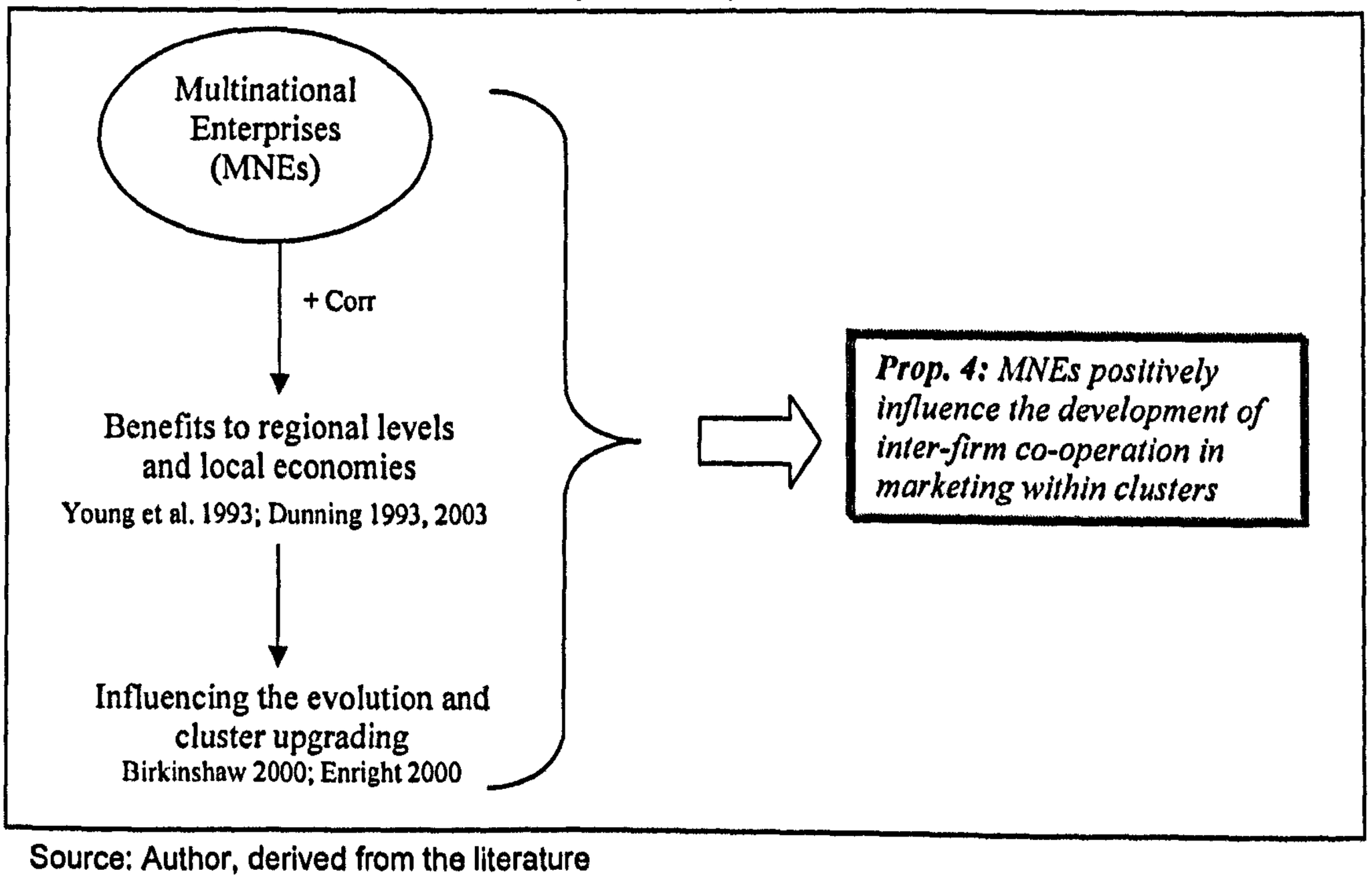
by cluster-based subsidiaries to the overall strategy of the MNEs" (Enright 2000, p.114). According to these ideas, foreign multinationals play a critical role in clusters, transferring skill and capabilities to embedded local firms providing employment to the regional territory and contributing widely to the industry with their own research capabilities. Consequently, Birkinshaw (2000) proposed three alternative propositions with regard to how foreign ownership may affect industry clusters:

Birkinshaw (2000) three alternative propositions:

(1) Foreign ownership is not good for cluster upgrading and development, because foreign subsidiaries tend to be less embedded in the local economies, compared to local companies.
(2) MNEs want to build a presence in foreign clusters. Thus, they contribute with leading-edge ideas, helping the upgrading of the industry in regional clusters.
(3) A neutral perspective, where foreign ownership *per se* is irrelevant.

Although the previous alternative propositions have not been empirically tested in quantitative studies, and their analysis has been more related to case study research at exploratory levels, they are a good platform for developing an enquiry related to the role of MNEs contribution in the development of inter-firm co-operation in marketing with local embedded firms and organisations.

Figure 5.7: Key Definitions and Concepts for Proposition 4



Source: Author, derived from the literature

Proposition 4: *Multinational Enterprises positively influence the development of inter-firm co-operation in marketing activities within regional clusters.*

To be consistent with previous research, the scales of measurement[18] for proposition 4 are adapted from Birkinshaw's three alternative propositions, which have been previously presented on page 158.

5.6 Cultural influences in inter-firm co-operation

Different cultural[19] influences among countries may have an effect in the cooperative behaviour that firms perform (Chen *et al.*, 1998; Hewett and Bearden, 2001). This means an influence in the type of alliances and inter-firm cooperation established between firms. Parkhe (1991) identifies three distinct factors (societal culture, national context and corporate culture) that include norms, values and personal behaviour of managers. The national context also comprises the surrounding industry structure, local institutions, such as trade organisations, as well as the role of local governments and their regulations, while the corporative culture includes the values which characterize particular organisations (Peters and Waterman, 1982).

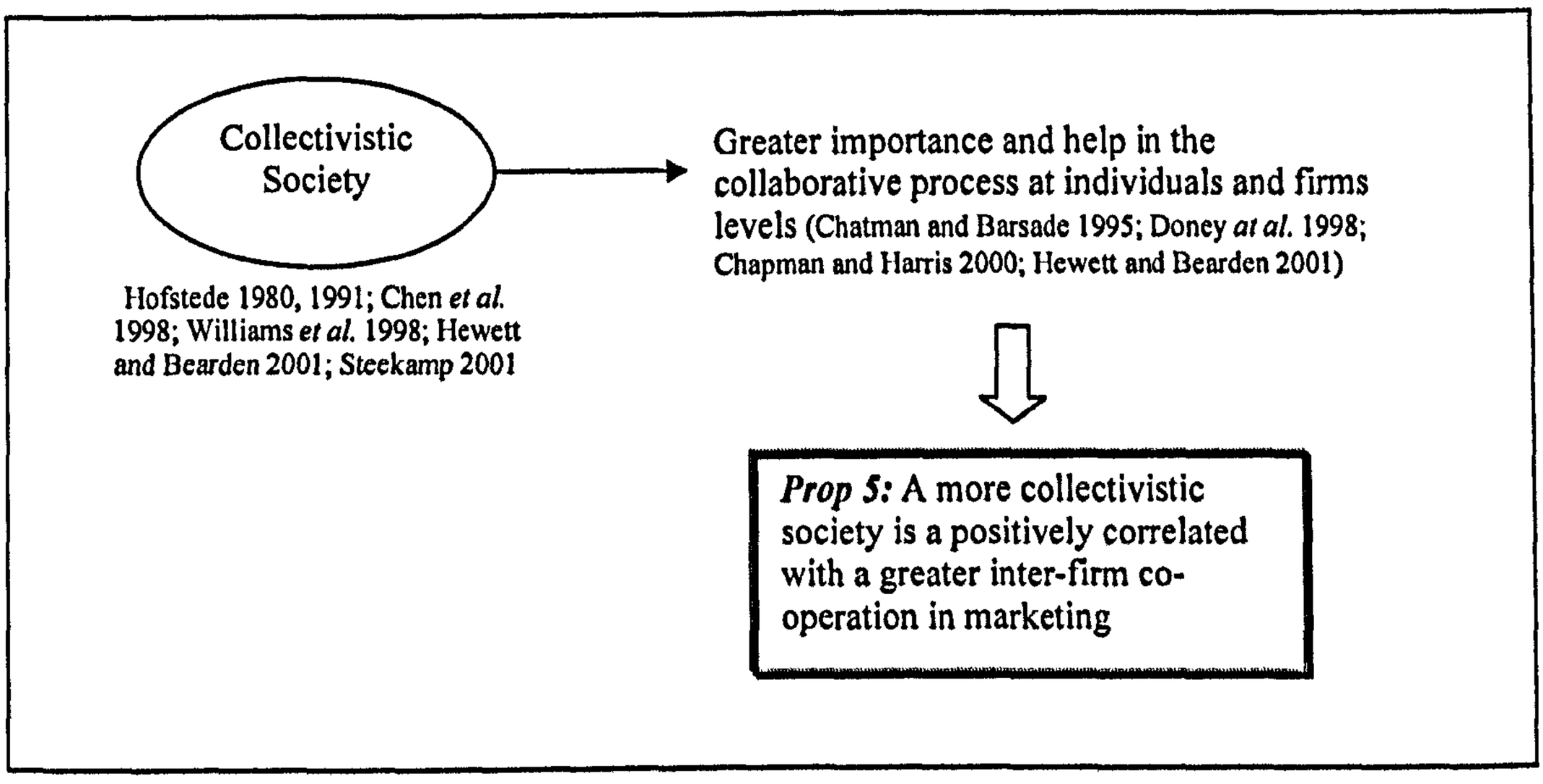
Different cultural influences that deal with models of conduct, standards of performance and inter-personal relationships in particular societies (Herbing and Dunphy, 1998) may have an effect in the cooperative behaviour that firms engage in (Chen *et al.*, 1998; Hewett and Bearden, 2001). In this respect, Hofstede (1980, 1991) stated that cultural differences vary along four main dimensions: (1) uncertainty avoidance; (2) individualism / collectivism; (3) tolerance of power distance; and (4) masculinity / femininity. Based on these dimensions, Hofstede (1980) created indices for more that forty countries for each dimension. According to some authors (Williams *et al.*, 1998; Hewett and Bearden, 2001; Steenkamp, 2001) the individualism / collectivism dimension of culture appears to be an important

[18] For further details, see chapter 6: Research Methodology
[19] The role of culture deals with the models of conduct, standards of performance and inter-personal relationships in a particular society (Herbing and Dunphy, 1998)

issue in the study of inter-firm relationships, because it reflects the way people in a particular society or group interact.

Inter-firm co-operation behaviour in cross-country analysis may be influenced by the differences in local-national cultures. For example, in more individualistic cultures individual goals take on greater importance than group goals, whereas in more collectivist societies, interpersonal and informal ties take greater importance and help in the collaborative process at individual and firms' levels (Chatman and Barsade, 1995; Doney *et al.*, 1998; Chapman and Harris, 2000; Hewett and Bearden, 2001). Consequently, it may be expected that levels of individualism / collectivism influence the co-operative behaviours through trust and commitment relationships.

Figure 5.8: Key Definitions and Concepts for Proposition 5



Source: Author, derived from the literature

Proposition 5: *Countries and regions in which there is a high level of social collectivism will demonstrate higher levels of inter-firm co-operation in marketing activities.*

For the operationalisation of the above research proposition, the following definitions and measurements are used:

Culture: "The collective programming of the mind which distinguishes the members of one human group from another... Culture, in this sense, includes systems of values and values are the building blocks of culture" (Hofstede 2001, p.21).

According to Hofstede (1994) *individualism vs. collectivism* is understood as: The relationships that individuals have with other people. The more *individualist cultures* stress individual rights, expecting to focus on satisfying his/her needs with relatively little regard to others. At the same time, individualism is associated with societies in which social ties and commitments are loose and individual initiative is part of the social identity (Baughn and Neupert, 2003). Hence, competition instead of co-operation is expected. On the other hand, *collectivist societies* emphasize integration, cohesive groups and exchange of loyalty based more on 'in-groups vs. out-groups' (Hofstede 1991; Baughn and Neupert 2003). Thus, more cooperation among firms and organisations, instead of pure competition, is expected.

Hofstede's model is comparative, and is used to compare one national culture against another. As this research is a cross-country analysis between the same industry clusters in two countries with different national cultures, this model is employed. Specifically, Scotland as part of the United Kingdom is in the third (3) position in Hofstede's score rank, showing an Individualism index (IDV) of 89. On the contrary, Chile is in the 38 rank positions, presenting an IDV of 23, being a more collectivistic society. Furthermore, the two countries are totally in opposition when presented on the Individualism x Power Distance graph of Hofstede's (1983) model. There is therefore an interesting opportunity for comparisons in cross-country analysis, which explore the issues described in proposition 5. Thus, at the end of this research, it will be possible to compare the results of inter-firm co-operation in marketing in two countries with different cultures, and how this is related to Hofstede's research of individualism vs. collectivism.

5.7 General theoretical framework

A theoretical framework is presented in figure 5.9, based on the five research propositions described in this chapter:

Proposition 1: *Social networking has a greater influence than geographic proximity in facilitating inter-firm cooperation in marketing activities.*

Proposition 2: *The social elements of networking are positively correlated to the development of inter-firm cooperation in marketing.*

Proposition 3: *Compared to formal relationships, informal networks are positively correlated with the development of inter-firm cooperation in marketing activities.*

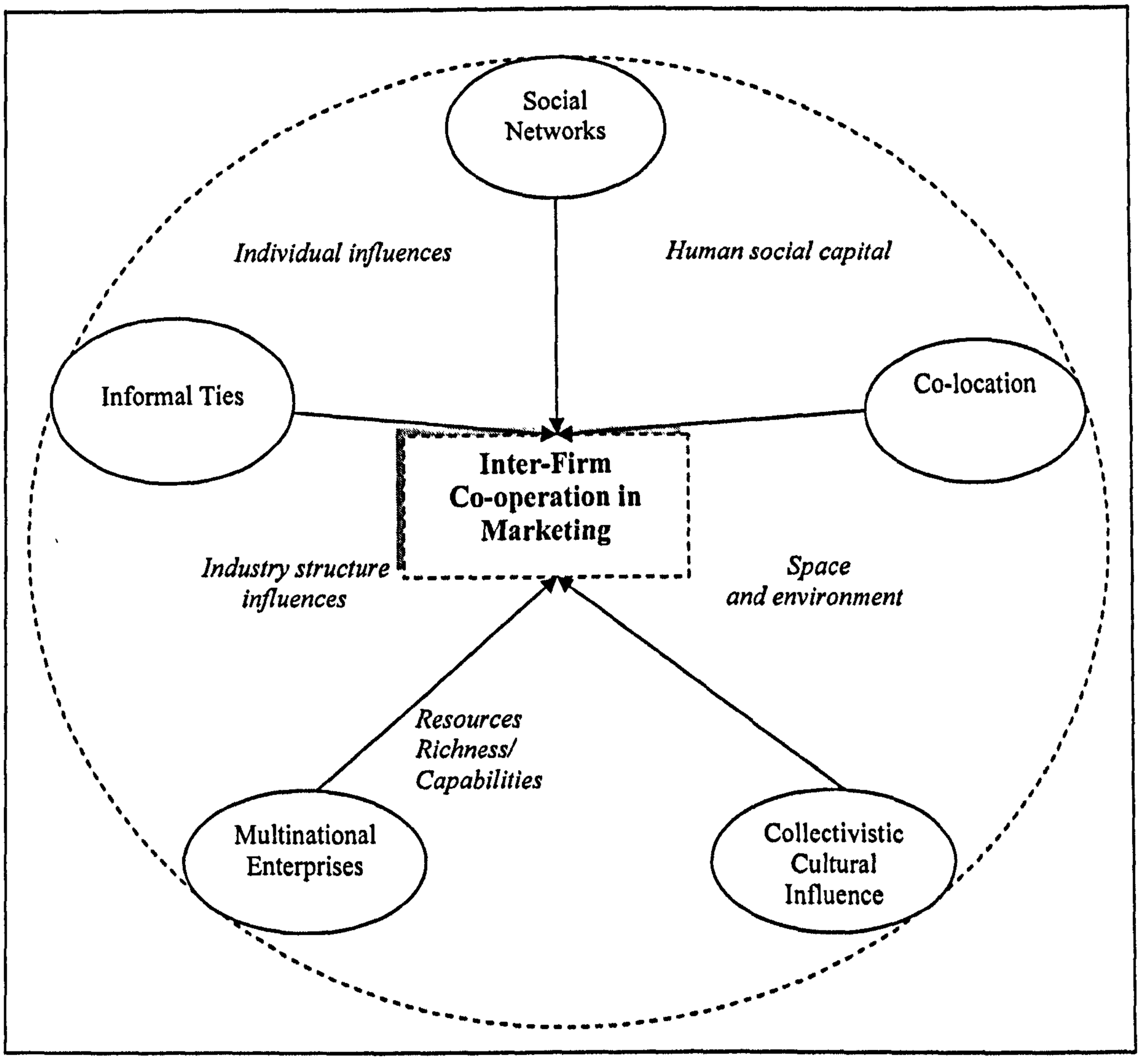
Proposition 4: *Multinational Enterprises positively influence the development of inter-firm co-operation in marketing activities within regional clusters.*

Proposition 5: *Countries and regions in which there is a high level of social collectivism will demonstrate higher levels of inter-firm cooperation in marketing activities.*

Figure 5.9 explains the theoretical framework. By considering this figure, it is possible to see many proposed influences (independent variables) for inter-firm cooperation in marketing (dependent variable). Probably, all of them have some influence. However, they may be in different intensities. The above propositions are explored in two main phases involving qualitative and quantitative analysis.

In the next chapters, semi-structured interviews and a questionnaire-survey are designed and justified with the aim of exploring the proposed issues, not to confirm the theoretical framework.

Figure 5.9: The theoretical framework for research



Source: Author, based on literature review

5.8 Conclusions

This chapter presented the research propositions derived from the literature review in chapters 2 and 3, which form the basis of the empirical framework for research conducted in this study. Generally speaking, the main purpose of this research is to build an understanding of the issues of concern in relation to influences of geographical co-location and social networking in inter-firm co-operation in marketing.

The operationalisation of this study is mainly done in an exploratory manner:

1) By conducting twenty-two personal/semi-structured in-depth interviews with Managing Directors of the selected industry in two countries, to allow cross-culture comparability of the results.

2) By developing a questionnaire-survey, based on the literature review chapters 2 and 3, industry analysis (chapter 4) and research propositions (chapter 5), with the aim of measuring if the co-operation in marketing activities (if there is any) occurs due to the geographic co-location of companies in specific regions (Regional Clusters), or if it is because the social networking process, or a mix of both in different intensities.

The detail of the research methodology used to test the propositions presented in this section is described in chapter 6. The results of the empirical study are presented in chapter 7, 8 and 9, as well as the main conclusion and implications which are presented in chapter 10.

Chapter 6:

Research Methodology

6.1 Introduction

The literature review and research propositions' chapters have shown that there are some gaps to research. These gaps are especially in the integration of cluster theory, social aspects of networking and their influence in facilitating inter-firm co-operation in marketing activities. Hereafter, the aim of this thesis is to explore the influences of geographical co-location and social networking in developing inter-firm cooperation in marketing. The research approach combined both inductive and deductive methods, and consisted of two phases. Firstly, in-depth interviews were conducted to clarify the research questions and obtain a deeper understanding of the problem. These issues were then tested empirically in the second phase of the research.

The overall objective of this chapter is to present and describe in detail the steps taken and the research method used in the current study. It starts by outlining the methodological considerations and philosophical framework on which this thesis is based. The chapter then describes the specific methods used in this research project, the advantages of using two research phases, as well as their reliability and validity.

6.2 Research Aim, Objectives and Questions

The aim, objectives and questions of this study are developed to provide an extension to existing knowledge regarding the influence of geographical co-location and social networking in inter-firm co-operation in marketing activities. Therefore, this study fills some of these gaps in the subject, contributing with empirical research which can be summarized by the following research aim and objectives:

6.2.1 Research Aim

The general aim of this thesis is to explore the influences of regional clusters (geographical co-location) and social networking in developing inter-firm cooperation in marketing activities.

6.2.2 Research Objectives and Questions

1. To build an understanding of the relationship between the issues related to regional clusters (geographical co-location) and social networking in developing inter-firm cooperation in marketing

This research objective was achieved by exploring and reviewing the literature related to agglomeration economies (chapter 2) and the issues surrounding the elements of social networking (chapter 3). The combination of these two main perspectives is presented in the research propositions (chapter 5). Throughout this research these topics (geographical co-location and social networking) are inter-related, considered in the qualitative and quantitative results chapters and also in the concluding section.

2. To explore how and to what extent co-location and networking influence inter-firm co-operation in marketing

This objective was mainly achieved in the qualitative and quantitative results, where one of the main questions was: What is the influence of geographical co-location and social networking in the development of inter-firm co-operation in marketing activities? Different levels of influences and activities were analysed and the conclusion chapter summarises these finding.

3. To understand the relative importance of the social elements of networking in influencing inter-firm co-operation in marketing

This objective was achieved by asking the following questions included in the two data collection stages and their analysis: a) How do these social interactions (networking) compare to the effects of co-location in creating inter-firm co-operation in marketing?,

b) Are these interactions part of personal or business networks?, c) If social networking influences inter-firm co-operation in marketing, what is the strength and frequency of this inter-firm social interaction?, c) If there is any inter-firm co-operation in marketing activities, what are the marketing areas and what kind of social interactions make companies develop these actions?

4. To explore if there is any influence played by multinational companies in the development of inter-firm co-operation in marketing activities, when firms are located in regional clusters

Chapter 3 demonstrates that there is little empirical evidence and no latent constructs related to the contribution of multinational subsidiaries in the creation of active externalities. This objective was achieved in both the qualitative and quantitative analysis by exploring the question: is there any perceived influence of multinational companies in the creation of inter-firm co-operation in marketing?

5. To explore if there is any country or region specificity in the use of different types of inter-firm co-operation in marketing among clustered companies

This objective was completed by comparing one specific industry sector in two countries with different levels of economic development and culture. The study of particular regions within the country was also another important issue for the achievement of this objective. An extensive discussion of these issues can be found in the results and conclusions chapters. The main question underlying this objective was: is there any country specificity in the types and levels of inter-firm co-operation in marketing that those companies in a cluster use?

6.3 Research Philosophy

The research philosophy, in social sciences, reflects the importance of the choice of research questions and the method of undertaking them (Rosenberg, 1998). Furthermore, "Philosophy possesses the potential to construct a frame of reference for the research"

(Williams and May 1996, p. 10). The early ideas of the use of philosophy for knowledge came from Descartes (1596-1650), where the question: 'Where does our knowledge come from and how reliable is it?' was posed. This question opens the discussion up to the branch of philosophy known as *epistemology,* which tries to discover the justification for knowledge (Williams and May, 1996).

It can be understood from the literature that there has been a debate in the social sciences concerning the most appropriate philosophical positions from which different methods of research should be derived (Nachmias and Nachmias, 1976). Generally, two approaches have been the most common for the study of a phenomenon in social research, the positivist and the anti-positivist or 'humanist' approach (Hammersley, 1993).

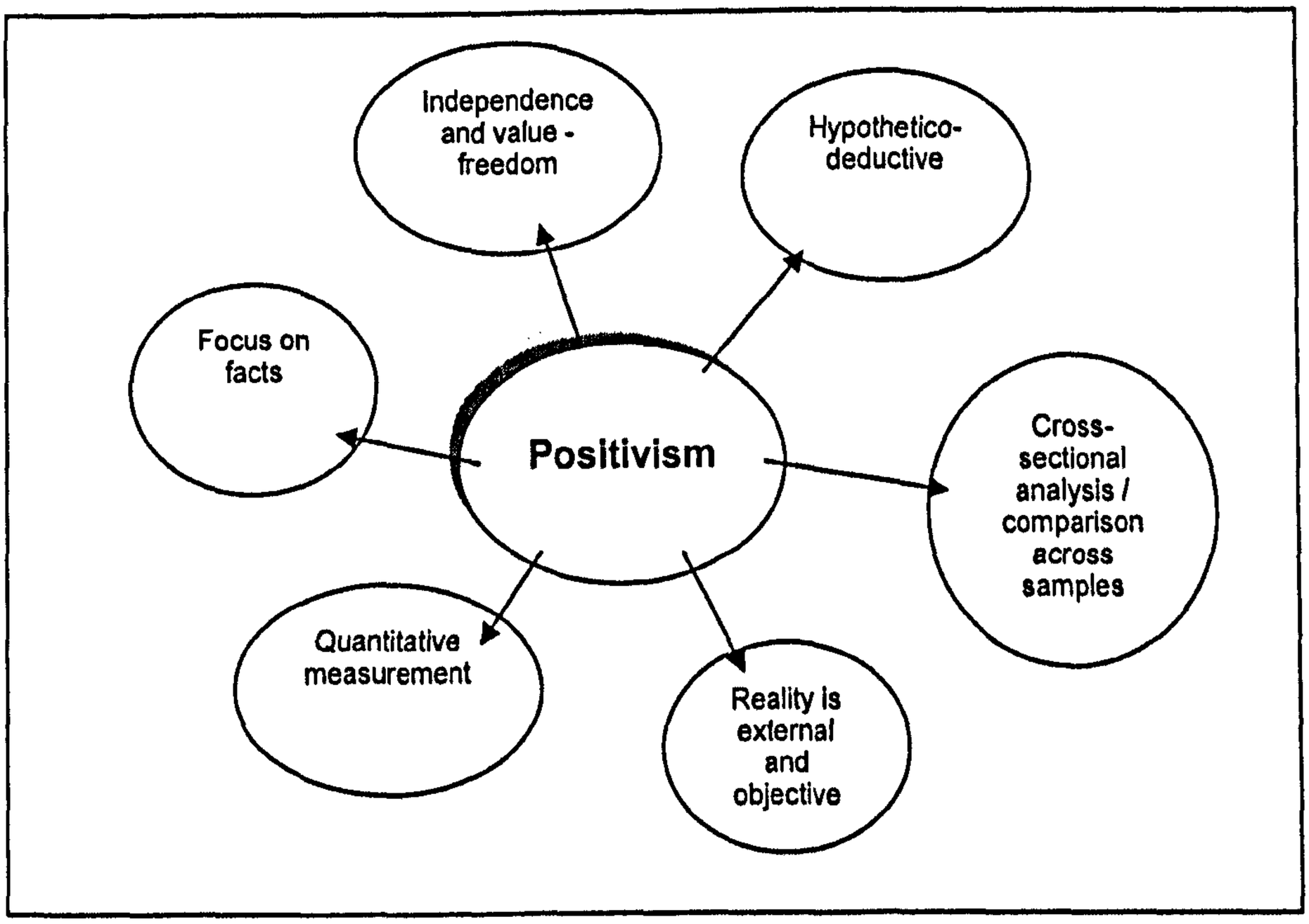
6.3.1 The positivist approach

The positivist approach, mainly influenced by the French philosopher Auguste Comte (1853), is based on the assumption that the social world exists externally and objectively, and that it can be measured through explanation and consequently deduction. Furthermore, it limits its conception of valid knowledge and science to what is observable. Therefore, it is concerned with the testing of theories and it is referred to as a hypothetical-deductive method (Easterby-Smith *et al.*, 1991).

As Donaldson (2001, p.9) states "Positivism has connections with empiricism, but it should not be labelled as empiricist epistemology. Positivism believes that there is a real world that exists independently of the mind of the observers". Furthermore, according to Nachmias and Nachmias (1976) the scientific approach is based on the assumption that the world can only be observed as an experience is processed through human intelligence, avoiding authoritarian, mystical and metaphysical modes with pre-conceptions of knowledge. In other words, a fundamental characteristic of the scientific approach is that it deals with objectivity and is based on the validation of theories by the

use of elementary observation statements known as hypothesis or propositions (Williams and May, 1996). Therefore, it can be concluded that scientific knowledge can be tested independently, and with impartial criteria, in a systematic manner. According to this idea, the positivist approach has been more related to quantitative data collection methods, where its main strength is that it provides a wide coverage of a range of situations, quickly and economically. As a result, using a positivist approach may be of considerable relevance to policy-making decisions because of its objectivity (Easterby-Smith *et al.*, 1991).

Figure 6.1: Some implications of the positivist approach



Source: Adapted from Easterby-Smith *et al.*, (1991)

The main practical advantage of the positivist or 'hypothesis – proposition testing' approach is that there is an initial clarity about what is to be investigated, and hence information can be collected speedily and efficiently (Easterby-Smith *et al.*, 1991). However, although the positivist approach is positively correlated with the characteristics of the scientific approach, one of its main weaknesses is that the method

tends to be 'inflexible' and 'artificial'. For example, it is not very effective in the understanding of processes (Nachmias and Nachmias, 1976; Easterby-Smith *et al.*, 1991). In addition, it relies on the fact that the only knowledge of any significance is that which is derived from the use of objective means. Indeed, Habermas (1970) argued that it is not always possible to have 'value-freedom', because any form of knowledge is an instrument of self-preservation.

6.3.2 The anti-positivist approaches

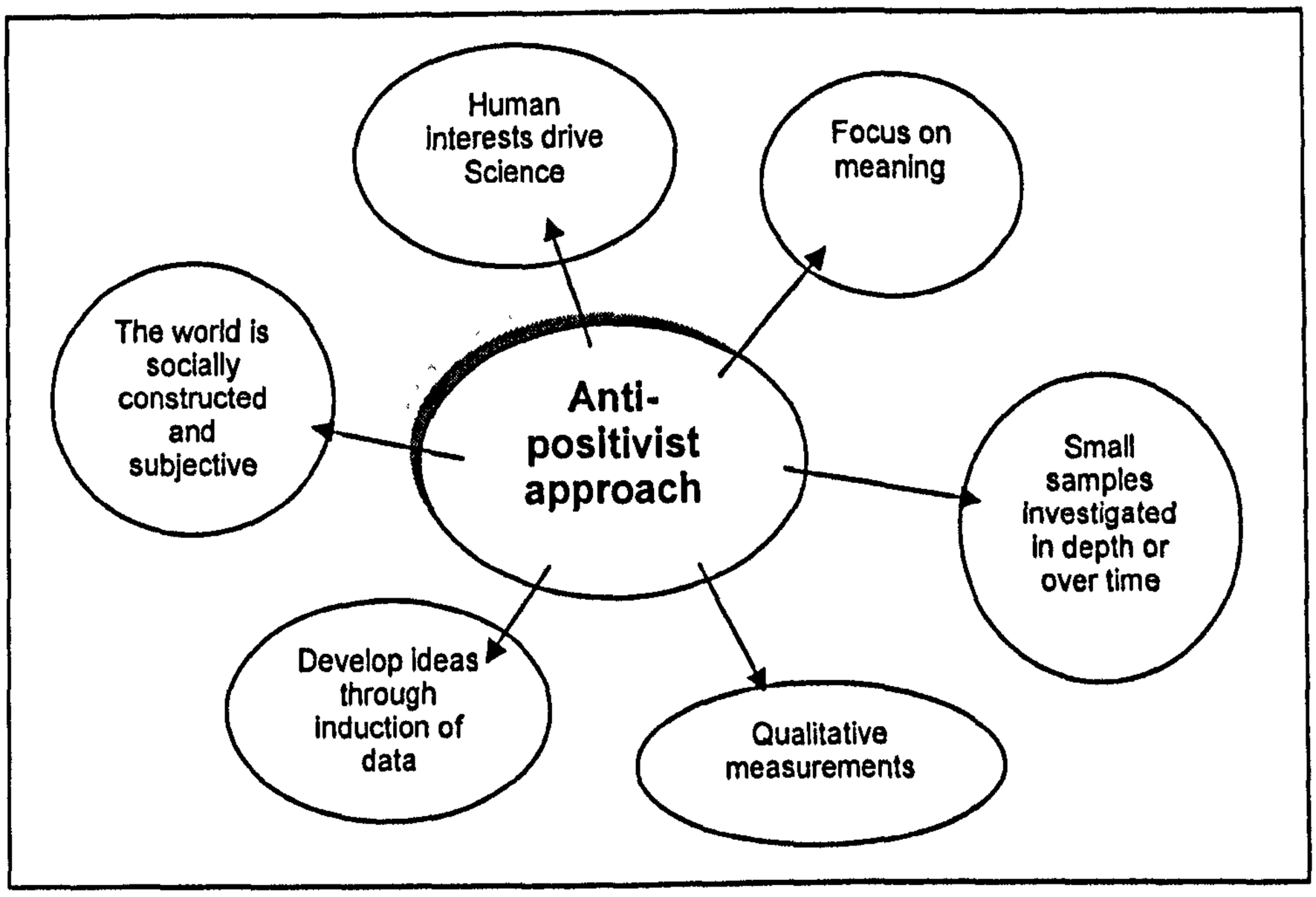
The anti-positivist philosophy of science argues against the view that reality and the social world are objective and exterior. Furthermore, it argues that reality is socially constructed and given meaning by people through interpretation (von Wright, 1993). In other words, in non-positivist approaches, reality is socially constructed and driven by human interests rather than objectively observed. Therefore, it is concentrated in meanings that people place upon their experience, when trying to *understand and explain the why of a situation* (Easterby-Smith *et al.*, 1991).

On the basis of the literature related to research philosophy, (Habermas, 1970; Nachmias and Nachmias, 1976; Easterby-Smith *et al.*, 1991; de Vaus, 2001), it is widely accepted that the main strength of the non-positivist approach is the ability to look and understand processes of interpretations contributing to the evolution of new theories. Furthermore, "it also provides a way of gathering data which is seen as natural rather that artificial" (Easterby-Smith *et al.* 1991, p. 32).

Anti-positivist approaches are flexible and can provide both explanations and new insights. However, it is time consuming and somewhat uncertain. It has also been recognised that among the main weaknesses of these approaches are the amount of time and resources that its data collection methods enforce (von Wright, 1993). Furthermore, the analysis and interpretation of data may be difficult and policy makers may give low

credibility to studies based only on qualitative data using a phenomenological approach (Easterby-Smith *et al.*, 1991).

Figure 6.2: Some implications of the non-positivist approach



Source: Adapted from Easterby-Smith *et al.* (1991)

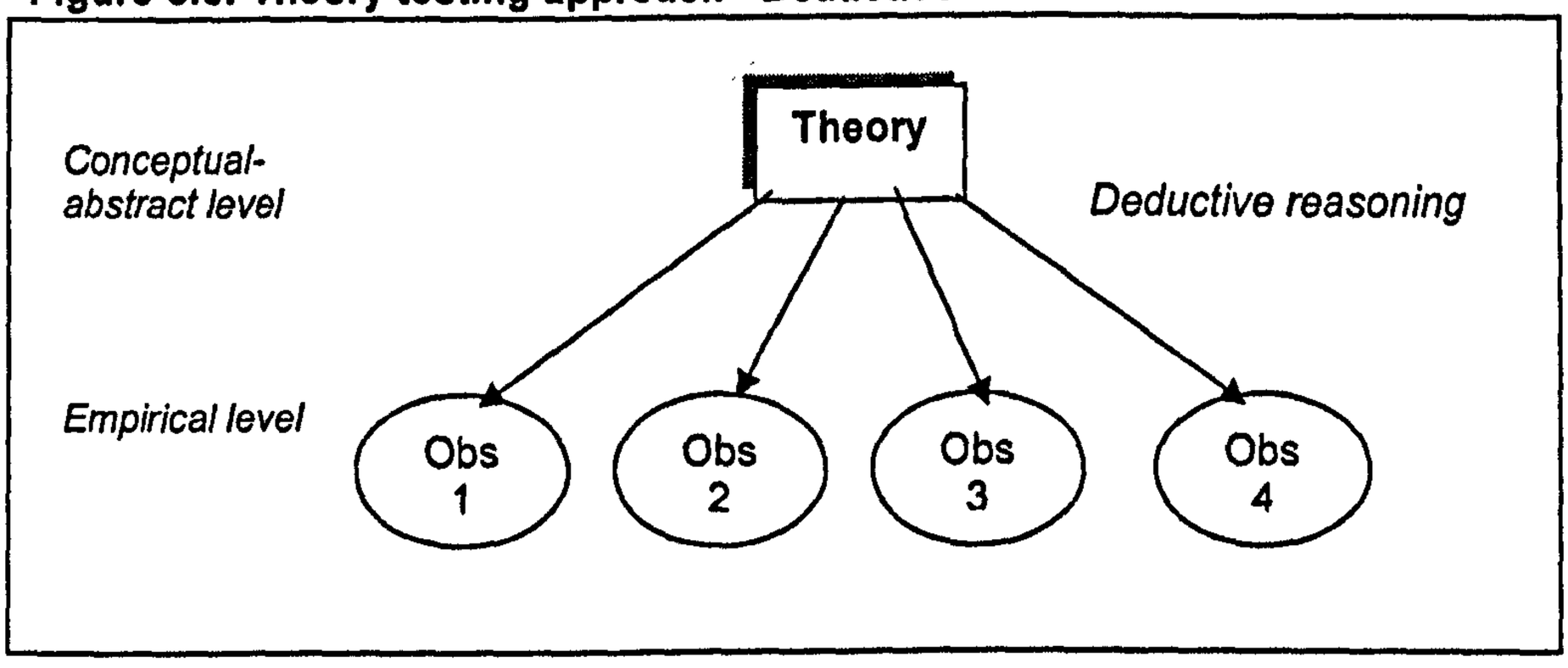
6.4 Deductive vs. Inductive Research

The previous philosophical approaches are important because they dictate the research methodology adopted and whether it is deductive or inductive.

According to Gill and Johnson (1991) and de Vaus (2001), *deductive* research methods are normally associated with the positivist approach, having a strong theoretical structure before testing empirical observations. In others words, deductive research uses theory to guide which observations to make, moving from the general to the particular (see figure 6.3). Indeed, a deductive explanation calls for universal generalisations using the role of logic, that is, it claims to encompass all cases that fall within the class to

which it applies. Therefore, "only a well-developed science can produce deductive explanations" (Nachmías and Nachmías 1976, p. 4).

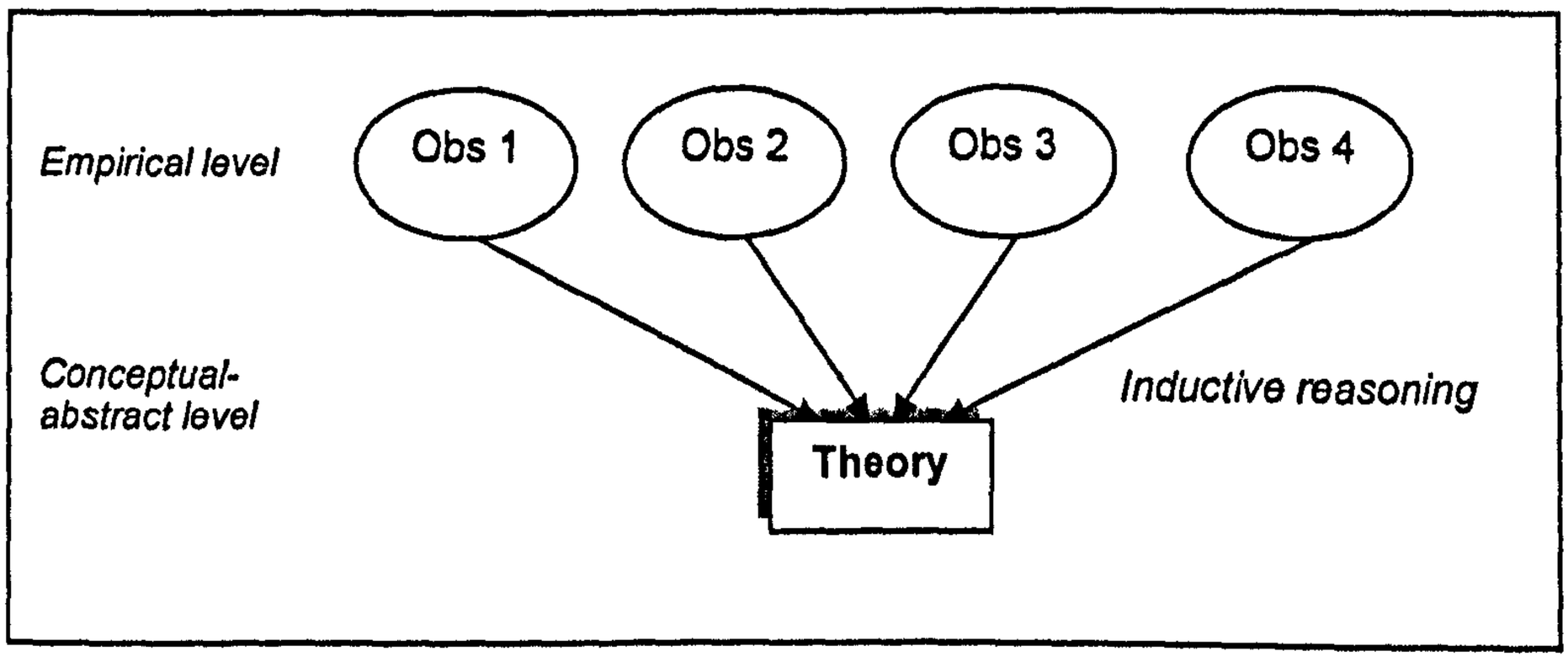
Figure 6.3: Theory testing approach - *Deductive*



Source: Adapted from de Vaus (2001)

On the other hand, *Inductive* research can be defined as "the derivation of a general principle, which is inferred from specific observations" (Williams and May 1996, p. 22). Furthermore, it is generally associated with the non-positivist approach, where theory is the outcome of observation, not the starting point (see figure 6.4). In other words, it involves a process of 'theory building' or '*post factum* theory' (de Vaus, 2001). According to Easterby-Smith *et al.* (1991), inductive research can be paradoxical, achieving powerful understandings of specific situations.

Figure 6.4: Theory building approach - *Inductive*



Source: Adapted from de Vaus (2001)

Finally, it is important to state that the key factors in marketing are socially constructed: human belief, behaviour, perceptions and values. Thus, when analysing these factors it is good to employ qualitative methods of social research. However, in the field of marketing, a strong preference can still be found for quantitative methods originating from the traditions of economics and behavioural science (Easterby- Smith *et al.*, 1991).

6.5 The Chosen Philosophical Approach

Sometimes in the field of social sciences it is believed there is a dichotomous choice between positivist (or *analytical-nomological* research) and anti-positivist (or *Interpretive / phenomenological*) approaches. However, Gill and Johnson (1991) explain that this view is inconsistent and that it is possible to construct a continuum of research methods and their underlying philosophies. Furthermore, nowadays it is more common to find academic research that combines both inductive and deductive techniques within the same methodological approach, which sometimes is called a *'multi-method approach'*. This is the approach used in this research. A combination of philosophical approaches is put forward in this thesis, through the use of qualitative and quantitative research methods explained later in this chapter.

The main benefit of a multi-method approach is that it allows the strengths and weaknesses of each technique to be addressed and thus produce more convincing research findings (Jick, 1979; Creswell, 2003). In addition, a two-stage research design provides an element of triangulation that enhances the internal and external validity of the study and the reliability of the findings (Creswell, 2003).

By including a *deductive* phase in the research design, it becomes possible on the one hand to generalise the research results and give a wider applicability to the study. At the same time, the results can also be verified by replication. On the other hand, researchers using an interpretive paradigm can use quantitative methods and *analytical-nomological* researchers can resort to qualitative methods of data generation. Consequently, the sharp

distinction between the two opposite poles is replaced by a research perspective which pragmatically incorporates elements of both poles, thereby creating a better understanding of the phenomena studied (Easterby-Smith *et al.*, 1991; Lee, 1991; Kromrey, 1994; Miles and Huberman, 1994; de Vaus, 2001; Creswell, 2003).

INDUCTIVE = *qualitative research methods = in-depth interview of a purposive sample of companies from the same industrial sector in Scotland and Chile*
DEDUCTIVE = *quantitative research methods = questionnaire survey of the population of companies in the chosen industrial sector in both countries*

Ontologically[1], as the literature review chapters have shown, the issues of interest in this study are inter-firm co-operation in marketing, especially for those companies located in close proximity. The operationalisation of these issues came from the explanations of previous studies in chapter 5: *Research propositions.* Epistemologically[2], the research incorporates what could be called objective and subjective evidence. The industry chapter presented the objective secondary statistical data available and collected by the researcher from key informants within the industry. Furthermore, subjective evidence was collected by the researcher through exploratory in-depth interviews with managers in the selected industry in Scotland and Chile.

6.6 Primary Research and Research Design

As Kummar (2000) states, primary data research may be used to assist in a specific project with clear research objectives. This involves having a clear target segment for the purposes of data collection.

[1] It refers to the subject of existence. It is also often confused with epistemology, which is about knowledge and knowing. The term ontology is used to mean a *specification of a conceptualization.*
[2] As previously stated, epistemological issues refer to the question of what might constitute knowledge about the phenomena studied.

6.6.1 The importance of the research process

When using a positivistic perspective, the function of the research process is to test rather than invent theories. Taking this into consideration, this research process involves: (1) the definition of the problem; (2) the formulation of the hypothesis; (3) the complete research design; (4) the scales of measurement; (5) the definition of the data collection methods; (6) data analysis; and (7) empirical generalisations. All these issues are discussed throughout this chapter.

The formulation of a research problem can be defined as "an intellectual stimulus calling for a response in the form of scientific answers" (Nachmias and Nachmias 1976, p. 10). At the same time, a problem that aims to be answered using a scientific approach should be specified. This was achieved by the researcher formulating research propositions presented in chapter 5, which aims to be tentative answers to research problems (Easterby-Smith *et al.*, 1991; Sounders *et al.*, 2000).

It is essential to consider that two important problems have arisen regarding the transition from the conceptual-theoretical level, to the empirical-observational level: (1) the degree of congruence between conceptual definitions and operational definitions. To avoid this, special care was taken in the operationalisation of the different variables under study. (2) Sometimes problems cannot be defined operationally. Subsequently, the use of meaning and the qualitative data became important. The use of validity tests helped to evaluate the congruence between conceptual and operational definitions.

6.6.2 The importance of the research design

According to (de Vaus 2001, p. 9) "the function of a research design is to ensure that the evidence obtained enables us to answer the initial question as unambiguously as possible". In other words, the research design is the basic plan or framework that guides the researcher in collecting and analysing the necessary data, relevant to the problem and research objectives using economic procedures (Tull and Hawkins, 1993; Kinnear and

Taylor, 1996; Kumar, 2000; Saunders *et al.,* 2000; Webb, 2002). Therefore, the researcher should choose an appropriate research design that best suits the study's objectives, while considering the limitations of time and human and financial resources. As Kinnear and Taylor (1996); Saunders *et al.* (2000) state, research designs may be classified according to the nature of the research objectives as: exploratory, descriptive, or causal (see table 6.1: traditional research designs).

Table 6.1: Traditional Research Designs

	Uses	Types
Exploratory Research	• Formulate problems more precisely • Develop hypothesis • Establish priorities for research • Clarify concept	• Literature search • Experience survey • Focus groups • Analysis of selected cases
Descriptive Research	• Describe characteristics of certain groups • Estimate proportion of people in a population who behave in a certain way • Make specific predictions	• Longitudinal study • Cross-sectional study • Panels • Sample survey
Causal Research	• Provide evidence of causal relationship between variables by means	• Laboratory experiment • Field experiment

Source: Adapted from Churchill (1995)

As table 6.1 summarised, *exploratory research* helps to discover ideas and get further insight into a topic (Webb, 2002). Additionally, it is characterized by a high degree of flexibility and versatility with respect to the method used in gaining insight (Churchill, 1995; Kumar, 2000). Furthermore, exploratory research is used when the objective is to define the problem or provide an overview of the situation. In fact, it is utilized extensively in international marketing research "when the researchers are asked to solve a problem or identify an opportunity in a foreign country they are not familiar with" (Kumar 2000, p. 83). Finally, exploratory research rarely relies on structured data collection instruments or involves any form of probability sampling procedures (Tull and Hawkins, 1993).

As Saunders *et al.* (2000) state, *descriptive research* focuses more on an accurate and valid description of the variables under investigation, by "not trying to uncover any causal link or any relationship between the variables – just describing them" (Webb 2002, p. 20). Furthermore, as Webb (1992; 2002) states, the majority of marketing research studies can be considered descriptive.

According to Kinnear and Taylor (1996), descriptive studies, in contrast to exploratory research, start from a prior knowledge of the marketing variables and are based on a previous understanding of the nature of the research problem. The purpose of exploratory and descriptive research is also different. An effective descriptive research is manifested by a clear statement of the research problem, the specific research objectives and detailed information needs (Webb, 2002).

According to Kumar (2000), cross-sectional[3] survey design is the most popular form of gathering primary data for international marketing research and it is useful in describing the characteristics of specific groups, providing a quick, inexpensive, efficient and accurate means of assessing information about the population (Kinnear and Taylor, 1996; Kumar, 2000). However, issues related to internal validity should be carefully considered when cross-sectional design is used (Easterby-Smith *et al.*, 1991; de Vaus, 2001; Croswell, 2003).

Although longitudinal research has the capacity to study change and development, it involves a repeated measurement of a fixed population sample. Therefore, they are very expensive to operate (Saunders *et al.*, 2000). For this reason, as well as considering the time limitations for this research (no more than three years), cross-sectional research has been chosen.

According to Webb (1992), *causal research* is a form of conclusive research, which identifies the cause and effect relationships among variables. In addition to this, the investigator usually controls variables, which can be subdivided into laboratory and field

[3] Cross-sectional designs have no time dimension and rely on existing differences, which facilitate methodological and practical issues for research (Saunders *et al.*, 2000; de Vaus, 2001; Croswell, 2003).

experiments, which are not applicable considering the research objectives and questions of this study.

Apart from the previous 'traditional' research designs, it is also important to mention *case study designs* (Yin, 1994). This consists of the exhaustive analysis of a single case (unit of analysis) or a series of cases (a variety of units of analysis) seeking full and in-depth explanations of phenomena using not only qualitative analysis, but also a range of data collection methods (Yin, 1994; de Vaus, 2001). Simply stated, a case study may be seen as an in-depth study of a particular instance of a phenomenon (Hyde, 2000).

According to Yin (1994) case studies, rather than the more conventional questionnaire surveys dominating research, are appropriate for researching causal phenomena. Furthermore, the choice of a qualitative case study does not necessarily imply an unstructured and interpretive research design. Moreover, the qualitative method with its interpretative orientation may be based on prior evidence and may be used in conjunction with this evidence as a point of departure for primary research (Mason, 1996).

Among the main weaknesses of case study design, are issues related to external validity, generalisation of results, access to accurate information, relatively high costs and the time involved.

6.7 The Chosen Research Design

Following on from the previous section, which detailed alternative research designs and taking into account the philosophical aspects, revision of the research objectives as well as the limitations of time and cost of this study, this thesis has adopted an exploratory and descriptive research design.

In the first part of this project, a more exploratory research design was adopted, because it involved un-structured interviews with key informants to gather information with

regards to the topic and specific industry. Thereafter, it was possible to understand the real problem and particular situation under research.

In the second part of this project, a more descriptive design was adopted, because the research provided clear objectives, a comprehensive and critical analysis of the literature, as well as a description of the industry. This part of the research was characterised by a carefully planned and structured data collection procedure, a questionnaire survey. Sometimes questionnaire surveys require large quantities of data to be collected (Kinnear and Taylor, 1996), and this was found to be one of the main limitations of this research, as a single industry sector in two countries were explored. Furthermore, achieving a good response rate was a key challenge during this research process.

6.8 Primary Data Collection

According to Williams and May (1996), most social research is conducted through different methodologies of data collection. The chosen methods would depend on the resources available and the nature of the phenomena to be studied.

As Williams and May (1996); Kumar (2000) and Saunders *et al.* (2000) state, there are different methods for collecting primary data, which include interviews, focus groups, observational techniques and surveys, among others (see table 6.2: Primary data collection methods).

Table 6.2: Primary data collection methods

Data Collection	Main characteristics	Advantages	Disadvantages
Interviews	It is a discussion between two or more people. It can be in person or by telephone. It is generally a qualitative method of research. However, it can also be use as quantitative.	It can help to gather valid and reliable information. It can also help to formulate research questions and objectives.	It is very difficult to conduct properly. It is the most expensive method of conducting research.

Focus Groups	There is group interaction with an interviewer that guides the discussion. It represents a qualitative method in primary research. It is useful for the generation of new ideas.	Because of the presence of several participants, allows a variety of points of view. They can also generate a number of key themes that become the subject of a survey.	It is difficult to combine participants from different social classes and age groups. Difficult in interpreting verbal and non-verbal communication. Sometimes, one or two members can force their views on the remaining panel members. Difficult to coordinate in industrial research, especially among managers.
Observational Techniques	It involves mainly a systematic observation, recording, description, analysis and interpretation of people's behaviour.	It is a good attempt to know "what is going on" in a wide range of consumer behaviour areas.	It is costly and time consuming for the researcher. People tend to react differently when they are being observed.
Survey	It is possible to ask people exactly the same set of questions. It is mainly used for descriptive and exploratory data about attitudes, beliefs, behaviours and attributes.	It can be used to reach a representative sample size of the population. Low cost compared to other methods of data collection.	The validity and reliability of the data and response rate depends on the design of the questionnaire and the sample size.

Source: Adapted from Kumar (2000) and Saunders *et al.* (2000)

6.8.1 Personal interviews

A personal interview involves face-to-face contact where the interviewer asks respondents questions with the aim of obtaining answers pertinent to the research propositions or hypothesis. At the same time, this data collection method allows access to raw data involving a socially constructed process.

Personal interviews can vary, ranging from very structured to unstructured types. In the most *structured* forms, the wording and their sequence are fixed and are identical for

each respondent. In order to achieve this, the interview should be based on key assumptions that sometimes can be difficult to achieve: 'all the questions have the same meaning for every respondent' (Kumar, 2000; Saunders *et al.,* 2000). Therefore, this structured form may imply further difficulties in cross-cultural analysis and the research involve in comparing industrial sectors in Scotland and Chile. Two countries where meanings, cultural norms and managers' willingness to participate in long interviews are perceived to be different.

Thus, *non-structured* interviews may be seen as a more flexible method by referring to the particular experiences of respondents or their specific situations. Non-structured interviews aim to provide a general understanding of the situations under study. Generally in this kind of interview "respondents are given considerable liberty in expressing his or her definition of a situation as perceived by each individual" (Nachmias and Nachmias 1976, p. 101). Furthermore, it permits the researcher to obtain details of specific reactions and emotions with little or no direction from the interviewers. As a result, respondents can express their own definitions of their situations. Furthermore, the interviewer has a great deal of freedom to explore different aspects and raise other specific queries during the interview.

Generally, personal interviews require thorough preparation. This includes clear definitions and structure of questions, identification of key issues and topics for research, as well as clear and precise phrasing of questions. Furthermore, it is recommended that questions are tested *ex ante* the interview.

6.8.2 Focus groups

According to Bryman (2001, p.337) "focus groups are a form of group interview, in which there are several participants (in addition to the facilitator moderator); there is an emphasis in the questioning on a particular and rather tightly defined topic; and the accent is upon interaction within the group and the joint construction of meaning". Thus, focus groups, as well as personal interviews, provide first-hand knowledge of the

subject. The main advantages of focus groups are their flexibility and accommodation of different situations. They also uncover real and often informal organisational life and personal experiences (Morgan, 1998). However, problems related to validity and reliability issues may continue to arise when focus groups are the only data collection method used (Bryman, 2001).

6.8.3 Observational Techniques

In contrast to personal interviews and focus groups, observational techniques emphasise the understanding of processes, by providing contexts and details of specific situations, as well as allowing empathy in the research process (Nachmias and Nachmias, 1976; Bryman, 2001).

The main advantage of this data collection method is its flexibility, allowing an unstructured method of research and theory development. However, it is costly and time consuming method.

6.8.4 Survey Research

According to Baker (1991; 2001), survey research is the best source of primary data collection, not only in marketing but also in the social sciences in general. Indeed, survey research includes "*structured or semi-structured* data collection methods, with the information being collected from a census of the interested population or from a representative sample of that population" (Webb 1992, p. 23). There are different techniques of data collection available which can be used to conduct survey research, including: personal interview, telephone interview and questionnaires, among others (see table 6.4: Main types of survey research)

Table 6.4: Main types of survey research

Survey Research	Main characteristics	Advantages	Disadvantages
Personal Interviews	A "door-to-door" interview, which involves high costs.	It is flexible method of obtaining data. Non-response error is marginal. The interview has a high degree of flexibility to replace questions.	High cost of study. The presence of the interviewer could make some respondents uncomfortable. Cultural bias.
Telephone Interviews	It is used when there is a large sample size and to reach respondents who are not available for a face-to-face interview.	Low cost. The research can be done in a short period of time.	Interviewer bias is present. It is not possible to use visual aids. Language and cultural problems in the interpretation of answers.
Mail Survey	Respondents complete the survey and mail it back. It is well known in industrial surveys	It can cover a broader respondent base. Do not require any field staff. Free from interviewer bias. Low cost.	High non-response rate. There is no control over the questionnaires and speed of response. Thus, there is a long response time.
Delivery and collection; "Drop-off and pick-up"	Appropriate for detail surveys of attitudes and behaviour	Moderately high response rate (30-50%). There is no interview bias.	It requires fieldwork in the delivery and collection of the survey. However, this enhances respondent participation. It requires travel expenses (delivery and collection) for each questionnaire.

Source: Author table, based on Kumar (2000) and Sounders *et al.* (2000)

6.9 The chosen data collection methods

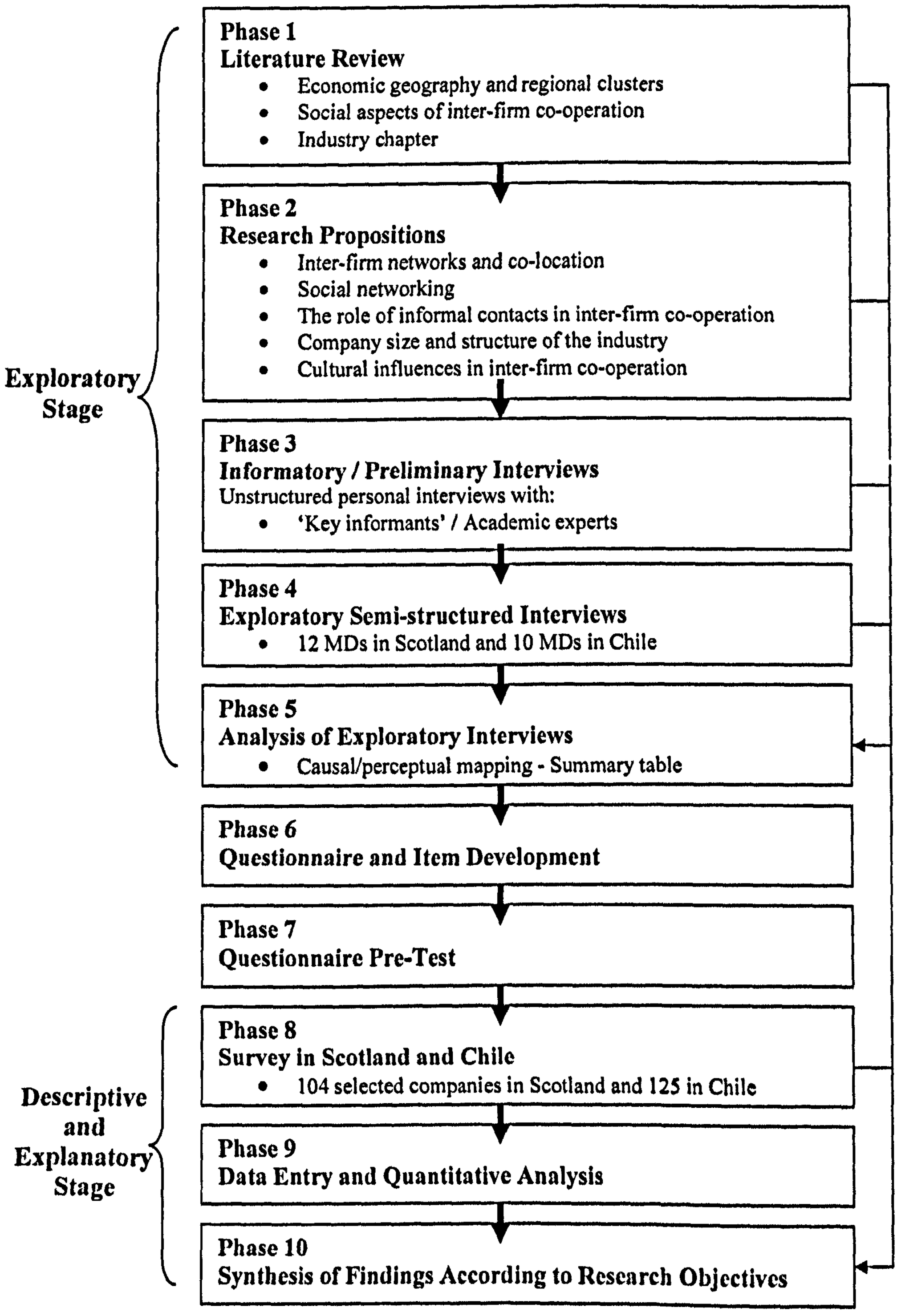
Considering the research objectives, and based on the analysis of different alternatives of data collection methods, personal interviews and questionnaire survey research were used for this study. Furthermore, considering time, expenses and human resources that were engaged, the data collection techniques were divided in two main steps: 'Exploratory Stage' and 'Descriptive and Explanatory Stage' (see Figure 6.5).

The exploratory stage, started with the literature review in chapter 2 and 3, where the main concepts and agglomeration economies and social networking were explained with a focus on inter-firm co-operation. Furthermore, an industry chapter was included to explain the specific industry context in which this research took place. Later, five research propositions were derived from the literature, generating a conceptual framework. This framework was used as the basis for exploration in the empirical analysis, which started with informatory - preliminary interviews.

(1) Preliminary personal non-structured interviews

Curran and Blackburn (2001) suggest that qualitative methods are most suitable to explore an issue or process. Purposeful sampling was used to identify key respondents that were known by the researcher as being 'well networked' in the selected industry for this empirical study. As Saunders *et al.* (2001) state, using the judgement of the researcher is a common issue in social research that helps to achieve the research objectives of specific studies especially in the early stages of the process. Furthermore, it is often used when researchers wish to select cases that are particularly informative.

Figure 6.5: Research Phases of the Thesis



The preliminary interviews with 'key informants' were conducted in Scotland and Chile. Each of these interviews was conducted in the country's spoken language (English and Spanish, respectively). The respondents were contacted prior to the interview via e-mail or telephone, explaining the purpose of the interview and the kind of information that the researcher was looking for. The main objective of these interviews was firstly to gain further insight and knowledge into the industry trends and structure, from a primary source, and secondly to identify the best way of approaching companies in each of the selected countries. It was hypothesised that the best way may vary according to local and business culture. At this stage, it was perceived that contacting Managing Directors from companies in Scotland would be direct, compared to those in Chile, which were contacted through their secretaries. This may be interpreted as the different power distant that exists in each national culture (Hofstede, 1991) as well as the differences in cultural and organisational factors (see Ibeh *et al.,* 2004).

Table: 6.5: Preliminary non-structured interviews

Stage	Method used	Number of respondents	Date
1	Preliminary interviews with leading academics in the subject. The main aim was to clarify the topic and research objectives	***4 respondents:***	
		Prof. Stephen Young	25-10-2002
		Prof. Michael Baker	17-11-2002
		Prof. Sara Carter (as supervisor)	2002-2005
		Prof. James Young (at Stirling)	2003
2	Non-structure interviews (2hrs each interview) in Scotland and Chile and data collection from key 'well networked' respondents	***3 Key informants:***	
		Mr. David Rackham	26-01-2003
		Ex-CEO in the Scottish salmon farming industry. Business consultant in the sector, Scotland	21-10-2003
		Mr. Jorge Mantellero, CEO	
		Salmon Farming Cluster Project, Puerto Montt, Chile	20-02-2003
		Mr. Ally Young	
		Project manager, Fish Protection Office, Isle of Sky, Scotland	09-06-2003

(2) Exploratory semi-structure personal interviews:

The aim of semi-structured personal interviews in this research is to obtain pertinent data, which facilitates the understanding of the practical context and concepts, developed previously in the literature review. At the same time, as previously stated in the research philosophy section, this data collection method also allows access to raw data involving a socially constructed process. Each interview took a maximum of 1 hour and 30 minutes, and was conducted by the researcher *in situ,* namely in Scotland: Perth, northwest Scotland and Shetland Isles. While in Chile, the interviews took place in: Santiago (central Chile), and southern Chile *IX* and *X regions* including: Villarrica, Pitrufquen, Puerto Montt and Puerto Varas (see table 6.6a and 6.6b).

Table 6.6a: Participant companies in the exploratory personal interviews in Scotland

Method used	Number of respondents
Interviews with CEOs and General Managers of trade associations, large companies and SMEs, which participate in the value chain activities. *Unit of Analysis:* the firm *Location:* Industrial districts and 'regional cluster' of the salmon farming industry in Scotland (Northwest Scotland and Shetland Isles). *Duration:* 1 hour and 30 minutes approx. Date of the interview: June/July, 2003	***12 respondents:*** Ms. Sue Wood The Salmon Management Company, Perth Mr. Brian Simpson Scottish Quality Salmon, Perth Mr. Nick Joy Loch Duart, Sotherland Mr. Dennis Overton Aquascot, Alnes, Highlands Mr. Gilpin Bradley Wester Ross Salmon, Inverness Mr. Cameron Brown Strathaird Salmon, Inverness Mr. David Sandison Shetland Salmon Farmers' Association Mr. Michael Tait Mainstream Scotland Ltd. (Shetland Office) Mr. Dave Hammond The Shetland Smokehouse Mr. Frank Johnson Framgord Ltd., Shetland Mr. Michael Stark Hjaltland, Shetland Mr. Ivor Johnson Johnson Seafarms Ltd.

Table 6.6b: Participant companies in the exploratory personal interviews in Chile

Method used	Number of respondents
Interviews with 'key informants', CEO and general managers of trade associations, large companies and SMEs, which participate in the value chain activities. *Unit of Analysis:* the firm *Location:* Industrial districts and 'regional cluster' of the salmon farming industry in Chile ('Region de los Lagos': Puerto Montt, Puerto Varas and Chiloe Island and IX region). *Duration:* 1.5 hours approx. Date of the interview: December 2003 and January 2004	***10 Respondents:*** Mr. Rodrigo Infante SalmonChile (Trade Association), Santiago Mr. Jorge Fernandez Cia. Pesquera Camanchaca, Santiago Mr. Hans Kossmann Patagonia Salmon Farming, Puerto Montt Mr. Gonzalo Arellano Alitec, Puerto Montt Mr. Arturo Clement Multiexport, Puerto Montt Mr. Rodrigo Sanchez AquaChile, Puerto Montt Mr. Andres Johnson Marine Harvest, Puerto Montt Mr. Eduardo Spencer Spencer Smoked Salmon, Puerto Varas Mr. Aquiles Von Fach Von Fach Smoked Salmon, Villarrica Ms. Alma Fernandez Salmones Alma, Pitrufquen

6.10 The Qualitative Research

6.10.1 General data collection process

The interview process provides the researcher with "the opportunity to uncover new clues, open up new dimensions of a problem and to secure vivid, accurate inclusive accounts that are based on personal experience" (Burgess 1982, p. 83). Furthermore, the interview process helps to construct the meaning and significance of particular situations, which with other methods of research are difficult to understand.

One of the key characteristics of a researcher conducting interviews is to be sensitive enough to ensure that they not only understand the respondents' views, but also to assist

the respondent to explore their own beliefs (Burgess, 1982; Easterby-Smith, Thorpe and Lowe, 1991; Baker, 2003).

As stated previously, the first primary data collection from this thesis included a qualitative technique, which aims to explain and understand, rather than predict phenomena (Gordon and Langmaid, 1988; de Vaus, 2001). Moreover, the analysis was carried out using cognitive (cause) maps (Eden, 1988; Eden and Huxham, 2002). This form of analysis provides graphical representations of how those questioned 'perceive', 'see' and 'explain' certain situations (causality). Furthermore, questions of 'why' certain situations occur, or 'what does it mean?', helped the understanding and explanation of processes, which in this case, have been related to 'how' and in 'which ways' regional clustered firms co-operate in marketing activities. Especially, if there are no collaborative marketing activities to explain the reasons 'why'.

6.10.2 Data collection in Scotland

Prior to the interviews, respondents were contacted in the first instance by e-mail[4] in the first week of June 2003, as part of a purposive sample of 24 MDs of individual firms in Scotland, who were involved at one or more stages of the value chain activities of the salmon farming industry. The main purpose of the e-mail was to explain the main objectives of this research of building an understanding of the inter-firm co-operation in the marketing activities within the industry and ask for a personal interview *in situ* (See appendix 1: Letter to the MDs).

After one week, seven (7) responses to the e-mails asking for an interview were obtained. Due to these far from encouraging responses from the industry, at the end of the second week of June 2003, four more MDs were contacted by phone[5]. Thereafter,

[4] The e-mail addresses were found by searching on the internet and from 'Intra-fish' databases, a Members' Directory book sent by The Shetland Salmon Farmers' Association and the Scottish Quality Salmon member list. Additional suggestions were provided by the key informants.
[5] Contact list provided by Mr. David Rackham, 'key informant' in the preliminary stage of this research.

they were willing to participate. Furthermore, the MD of the Shetland Trade Association was disposed to provide further industry contacts. This situation demonstrates that personal contact and networking in the industry are key elements for the success of this kind of research. Furthermore, while e-mail contacts may be seen as an inexpensive and rapid means of communication, they are not always effective when contacting MDs for personal interviews in this industry, and a personal approach seems to be more effective.

During June 2003 the process was continued and other companies included in a list given by one of the 'key informants' in the industry were contacted. Three out of five companies decided to participate in a personal interview during July. The other two companies refused. Other MDs were contacted, but they were not able to participate in the interview process.

6.10.3 The interview outline and validity issues

Interview outlines can guide the process of collecting information, increasing the comprehension of the data gathered and make the data collection relatively systematic, whilst still enabling the interviews to remain fairly conversational and flexible (Patton, 2002; Baker, 2003). The extent and structure of the interview outline may affect the comparability of the results especially when doing cross-cultural analysis, as in this thesis. For this reason, it may be advisable to use a more structured approach by having a standardised open-ended interview, where the exact wording and sequencing of questions is determined in advance. This approach means that there is a high level of comparability of responses and it reduces the biases of the interview process (Baker, 2003).

This research used an interview guide. This guide was a mix of questions, which according to the research objectives covered the main areas of this exploratory enquiry (see appendix 2: interview guide). Furthermore, the interviewer was 'free' to explore in greater depth certain aspects of the interview, as well as being 'flexible', depending on

the particular characteristics of the participating firms (Patton, 2002; Webb, 2002; Baker, 2003).

The interview outline was reviewed by the thesis supervisor and two other academics at the University of Strathclyde[6]. Furthermore, the questions were commented on, by two of the key informants of the industry. These critiques and feedback assured the internal validity of the questions for the interview, and avoided possible misunderstandings, regarding the exact meaning of the selected questions.

6.10.4 The Interview process in Scotland

The interview process in Scotland was conducted in English; each interview took approximately 1 hour and 30 minutes. The process started by describing the general boundaries that circumscribed the interview situation and research (Webb, 2002; Baker, 2003). At the same time the respondent was reassured about the confidentiality of the interview and permission for the use of a tape recorder was requested and granted. The interview progressed with general questions related to the activities of the firm, in order to establish a rapport. Once the activities and main markets were described, opinions and particular thoughts, related to inter-firm co-operation in marketing activities within the industry cluster, were sought. Questions related to future actions were minimal as these are typically less reliable (Patton, 2002). Questions like: 'Why?', 'Where?', 'What sort of...?', and 'How?' were used to acquire more detailed descriptions and more information from the respondents. At the end, the interviews closed by asking the respondents if there were any questions they had not been asked that they thought they should have been asked, or if they wanted to raise any particular issue related to the interview process.

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[6] The researcher wishes to thank Professor Sara Carter and Dr. Stephen Tagg (at Strathclyde) and Dr. Pavlos Dimitratos (At Athens School of Economics) for their useful comments and suggestions in the interview outline.

After the semi-structured interviews (n=12) were carried out in the selected industry during July 2003, the researcher started to analyse the information by means of causal maps (August and September 2003), as well as briefly describing each participating company (see chapter 7 for the qualitative analysis). In the interest of assured confidentiality and anonymity, the names of the companies have been changed to the randomly chosen pseudonyms S1, S2... for companies located in Scotland, and Sh1, Sh2... for those companies located in Shetland isles. In October 2003, a copy (summary) of the analysis to each company that participated in the interview was sent out.

Two weeks after notifying the participant companies with the results of the interviews, the researcher called them to check if they have received the information and if they had any further comments or feedback. All the companies acknowledged receipt of this information. Furthermore, the MD of S2 declared that he has passed this information to their marketing director "because of the importance of the analysis and the relevance of it to their marketing strategy...". Apart from this company, the MD of S4 was in touch with the researcher just after receiving the summary of the interview, asking for an electronic copy of the casual map (by e-mail) because "this is important information for future meetings analysing the current situation of the company...". These facts indicate that in innovative companies; engaging in the development of 'active marketing externalities', the entrepreneurial and active role of the MD/owner is a key element, and this spirit leads to the creation of collaborative arrangements among firms (see chapter 7).

6.11 Data collection in Chile

On September 25, 2003, the researcher sent from Scotland 16 letters and 4 e-mails in Spanish (*'castellano'*) to a purposive sample of General Managers / Managing Directors, of selected Chilean companies involved in the value chain activities of the Salmon Farming Industry, located in the *Xth. Region,* southern Chile. Each Manager was asked for a personal interview during December 2003, or alternatively January 2004. This

period of time was chosen for communication by letter and e-mail because it is after the national holidays (*'18 de Septiembre'*), which means businesses start to think about the different activities that they will perform until the end of the year. This suggests that it is important to be aware of local cultures. This is a key issue when conducting multicultural research.

After two weeks, only one (1) reply from the contacted companies was received. This positive disposition for an interview was from the MD of the trade association 'SalmonChile', located in Santiago, agreeing for a meeting in Santiago on December 10, 2003.

After a month, and considering that letters were sent by international mail (from Scotland to Chile), during the last week of October 2003, companies were contacted again. At this stage, it was realised that many of the Chilean MDs did not pay careful attention to the said communication. Others did not receive it, and others asked for a copy to be sent to their personal e-mail address. Later, during the first week of November 2003, the companies were again contacted, asking for a response to the proposed meeting between December 2003 and January 2004. At this period of time, only one (1) positive answer for a meeting during the first week of January 2004 was received. The rest of the MDs (mainly through their secretary) acknowledged that they would plan a time for a meeting nearer the proposed dates. So, they agreed to be in touch again by telephone at the end of November or beginning of December 2003. This situation represents the characteristic of a country with a high power distance (Hofstede, 1980), where the use of secretaries and gatekeepers makes it more difficult to contact directly MDs (Ibeh *et al.*, 2004).

The previous situation demonstrates that corresponding by post and preliminary e-mail, must have an intensive follow-up process when doing international cross-country research and especially in some cultural contexts (see Ibeh *et al.*, 2004), as in the case of Chile, where telephone calls and a more personal contact may be a key element for cooperative research with firms.

During November and December 2003, all the previous companies were contacted again, to confirm possibilities for meeting. The result was that 7 companies agreed for a meeting during December 2003 and January 2004.

At the beginning of December, the researcher moved to Chile for three months with the aim of conducting the personal interviews, as well as to prepare the material for the questionnaire survey (Spanish version). During these months 10 companies were contacted. All the interviews took place at the companies' premises and they included a well balanced mix of small business (SMEs) and multinational companies (MNEs) (see chapter 7: qualitative analysis).

6.11.1 The interview outline

The interview outline used in Chile, was the Spanish translation and adaptation of the one designed previously in Scotland. The translating process was initially done by the researcher. However, as this can be biased, the collaboration of a professional translator was enlisted. Furthermore, the questions were commented on and adapted to the cultural reality of the country with two of the key informants of the industry[7]. Therefore, this process helps with the internal validity of the questions for the interview and avoids possible misunderstandings.

6.11.2 The Interview process in Chile

The interview process in Chile was conducted in Spanish (mother tongue of the researcher); each interview took not more than 1 hour and 30 minutes. The process began by describing the general boundaries that circumscribed the interview situation and research (Webb, 2002; Baker, 2003). Later, with the aim of allowing comparability, the process continued per the Scottish interview process.

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[7] The researcher wish to thanks the collaboration of Mr. Johnny Neumann (Nutreco, Skretting Chile and Scotland) and Mr. Jorge Mantelero (ARASEMAR, Chile)

After the interviews (n=10) carried out during December 2003 and January 2004, the analysis was completed by means of causal maps (February 2004). Subsequently, during March a summary of the analysis was sent out to each company that participated in the interviews. In the interest of the assured confidentiality and anonymity, the names of the companies have been changed to the randomly chosen pseudonyms Ch1, Ch2... for companies located in Chile.

At the end of the interviews in both countries, a comparative qualitative analysis was carried out and is presented in chapter 7.

6.11.3 Qualitative data analysis, main problems and further steps

The complexities of analysing qualitative research data can be particularly appreciated when compared to quantitative data. One of the diagnostic tools used in this study was content analysis (Brenner *et al.*, 1985), because by the end of the exploratory interviews the researcher was faced with a mass of open-ended material to make sense of. The overall purpose of the content analysis approach was to identify specific characteristics of communication systematically and objectively in order to convert the raw material and like respondents' answers into scientific data. However, the problems of validating the results of qualitative content analysis, where intuition and interpretation played a major role in the analysis, are obvious. One of the tools to enhance the validity of the findings in this study is the triangulation of the results with a quantitative analysis of a questionnaire survey research. The results are presented in chapters 8 and 9.

6.12 Questionnaire survey

After the personal interview process (from July 2003 to February 2004), which included a qualitative analysis by means of causal maps, a questionnaire survey was designed and sent out to collect data for quantitative analysis.

6.12.1 Survey procedure and pre-test

The second part of this study was conducted using a mail survey. Where possible existing measures for operationalising constructs employed in previous studies were used and adapted, on the basis of the nature of the phenomena under study (see Chapter 5: Research Propositions). The questionnaire was designed and set out in English (for the Scottish industry) and Spanish (for the Chilean industry). It was pre-tested by a group of 10 academic experts[8] and 8 Managing Directors/ practioners from Scotland (n=5) and Chile (n=3)[9] to assess clarity of instructions, style of the questionaire, length and scale itemes. Finally, on the basis of their comments, modifications were made.

While piloting the survey, at the pre-test stage, it was decided not send it to the participant companies, in order to avoid contaminating the sample.

The translation process of the questionaniare from the final English version to the Spanish one was completed, in the first instance, by the researcher whose mother tounge is the local language (Spanish). Later, an independent translator was enlisted to translate from English-Spanish, to confirm the previous one and resolve with the differences in the meaning of some words. The results of this process concluded that there were some differences in a few words and expressions, for example the real meaning of 'Clusters'. These differences were sorted out with the help of one of the key informants in Chile (educated in the UK). Following the advice of some authors on cross-cultural research (Choudhry, 1986; Ibeh *et al.*, 2004), a back translation strategy was also used to achieve a more reliable and appropriate translation. This process was achieved with the help of another independent translator located in Chile[10].

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[8] The researcher wishes to thank Professors Sara Carter, Susan Hart, Michael Baker, Stephen Young, Colin Mason and Dr. Stephen Tagg (at Strathclyde, UK); Professor Rod McNaughton (at Waterloo, Canada); Professor Michelle Akoorie (at Waikato, New Zealand) Drs. Pavlos Dimitratos and Emmanuella Plakoyiannaki (Athens University of Economics and Business, Greece), for their useful feedback and comments on the questionnaire.

[9] Special thanks to Mr. David Overton, David Rackham, Placido Flores, Johnny Neuman, Brian Simpson, Nick Joy, Cameron Brown and David Sandinson for their specific comments

[10] During the translation process the researcher wants to thanks the collaboration of Mrs. Monica Jimenez, Mr. Andrew Chapman and Mr. Michael Acevedo

The total process from designing the questionaire, pre-test, translations and back translations took six months. This followed a rigorous and detailed process, not only achieving a better instrument of measument, but also accomplishing high levels of validity of the questionaire, one of the objectives of scientific research.

6.12.2 Scales of measurement

Generally speaking, there are four levels of measurement that can be used for marketing research: nominal, ordinal, interval and ratio. As Webb (2002, p. 143) states, "as the level of measurement increases from nominal (the lowest) to ratio (the highest), the conditions for entry to each level of measurement become more exacting and the manner in which the numbers may be analysed becomes less exacting". According to Baker (1991), a nominal scale is the weakest form of scale, numbers have the least mathematical value and a good statistical manipulation of the results is not possible. On the other hand, in ordinal scale or ranking scale, numbers are assigned to objects to present some characteristic, but in this instance the numbers themselves are meaningful (Saunders *et al.* 2000).

The questions used in this study mainly utilized a *Likert scale*, with response categories ordered on a five-point scale representing the degree of a respondent's agreement (Section 1: Q7; Section 3: Q4, Q5, Q6, Q8, Q9; Section 4: Q2, Q9, Q10, Q11, Q12; Section 5: Q1) , usefulness (Section 2: Q1, Q2, Q3), cooperation (Section 3: Q7), importance (Section 4: Q7, Q8), or expectations (Section 5: Q2) of different statements (see appendix 3: Questionnaire). Generally, Likert scales are easy to use with simple instructions, which facilitate mail and self-administrated questionnaires (Kinnear and Taylor, 1996; de Vaus, 2002; Blaikie, 2003). At the same time, it has been extensively used in previous research related to the issues of inter-firm cooperation and social elements of networking (see Granovetter, 1973; Morgan and Hunt, 1994; Brown and Bell, 2001; Coviello *et al.*, 2002; Coote *et al.*, 2003; Coutler and Coutler, 2003).

The main disadvantage of a Likert scale is however, that it produces only an ordinal scale. Some researchers argue that the Likert data closely resembles that of an interval scale, and are therefore more in favour of using statistical techniques requiring interval data (Bagozzi, 1996).

The study also used some nominal scales (Section 1: Q1, Q3, Q4, Q5, Q6, Q8, Q9; Section 3: Q1, Q2, Q3; Section 4: Q1, Q3, Q4, Q5, Q6) as they were useful to collect certain types of data and characteristics of the respondents companies (see appendix 3: Questionnaire). However, it is important to bear in mind that this type of scale is not suitable for computing operations with the usual parametric statistics such as mean, median and standard deviation. Moreover, a nominal scale says nothing about order or distance and has no origin (Bagozzi, 1996; Blaikie, 2003). In terms of mathematical or statistical operations allowed in nominal scales, only those based upon counting are permitted. Frequencies, modes, percentages and statistical manipulations such as chi-square analysis, are the only manipulations permitted (Peterson, 1982; de Vaus 2002; Blaikie, 2003).

6.12.3 Sample frame, follow-up process and response rate

A total of 229 questionnaires were sent by post to a population of companies engaged in the main value chain activities[11] in Scotland (n=104) and Chile (n=125). The unit of analysis was *the firm*. The total number and postal addresses of the organisations was taken from different company directories of each country, namely for Scotland: Shetland Salmon Farmers' Association Members' Directory, SQS member list, and Scottish Food and Drink from the Highlands and Islands Directory. For Chile: SalmonChile Trade Association list of companies, and Company Directory 2003 of the fish and salmon industry in Chile, were used. Thereafter, the sampling frame was all the cases in the populations which were involved in the main value chain activities previously described.

[11] Companies engaged in the main value chain activities involved: food suppliers, hatcheries, harvest process and processing plans. It did not include distribution channels, which are dispersed around the main local and export markets. See chapter 4: Industry Analysis, for further details.

Probability sampling was not used, as advised by Henry (1990) and Saunders *et al.*, (2000) when the research deals with a small number of cases. However, a requirement minimum sample of 30 cases was achieved for basic statistical analysis (The Economist, 1997)

The questionnaire included a cover letter asking the Managing Directors/CEOs/ owner-manger to answer the questionnaire, a convention of small firms' research (Tzokas, Carter and Kyriazopoulos, 2001). Consequently, they would have a 'total picture' of how their firm's co-operation, or non co-operation, in the marketing activities within the industrial district or regional cluster was an important contributing factor. Furthermore, cover letters outlined the nature of the study and emphasized the confidentiality of the research. As an incentive for participation, respondents were also given the opportunity to request a summary report of findings from the completed study (see appendix 4: Cover Letter)

The questionnaire was sent out in the official language of each country under study (Scotland: English / Chile: Spanish), including a pre-paid envelope for replies. At the same time, as advised by academics and practitioners, the questionnaire was sent out from a local University address (University of Strathclyde in Scotland and Universidad Austral de Chile in southern Chile) as it facilitated the delivery, quick reply and collection of the answered questionnaires. They also similarly used the University of Strathclyde's letterhead for their cover letter[12], employed an altruistic appeal and provided an explicit assurance of confidentiality.

After three weeks, a total of 14 questionnaires were returned to the sender because of change of address or a company did not exist any more. Other reasons companies (5 Scottish and 3 Chilean) gave for non-response, were: inundated with surveys and questionnaire requests, time constrains due to work pressure or that the information was too confidential. At this stage, only 7 questionnaires were received from Chile and 11

[12] In the case of Chile, this was combined with the Universidad Austral de Chile logo.

from Scotland. This response prompted the researcher to do a follow-up of the survey, as past research (see Ariño, 2003) had successfully achieved a high response rate (48%) in mailed questionnaires, when taking special care in identifying the target respondents and the follow-up process.

This process consisted of e-mails to a sample of the participant companies in both countries. In addition, telephone calls were made during the last week of March and first week of April[13]. Some of the companies contacted asked the researcher to e-mail them the questionnaire again, as they had lost it, or had not received the original correspondence (in the case of Chile). Others argued that they did not have time to answer a questionnaire, but they would do so. This follow-up process was also supplemented with more intensive phone calls, as advised by Dillman (1978). At the same time, the researcher re-assured the respondents of confidentiality and free access to the study's findings. In addition to this process, the assistant and more collaboration from company managers and the trade associations in Scotland and Chile were sought, aimed at increasing the response rate.

The trade associations collaborated by sending an e-mail to the associate companies, asking them to fill out the questionnaire survey. Subsequently, during the last week of July and first week of August, the questionnaire was in an industry-news related website (www.aqua.cl), which explained the importance and relevance of this research to the industry sector. However, this method was not as effective as expected, as only one questionnaire was answered through this website link. The most cost-effective data collection method in this industry seems to be approaching companies in collaboration with the trade association, the establishment of personal relationship with mangers and intensive phone calls followed by personalised e-mails.

[13] The researcher wishes to thank the collaboration of Ms. Rebeca Jimenez from Universidad Austral de Chile for her patience in helping the researcher during the follow-up process, calling some companies in southern Chile and collecting the responses at the University Office.

Overall, after the five month follow-up process, 53 usable questionnaires were received by the cut-off date, 15th August 2004, of which 76% were collected at the follow-up stage. This confirms, once again, the importance of an intensive follow-up process for achieving good response rates in industrial research (see Larson and Chow, 2003; Ibeh *et al.*, 2004).

Excluding refusals to answer the questionnaire and companies that had closed, or were not trading, the effective response rate achieved was 25.6% (33% response rate in Scotland and 20% in Chile). Given the confidentiality, strategic nature, depth and length of the questionnaire, this response rate was not totally unexpected, and is consistent with in-depth surveys of this nature requiring time and commitment to complete. The issues of 'research fatigue' (Cooper, 2000; Ibeh *et al.*, 2004), which is related to the case of over sampled industries, and the specific 'environment of the research organisation' (Tomaskovic-Devey *et al.*, 1994), also may give an answer to the response rate achieved in this research. This is an important point of discussion, as the salmon farming industry is one the major economic sectors in southern Chile being constantly approached by university students and researchers. Previous exploratory two pages questionnaire-survey research, conducted in this Chilean industry by the National Statistics Bureau in 2003, only achieved a response rate of 30% (30 companies out of 100). This shows the low-response rate of this industry in social science research[14].

The differences in response rate may also be linked to cultural, economic (structural) and organisational factors in the participant countries, as well as in the specificity of the aquaculture/agriculture sectors. For example, the power distance factor (Hofstede, 1980) may play an important role in the different countries under study. The assumption being that higher responses rates may be achieved in cultures with less power distances (e.g. Scotland) than in those with greater power distances (e.g. Chile). Probably, this issue needs to be taken further in future cross-cultural research. Moreover, different

[14] The previous exploratory research led by the National Statistical Bureau looked at the managerial decision making process. The questionnaire was only two pages long, which largely differs with the one that this research used (8 pages).

organisational size and the use of gatekeepers in larger organisations (Ibeh *et al.*, 2004), limiting access to respondents and filtering unsolicited questionnaires to the managing director, may also influence the results in the response rate achieved, especially in the case of Chile.

A high level of item response was found in the usable questionnaires (i.e. all questions were answered), as well as a high internal consistency of the responses.

6.12.4 Data Analysis Techniques

Descriptive statistics were used to exhibit general frequency responses for all the variables included in this research, as "the more obvious and robust relationships on which action decisions may be based will often emerge from an evaluation of the basic data" (Baker 1991, p. 215).

The Chi-square test was used to investigate any significant differences between countries and company size.

As samples over a 100 cases immediately assume a normal distribution, the researcher placed special attention only using non-parametric statistics. Although, some authors (see Pallant, 2002 and de Vaus, 2002) suggest that in practice, this does not seem to have a severe effect on results.

6.12.5 Estimating non-response bias

An inherent problem in survey research is that of non response bias (Hudson *et al.*, 2004). In this survey, the 53 usable responses equated to approximately 23 per cent of the total salmon farming population in Scotland and Chile. One of the first tasks in the

analysis of responses was to ascertain whether non-respondents differed substantially from respondents.

Non-response bias, by its nature, is difficult to identify and the characteristics of non-respondents are typically not observed. Traditional non-response bias testing includes contacting non respondent companies by telephone, intensive follow-up survey among them, or both (Hudson *et al.*, 2004). In the absence of the traditional methods, because it was considered rude and excessive, and also because it might have caused research fatigue among managing directors in the industry, non-response bias was calculated with the accepted early-late response analysis, comparing the responses already collected in the field research from the first mailed survey with the responses from the follow-up process (Ratneshwar and Stewart, 1989).

Significant differences between countries were found among the first group of respondents and the follow-up one, with the Chilean response rate being the one that increased more from this process. This may imply that conducting industrial surveys in Chile may take longer and require more intensive follow-up processes, compared to their counterparts in Scotland. Some significant differences were found in the formality of discussion with other firms (variable: mainly at a formal, business level); social expectations from the partner (variable: reliance), and influences of MNEs subsidiaries (variable: do not help). All the other remaining variables did not differ significantly.

The usable responses were analysed using SPSS for Windows (version 11.5). The analysis was undertaken using exploratory methods. The resulting analysis is presented in Chapter 8 and Chapter 9.

6.13 Validity analysis

De Vaus (2001, p. 28) states "internal validity is the extent to which the structure of a research design enables us to draw unambiguous conclusions from our results". In other words, it refers to the extent to which an observed relationship reflects the relationship between the variables of interest (Reynolds *et al.*, 2003). Hence, the more the structure of a study eliminates alternative interpretations, the stronger the internal validity of the study. However, it is impossible to eliminate all ambiguities in social research, but the structure can certainly reduce them (Van Herk, 2000; de Vaus, 2000; Reynolds *et al.*, 2003). For these reasons, homogeneous interest groups were selected in a single industry in both countries: Scotland and Chile

External validity refers to the extent to which results from a study can be generalised beyond the particular study. "The critical question is whether the results are likely to apply more widely" (de Vaus 2001, p. 28). In other words, it is the ability to make inferences from subset to larger groups, and this depends on the method by which the sample of elements was chosen (Churchill, 1999, Reynolds *et al.*, 2003). At the same time, the most common threat inhibiting the capacity to generalise more widely from a research study is the use of unrepresentative samples. Clearly, a key goal for good social research is to achieve validity (Williams and May, 1996). "In particular, survey research may obtain greater external validity than qualitative approaches, which generally concentrates on internal validity" (Williams and May 1996, p.140).

The issues of validity may also be context-dependent, as a measure may be valid in one context and with one sample, but not another. Although there is an asymmetrical relationship between reliability and validity; "validity is a more important criterion because a valid measurement is always reliable" (Webb 2002, p. 148). Based on Bollen (1989) and Ariño (2003), content validity is a 'qualitative' – 'subjective' type of validity, where the researchers may 'judge' whether the measures represent certain concepts, and to what degree they are associated to prior research.

According to the previous definition, with the aim of obtaining a reasonable degree of content validity and following Davis and Consenza (1988) advice, the following procedures were implemented:

1. A complete and critical review of the literature attaining the appropriate variables and scales of measurement, which were included and adapted in the questionnaire design.
2. Survey questionnaire reviewed by the researcher's supervisor for comments and approval as well as from leading selected academics in Canada, New Zealand, Greece and the UK.
3. Pre-test of the survey questionnaire, with suggestions from industry key informants and participating firms, of the selected industry (Scotland=12 and Chile=10). This means, achieving a better instrument of measurement.
4. Modification of measurement instrument when necessary.

6.14 Limitations of the quantitative research

McGrath (1982) points out that research in practice requires the researcher to make decisions regarding approach, methodological technique and sampling strategy. Each decision reduces the options available to the researcher and consequently, a number of compromises are made which, while offering some advantages, may also act as limitations to the study. Some particular decisions are considered below.

Firstly, the use of study area and specific industry approach in Scotland and Chile. It is widely appreciated in the small business literature that the local environments in which firms operate demonstrate different levels of resource richness and that this has an effect on firm behaviour (Cooper, 1993; Westhead, 1995). The differences in response rate between Scottish and Chilean companies may imply some of these differences in the organisational environment, industry specificity in each country, best ways of approaching this specific economic sector, as well as cultural issues surrounding the

local business environment. Although the results are only applying to one industry, and there are some issues of generalisations beyond this, the field study presents stimulating efforts towards a comparison of network activities across regional and national borders. Moreover, it highlights an emerging industry where there are only a few earlier academic studies focusing on this depth of analysis.

Secondly, this study is multi-disciplinary, which may cause superficiality in some areas. However, "...the domain of trust has no fixed boundaries within it" (Kaplan, 1964, p.4). To ensure that the study is not conceptually superficial, the researcher has conducted a thorough literature review, which covers the key areas and concepts related to: Industrial districts and regional clusters (Chapter 2); Social networking and inter-firm cooperation (Chapter 3); as well as the specific industry analysis (Chapter 4).

Thirdly, as this study is concerned with a single industry, issues of external validity (generalisation of the results) should be taken carefully. The generalisation in this context may be only done from the study to a theory development, rather than to others industry sectors. To achieve a better external validity, this study should be replicated under a variety of conditions and with a more extensive variety of samples. Thereafter, the confidence for a more general application of the results may be achieved. This also may help to discover the conditions and groups to which the results do not apply.

Fourthly, according to Reynolds *et al.* (2003), sampling has a major impact on the validity of the findings, which includes the concepts of internal and external validity. During the last few decades, the research interest in sampling specific groups or industries has increased (Sudman and Blair, 1999). As a result, this leads to the generalisation of the research results being valid only to this sub-population of interest. This is one of the main limitations of this study, which selected only one particular industry for the empirical analysis.

This study was developed with a non probability sample. This implies problems estimating the non-sampling error and thereafter, its statistical generalisations (de Vaus,

2002; Blaikie, 2003). However, this is usually the case in most cross/culture comparative research (Sin *et al.,* 1999; Lohr, 1999).

6.15 Research implications for a cross-country analysis

During this chapter, the difficulties of international research have been clearly specified. Concerns with sampling, translations and the need to balance within-country representativeness, with cross-national comparability have been key issues that this research has had to deal with. For example, one of the most critical issues has been related to sampling, which has a major impact on the validity of the research results (Reynolds *et al.,* 2003). A decision had to be made between the sampling of countries (and/or cultures) and the sampling of individual respondents from within each country or culture (Malhotra *et al.,* 1996; Reynolds *et al.,* 2003). The researcher also used a non-probability sample in Chile and Scotland.

According to Sin *et al.* (1999) non-probability sampling[15] in international marketing research has been used in most of the previous studies cross/culture – cross/country studies. However, the main weakness of this method is that it does not allow sampling error to be estimated (Lohr, 1999).

Apart from the above ideas, Van Herk (2000) and Reynolds *et al.,* (2003) suggest that homogeneous samples (e.g. using industries with similar structures as it has been done in this thesis) are often used to remove demographic differences between participants of the countries involved, and thus enhance the cross-national comparability of the sample as well as the internal validity of it (see table 6.8). For this reason, it was necessary to pay special attention to selecting an industry which allows international comparability by having similar characteristics (See chapter 4: Industry Analysis). In addition, the total selected population of companies was similar in both countries. A better comparison of results was thus facilitated.

[15] This includes convenience, judgmental and quota sampling

As table 6.8 shows, comparative and theoretical studies, fall within the category where the issues of internal validity have a primary emphasis. To ensure between-country comparability, a key issue in international studies, the use of homogeneous samples, typically selected via non-probabilistic procedures is important (Reynolds *et al.*, 2003).

Table 6.7: Sampling choices in international marketing research

Type of international research	Research objective	Sampling characteristics and Primary emphasis	Preferred sampling method
Descriptive	Examine aspects within specific countries	Within-country reprentativeness, estimate sample error. External validity	Probability within each country
Contextual	Examine attributes of a cross-national group	Representativeness of specific population of interest, sapling error. External validity	Probability sampling of population of interest
Comparative	Examine differences or similarities between countries	Cross-national comparability, homogeneous sample. Internal validity	Non-probability acceptable
Theoretical	Examine the cross-national generalisability of a theory or model	Cross-national comparability, homogeneous or deliberately sample. Internal validity	Non-probability acceptable

Source: Adapted from Reynolds *et al.*, 2003

6.16 The advantages of two research methods

Combined data collection methods (exploratory personal interviews and mail questionnaire survey) were found to be more appropriate for this study not only because they allowed the researcher to reach the specific population under study in a convenient period of time, but also because they combine an *exploratory-qualitative* phase and a more *descriptive-conclusive* quantitative phase, which provide internal as well as external validity for this study. At the same time this multi-method approach provides a good feature for triangulation (Creswell, 2003). Furthermore, a mail survey

questionnaire was included because respondents are not subject to interviewer bias (Saunders *et al.*, 2000; Ibeh *et al.*, 2004).

Apart from the previous reasons, the choice of this research design and data collection method was also influenced by other factors: (1) limitation of resources for the international data collection process in two countries. This study obtained competitive research funding from 'The Carnegie Trust for the Universities of Scotland (£1400)' and 'Universidad Austral de Chile, R&D project (£1900)'. However, no other external funding either from the Research Councils in the United Kingdom or from private companies in the selected industry was used. A drop and collect technique was not possible for the questionnaire survey, as it required additional funding. (2) Past studies in the field of inter-firm co-operation in industrial districts and regional clusters have used surveys which sometimes have been supplemented with personal interviews, combining both approaches (Das, 1998; Weikl and Grotz, 1999; Chell and Baines, 2000; Huggins, 2000; Varamaki and Vesalainen, 2003). Thus, having a cost-effective method that allows comparison with previous findings was also an important feature when selecting a research method for this study.

A further important issue during this research project has been the close interaction with the industry, as the results have been widely spread among participating companies and trade association. Furthermore, the main results and conclusions have been the basis for industry reports, interviews and debates in which the author has actively participated. These issues contributed to a better validity of results, as there is an improved understanding of the phenomena studied.

6.17 Project timetable

The study was undertaken between October 2002 and July 2005. Key dates in the research process are given below in table 6.9.

Table 6.8: Project timetable

Task	Important dates
Identification of research topic	October-November 2002
Completion of main literature review	June 2003
Phase one: Exploratory interviews	June 2003 – January 2004
Qualitative analysis	August 2003 – February 2004
Phase two: Questionnaire design	August 2003 – January 2004
Pilot questionnaire	January – February 2004
Sample preparation	January 2004
Questionnaire sent out	March 2004
Questionnaire follow-up	April – August 2004
Cleaning, coding, data input	August 2004
Quantitative data analysis	August – November 2004
Writing up	January – March 2005
Re-drafting	March – July 2005

Source: Author

6.18 Conclusions

This Chapter explained every step in and the main justifications of the research methodology used for thesis. Table 6.10 summarizes the research objectives and how they are achieved through this research.

The qualitative results are presented in Chapter 7. While quantitative results are in Chapters 8 and 9.

Table 6.9: The path from research objectives to results

Research Objective	Literature review	Qualitative phased	Quantitative phased
1. To build an understanding of the relationship between the issues related to regional clusters (geographical co-location) and social networking in developing inter-firm cooperation in marketing	Agglomeration economies (Chapter 2), social networking (Chapter 3). Combination of these two main perspectives (Chapter 5 and results).		
2. To explore how and to what extent co-location and networking influence inter-firm co-operation in marketing		Interview guide (section II) To what extent your firm/institution have substantial relations with other firms/institutions in the marketing and international marketing activities? What are the main characteristics of these relationships?	Questionnaire survey: Influences of geographical co-location in section 2; Social networking in section 4
3. To understand the relative importance of the social elements of networking in influencing inter-firm co-operation in marketing	Social networking: Chapter 3	Interview guide (section II) To what extent do you have informal contact with at least one manager/CEO in another firm in the industry? Are these contacts within the geographical region/location? How do you contact them? Why? Are there any family linkages within the industry?	Questionnaire survey: Social elements of networking, section 4
4. To explore if there is any influence played by multinational companies in the development of inter-firm co-operation in marketing activities, when firm are located in regional clusters	Multinational companies: Chapter 3	General questions asked to managers: Is there any perceived influence of multinational companies in the creation of inter-firm co-operation in marketing?	Questionnaire survey: Multinational companies and relational benefits, section 5
5. To explore if there is any country or region specificity in the use of different types of inter-firm co-operation in marketing among clustered companies		Researcher question after interview in dif. Countries and regions: is there any country specificity in the types and levels of inter-firm co-operation in marketing that those companies in a cluster use?	Applying the questionnaire in two countries with different culture and norms (cross-country analysis)

Source: Author (see interview guide in appendix 2 and questionnaire survey in appendix 3)

Chapter 7:

Results and Discussion of Exploratory Interviews

7.1 Introduction

The first set of primary data for this study was collected using semi-structured personal interviews during July 2003 and January 2004, based on a purposive sample of twenty-two companies[1] in two regions in Scotland (Northwest Scotland and Shetland Isles) and two regions in Chile (IX and X regions) drawn from a single industry, salmon farming. This sector makes a substantial contribution to both the rural-remote and regional economies of both Scotland and Chile.

The interviews were conducted in the official language of each country, namely English in Scotland and Spanish in Chile. The aim of semi-structured personal interviews is to have pertinent data, which helps with the understanding of the practical context and concepts developed previously in the literature review. At the same time, this data collection method allows access to raw data involving a socially constructed process. Each interview took a maximum of 1hour and 30 minutes, being conducted *in situ* in the main offices or processing plants where managing directors (MD) or marketing directors of the selected firms were located, namely in Scotland: Perth, Northwest Scotland and Shetland Isles. In Chile, the interviews took place in the cities of: Santiago, Villarrica, Puerto Montt and Puerto Varas.

This data collection includes a qualitative analysis, which aims to explain and understand rather than predict phenomena (Gordon and Langmaid, 1988; de Vaus, 2001). This means, developing an understanding of how individuals 'perceive', 'see' and make 'meanings' of certain situations. Then, questions of 'why' certain situations

[1] This includes the participation of thirteen SMEs, which for this research are those firms with less than 250 employees

occur, or 'what does it mean?', help the understanding and explanations of processes, which in this case, are related to 'how' and in 'which ways' firms co-operate in marketing activities in regional clusters and industrial districts.

The structure of this Chapter starts with a summary of the demographic characteristics of the participating companies and their value chain position within the industry. The Chapter then presents the analysis of each interview conducted in Scotland and Chile. Following this, a comparative analysis between the two countries is presented, highlighting the most relevant topics related to the research objectives and propositions. Finally, a discussion of the qualitative results, theoretical and public policy implications are presented.

7.2 Demographic characteristics of the sample

Table 7.1 shows some of the main demographic characteristics of the twelve respondent companies that participated in the exploratory interviews in Scotland and Chile. Of the Scottish based companies, two are located in the central belt of Scotland (Perth), four in the North-west and Inverness and six located in the Shetland Isles. Half of the companies located in Scotland correspond to small and medium size enterprises. Three companies are subsidiaries of multinational corporations, one is a large company and two are trade associations. This profile stresses the importance of small and medium size enterprises within the industry. Seven out of the twelve firms are fully integrated, comprising the full range of value chain activities of the salmon farming industry, from hatchery, harvest, processing and sales to traders or distributors.

Table 7.1 Demographic characteristics of the sample

COMPANY/ ORGANISATION	MAIN LOCATION	FULL TIME EMPLOYEES	CAPITAL STRUCTURE (SIZE)	MAIN VALUE CHAIN ACTIVITY
	Scotland			
S1	Perth	3	SME	Sales organisation, belongs to a vertically integrated group
TS1	Perth	10	Trade Association	Companies' representation
S2	Northwest	32	SME	Fully integrated
S3	Northwest	60	SME	Fully integrated
S4	Inverness	210	MNE subsidiary	Fully integrated
S5	Inverness	550	Large	Fully integrated
TSh1	Shetland	3	Trade Association	Companies' representation
Sh2	Shetland	67	MNE subsidiary	Fully integrated
Sh3	Shetland	18	SME	Fully integrated
Sh4	Shetland	160	MNE subsidiary	Fully integrated
Sh5	Shetland	9	SME	Trading company
Sh6	Shetland	25	SME	Hatchery & Harvest process
	Chile			
TCh	Santiago	7	Trade Association	Companies' representation
Ch1	Santiago and southern Chile	3000	Large	Fully integrated
Ch2	Puerto Montt	340	Large	Fully integrated
Ch3	Puerto Montt	2400	MNE subsidiary	Fully integrated
Ch4	Puerto Montt	1500	Large	Fully integrated
Ch5	Puerto Montt	280	MNE subsidiary	Food supplier
Ch6	Puerto Montt	1500	Large	Fully integrated
Ch7	Puerto Varas	7	SME	Re-processor (Smoker) and sales
ChN8	IX region	3	SME	Re-processor (Smoker) and sales
ChN9	IX region	6	SME	Re-processor (Smoker) and sales

As Table 7.1 shows, more that half of the ten participating Chilean companies are located in X^{th} Region, mainly in the city of Puerto Montt, or near by (e.g. Puerto Varas). Two of the remaining firms have their general offices in Santiago and two small firms were located in the IX^{th} Region. The Chilean sample comprises a balanced mix of three small firms, three large firms, and two subsidiaries of a multinational corporation. The large firms and one subsidiary, have full integration of their value chain activities. The remaining subsidiary is a large food supplier to the industry (fish feeding). Small companies are local re-processors (smokers), which also have sales activities using a niche market approach, for example selling their products to specialised small restaurant-retailers, up-market supermarket in Chile or selected customers in the USA.

Small and medium size companies in Scotland are larger in terms of number of full-time employees, compared to their Chilean counterparts, which mainly correspond to micro-companies having less than 10 employees. The sample which comprised Chilean small companies are not vertically integrated and they are mainly involved in the last aspects of the value chain activities of the industry (re-processing and sales activities). This implies that there may be certain structural differences between Scottish and Chilean small companies. This may also imply different economic rationales to their activities and a different approach to the trade association within the country. The sample also comprised two trade associations in Scotland, one located in the Shetland Isles and the other located in the central belt of Scotland. Each trade association has different objectives and specific generic marketing for their associated companies, which includes small, large and multinational firms. The case of Chile is different. There is only one trade association and it mainly comprises large companies and subsidiaries of multinational corporations. Small firms do not have representation in the Chilean trade association.

To sum up, the sample comprised a fairly balanced mix of small and large firms, as well as subsidiaries of multinational corporations and trade associations in the two countries under study. There is also a balance of firms participating in the different aspects of the industry's value chain activities. The sample of companies also reflects the international tendency towards full integration among activities, aiming to achieve better economies of scale.

The next section presents a detailed description of each firm which participated in the in-depth interviews in Scotland and Chile.

7.3 Scotland

Five interviews were conducted in Northwest areas of Scotland (S), including the Trade Association (TS1) located in the central belt. Six other interviews were conducted in Shetland Isles (Sh), including the local Trade Association (TSh1). A description of each participating firm and their views, related to the influences of co-location and social networking in inter-firm co-operation in marketing, is provided below.

7.3.1 Mainland Scotland Interviews

S1

This is a small (L=3)[2] sales organisation, located in the central belt of Scotland, wholly owned by an independent salmon farm (L=25), located in a remote rural area in the northwest region of Scotland. The interview was conducted with the marketing manager who explained that S1 sells its products in the UK (50% to 70%) and foreign markets (30% to 50%), as described in figure 7.1. Among the key foreign markets is France, where the company participates in the generic 'label rouge' strategy with other Scottish salmon producers maintaining a flexible adaptation to local demands of fishmongers and specialised distributors. The Trade Association coordinates these activities, as well as the generic marketing campaign in foreign markets. At the local level, S1 sells its products to different retailers, including national supermarkets chains. As the marketing manager stated *"we have a fresh producer's strategy, participating with the selling of fresh salmon in the UK..."* This means the salmon is delivered from the processing plants to customers in less than twenty-four hours from when it was ordered, maintaining high standards of products quality. The Trade Association also coordinates these local generic marketing activities, with the participation of different small producers united under the 'Tartan Quality Mark'.

[2] L= labour. This abbreviation is widely used in economics to describe the number of employees that work in a company.

Although according to S1 *"everyone knows everyone..."* and they have informal contacts among the industry, they do not to use these contacts for specific joint co-operation in marketing activities: *"we know each other, because I used to work in a big multinational before. So, we still keep in touch with old colleagues, meet for lunch or in golf competitions, but we do not share our business secrets..." "Other firms within the industry are seen as direct competitors and you do not want to share your business strategies with them..."* as the manager stated.

According to the previous facts, S1 only collaborated through the Trade Association with other companies in generic marketing campaigns and joint efforts, to achieve better country of origin effects in international markets and keep a leading position in the local market. The Trade Association promotes these activities, which is highly beneficial for small companies, facing resource constraints. Accordingly, S1 relies heavily on the marketing efforts of the Trade Association (TS1) at local and international levels. Thus, S1 does not collaborate with others companies in joint marketing activities as independent units, but rather through TS1.

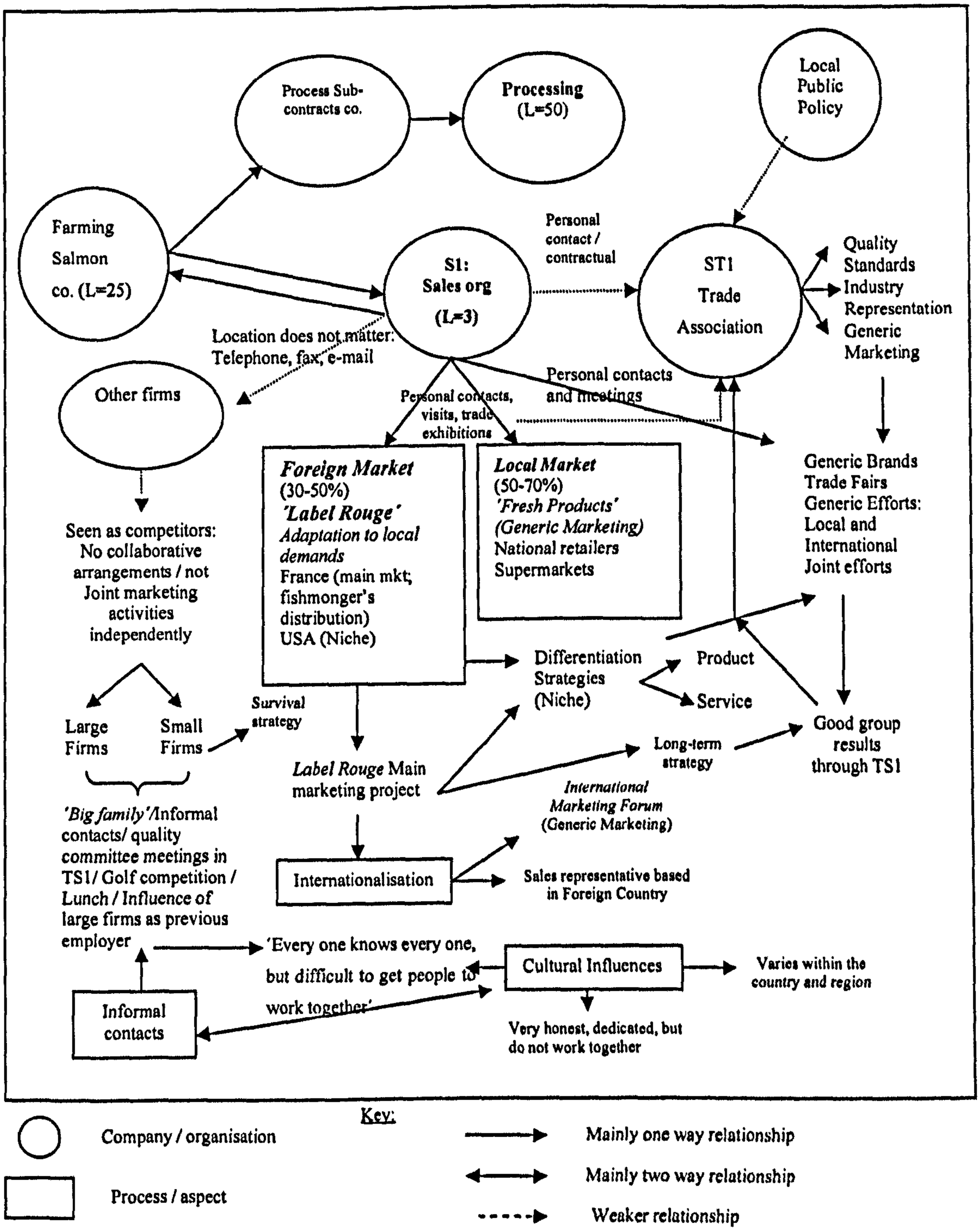
Activities related to generic marketing campaigns, generic brands, trade fairs in foreign markets and representativeness within the industry, are also undertaken by the Trade Association. Consequently, S1 only concentrates on sales and marketing of their own products, at local and international levels and not in the issues of inter-firm cooperation with other firms at individual basis. As the manager stated, *"The Scottish culture is very individualistic. So, each company prefers to work alone, but with the coordination and help of the trade association...We are very honest and dedicated, but we do not work together..."*. According to the interview with S1, it can be suggested that geographical proximity helps to create the 'industrial atmosphere' (Marshall, 1919) for the building of trust and knowledge among people of the same industry, but not for strategic cooperative arrangements.

S1 stated that the company performs other forms of collaboration. This is mainly done in the production process where co-location is important, but not in marketing activities,

because *"marketing is seen as a very strategic topic within the company and we do not want to share our tools for success..."* (Manager S1). Informal contacts with people located anywhere, more than geographical co-location, are seen as important elements for better and more co-operation among firms. Information technologies help to facilitate this communication process, when people are located in different locations within or without the country.

Multinational companies are not seen as important for the transference of commercial knowledge to small firms. However, at the very beginning of the life cycle of the industry, they helped in upgrading the research capabilities of the industry. As the S1 manager stated, *"MNEs have different commercial objectives and market segments, they do not deal with small fishmongers at a personal relationship level as we do. So their commercial contribution to us is minimal. They are our biggest competitors as they have big economies of scale..."*

Figure 7.1: Graphical Description of S1



TS1

This is a trade association (L=10) funded by their own members, which represents 65% of the total salmon farming companies participating in the Scottish industry. It has 50 members of which 5 are 'big players', large British conglomerates or subsidiaries of multinational companies (MNEs), and the remainder 45 are SMEs. The interview was conducted with the Managing Director (MD) in the central belt of Scotland, from where he coordinates the trade association activities. As the MD explained, their main mission is to 'represent the associate members at local and international levels, ensuring quality standards of their products in every process of the value chain activities'. They also have a strong role in public relations not only with the media, but also at political levels. As the Managing Director stated, *"This good public relations system helps us to promote our industry with all our stakeholders, including the general public, politicians, local community and investors, among others..."*

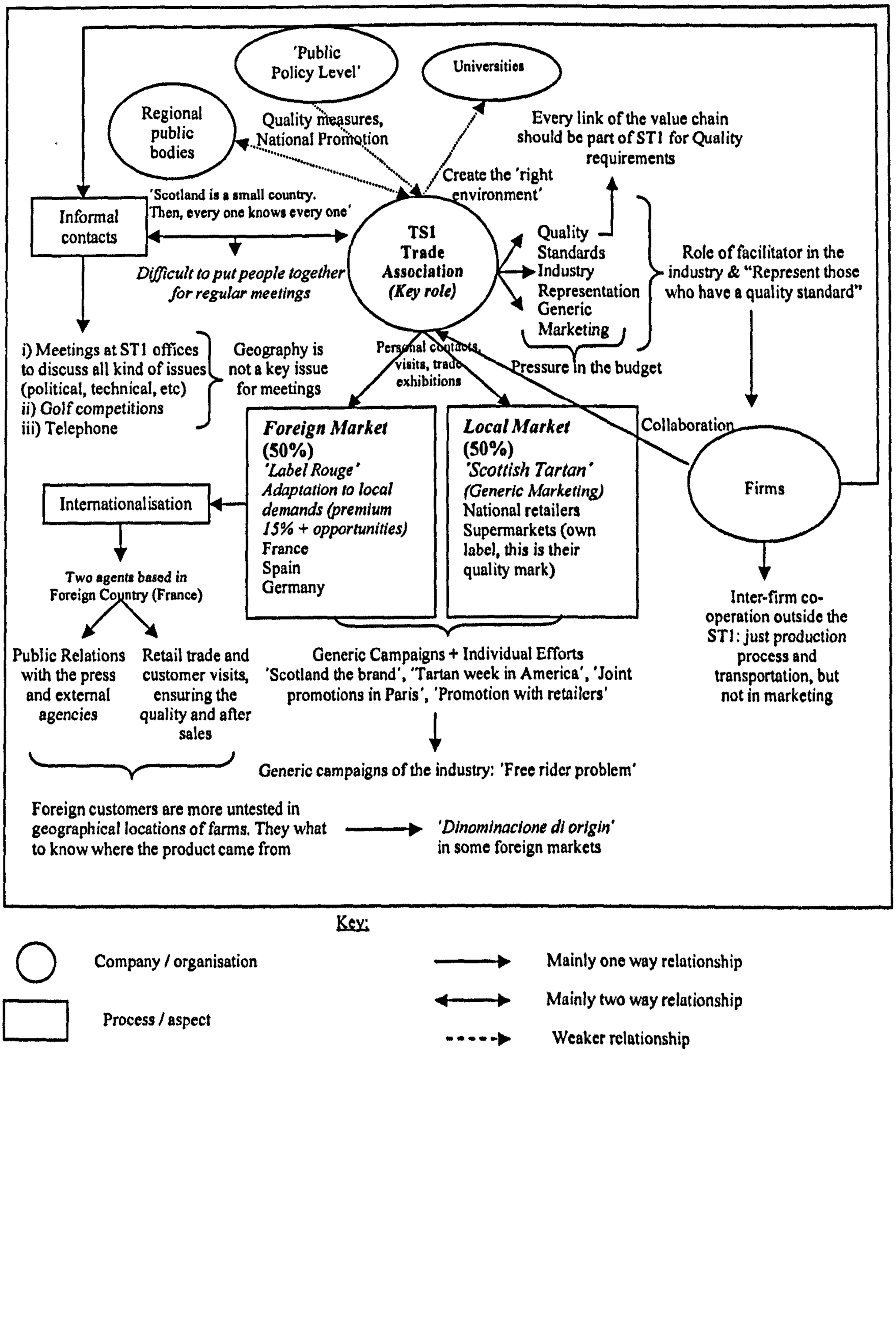
As figure 7.2 illustrates, TS1 has a key role in the generic promotion of Scottish salmon at both local and international levels. This is done through the 'Scottish Tartan Mark" in the British market and the 'label rouge' in the foreign market. Both of them assure quality standards of the associated members to final customers. However, as the MD stated *"this is difficult to coordinate, as there are always free rider problems, but is the only way to achieve premium prices on our products..."*

According to the interviewee, the main role of the TS1 is *"to create the right environment for companies to make profitable sales and to have a quality standard for the industry"*. These activities are done through formal and informal contacts with the participant companies: *"we meet regularly at formal levels at the trade association, but we also meet informally in the countryside, in London, in Inverness, everywhere...There we discuss the future of the industry and our role promoting it at the different levels"*. The TS1 also has direct relations with regional public policy bodies, such as the Highland and Islands Enterprises; and executive development agencies, such as Scottish Enterprise, as well as regional Universities. These formal and informal contacts with external organisations help the development of the industry and its long-term

sustainability. As the MD stated *"these institutions also help to create the right environment in our industry, as they support with the food and drink cluster strategy... we also share visions and values..."*

According to TS1, the participating companies heavily rely in their activities and they only collaborate in marketing through the Trade Association. This especially the case of small companies with resource constraints: *"small companies come to us for advice. They want to joint our 'label rouge' and 'tartan quality marks'. So they can be more competitive at local and international levels..."* Geographic co-location of companies seems not to influence in the inter-firm co-operation in marketing activities, because this can be done anywhere using the information technologies: *"we try to encourage inter-firm cooperation in marketing. However, it is difficult, because competition is very strong in this industry..."* (MD TS1)

Figure 7.2: Graphical Description of TS1



S2

This is a small – fully integrated in value chain activities Scottish producer and sales organisation (L=32) run by their owners, which are the company directors, and located in a remote-rural area of the northwest of Scotland. The interview was conducted with the Managing Director at the company premises.

As figure 7.3 illustrates, its sales are in local (30%) as well as international markets (70%), having a unique niche strategy and customer approach. At the same time, S2 uses clear brand strategy for its salmon, which together with its environmentally friendly practices has made it a singular success, in the Scottish industry. The manager stated that *"this is a profitable company in the average Scottish salmon industry and it has been the pioneering salmon farm to move towards sustainable salmon farming..."*. The company has successfully re-branded and marketed its salmon to differentiate the product, gaining premium prices. *"Our business strategy is a matter of putting trust back into the food chain: people are looking for people to put their hands up and say they are responsible and cooperative. Multinationals won't do that..."*

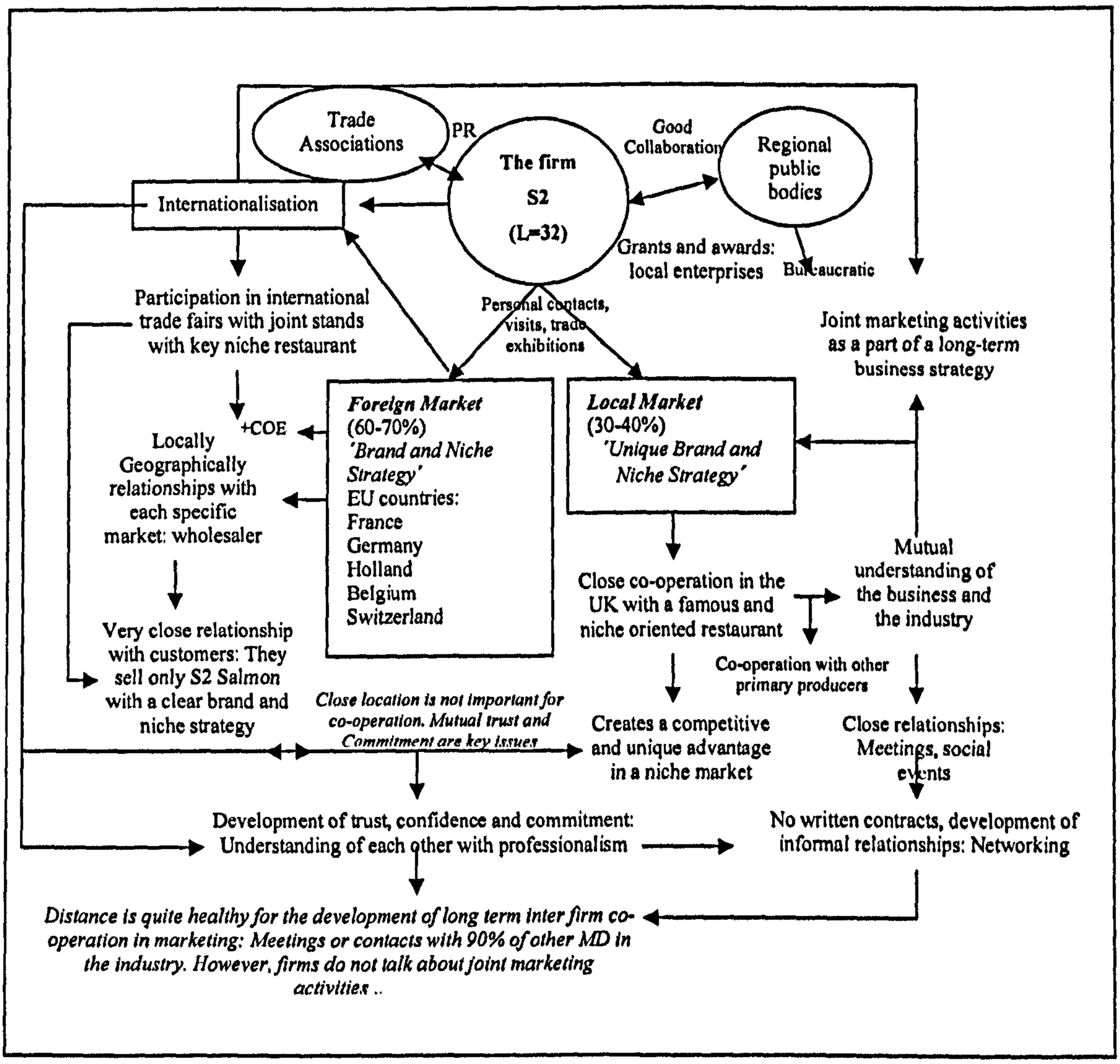
S2 has emphasised the changes in the industry during the last few years, from being SMEs dominated to MNEs having a main role with their own in-house skills. However, according to S2, *"MNEs do not transfer these skills to SMEs at the beginning, but they encourage them to research specific issues of the industry. That's their only contribution to small companies... They do not transfer marketing knowledge or commercial capabilities. They are in a massive business, not customised service"*. Furthermore, Trade Associations have also changed their role from a research and marketing position, to a more public relations function at both political and media levels.

S2 has a high profile in the industry because of its specific niche strategy. Consequently, it conducts joint marketing activities with other specific firms within the industry. However, *"not all the firms in the industry share this knowledge due to the 'free rider' and competition issues"*. According to S2, it can be seen that although companies operate in a very competitive environment, and some of them focus only on the short

term, S2 has a clear long-term strategy and works for a very specific long-term niche / differentiate market. This may be a direct result of their 'active actions' in the joint marketing activities within the industry. Furthermore, to win trust among individual as well as business customers, S2 has extended its branding right back through the farming process, which gives a clear competitive advantage to its products: *"At the end it is a question of having the customers understand the different way our salmon is produced..."*.

Apart from the previous issues, S2 states that geographical co-location is not a key issue for the development of joint marketing activities. On the contrary, trust, commitment and mutual understanding among partners are the most important elements for more marketing collaboration. Furthermore, *"distance is quite healthy, for the development of long-term inter-firm co-operation in marketing... this is like a marriage, where partners need their own space...."*. S2 develops inter-firm cooperation in marketing with small retailers and restaurants across the UK. These business relationships rely heavily on trust. *"Building such relationships helps dispense with the need for time-consuming and costly haggling over specific contracts details..."*. Furthermore, these trusty relationships can be everywhere, as partners understand each other: *"Our inter-firm cooperation with partners is as critical to our business as the quality of our products"*.

Figure 7.3: Graphical Description of S2



S3

S3 is a British family-run company, which employs sixty people (L=60). The firm is located in the northwest of Scotland, their main focus being the local market, using the 'tartan quality mark' which helps the company to achieve a quality differentiation (90%

of sales concentrated in the UK (See figure 7.4). The interview was conducted with the managing director at the company premises.

As the managing director stated, S3 wants to maintain a dominant position and a clear marketing strategy in the local market. Thereafter, it participates in a generic marketing campaign 'Scottish Quality Tartan', which is coordinated by the Trade Association. In the foreign markets, the marketing strategy is the 'label rouge' mark, which helps to achieve premium prices.

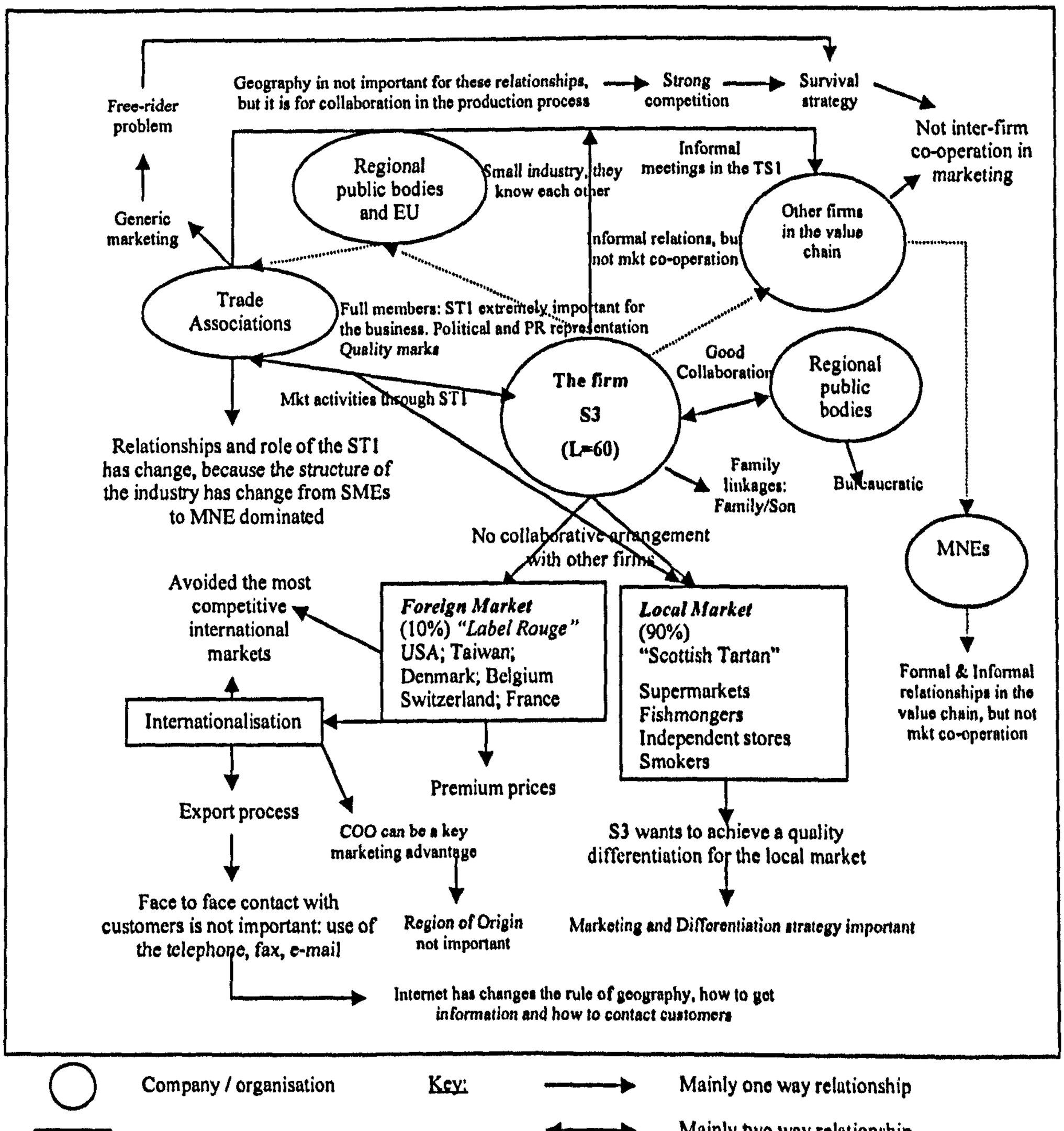
Although firms in close proximity cooperate in the same production processes of the value chain activities, they do not collaborate in marketing, because of the strong competition and survival strategies in SMEs: *"geographic co-location is very useful for meeting people on an informal basis, and the building of mutual knowledge. However, it is not a key issue in finding business partners or in developing inter-firm cooperation in marketing..."* (MD S3).

S3 also stressed the importance of the Internet as a vital tool, which has changed the rules of geography, getting information and contacting customers. Consequently, with the use of technology, close proximity in not a key issue for the development of inter-firm co-operation in marketing and informal relations seem to have a greater influence on it. As the MD stated, *"Our best partners are our fish-meal suppliers and customers, because we need each other, and we complement each other... Having inter-firm cooperation in marketing with competitors is difficult. However, we do it in the production process... a good marketing strategy, means more sales and you do not want to share it with competitors...we are very individualistic..."*. This may suggests that geographical co-location is useful for sharing general information, rather than strategic marketing information and it depends whether it is vertical cooperation (seller-buyer-seller) or not.

The manager also recalled the changes in the structure of the industry from SME to MNE dominated, which has also influenced the kind of activities performed and the

relationship with the Trade Association: *"MNEs and SMEs have different objectives, economies of scales and customer approach, we know well each of our customers and we care about them...." "MNEs do not transfer their commercial and marketing knowledge to small business, they just compete for the most cost-effective location with the aim of achieving massive sales...".*

Figure 7.4: Graphical Description of S3



S4

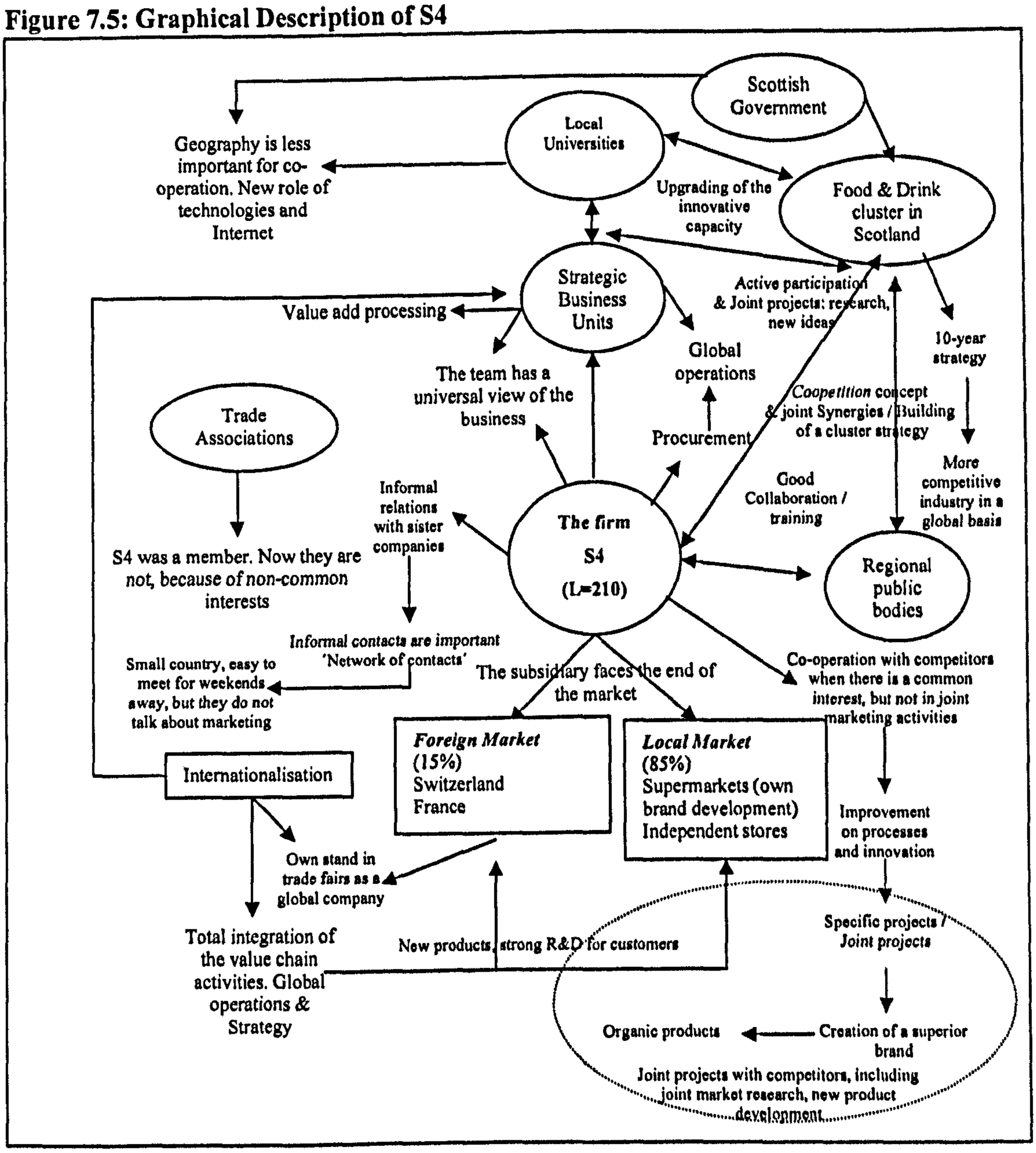
S4 is the Scottish subsidiary (L=210) of a large foreign multinational conglomerate, which comprised of all the value chain activities, having operations in Chile, Canada, Scotland and Norway. The conglomerate has three companies operating in Scotland and each one represents key activities in diverse areas of the value chain activity. The interview was conducted with the Managing Director of the Scottish subsidiary of one of these companies (S4), which produces salmon, sea grown trout and turbot at 30 sites in and around Scotland. As figure 7.5 shows, the local market remains the most important one for S4 (85%), selling its products directly to large supermarket retail chains across the UK, who have their own brand strategy. The main foreign markets (15%) are in France and Switzerland, where they also sell to large supermarkets chains. At the same time, the company encourages partnerships with its customers, which enable it to rear fish specifically to meet individual market demands.

S4 co-operates actively with the food and drink cluster in Scotland, especially on a one to one basis, upgrading the cluster strategy, transferring technology and developing new innovative projects for the industry. The relationship of S4 with the local developmental agency of Scotland is based on 'coopetition'[3], where companies understand the benefits of cooperation, but they also recognise that they are competitors. As the MD stated, *"As a multinational company, we understand our responsibility for the development of a coherent food clusters strategy in Scotland. Our participation is vital to achieve better public policies in this area, and therefore, achieve better competitiveness as a country..."*. Therefore, public policy issues and cooperation with the regional developmental agencies are a key issue for S4, maintaining direct communication and participating actively in the upgrading of innovative capacity in the industry. This includes participation in joint projects and research with local institutions and universities (see figure 7.5).

[3] 'Coopetition' is a term widely use in the strategic management literature, which mans a mix between competition and cooperation.

S4 also believes that close proximity is not a key issue for the development of inter-firm co-operation in marketing, because of the use of technology and the internet that allows better and quicker communications. Furthermore, as the MD stated, "*Scotland is a small country, it is easy to meet people during weekends. However, in these informal meetings we do not talk about marketing, because this is a strategic issue for each company's competitiveness*". The issues of informal co-operation, trust, commitment and understanding among companies seem to be key issues for the development of new projects with other firms, as well as with local developmental agencies. S4 develops inter-firm cooperation in the production process and the research for new technology. However, collaboration in marketing remains an individual, firm specific, strategic issue. S4 is not a member of the Trade Association, because *"they have different business interests and long-term objectives"*.

Figure 7.5: Graphical Description of S4



Key:

- Company / organisation
- Process / aspect
- Mainly one way relationship
- Mainly two way relationship
- Weaker relationship

S5

S5 is a large and fully integrated British company, employing 550 full time employees (L=550), as part of a larger national conglomerate (L=1500), comprising of all the activities of the value chain in the salmon farming industry. The interview was conducted with the Managing Director (MD) of the company, located in Inverness. As table 7.6 shows, the main customer focus is large retailers and supermarkets in the UK, where S5 sells its products as 'value added products' customising the packaging and product specification to the needs of each customer segment. Apart from this, S5 exports around 20% of their products to countries in the European Union, like Belgium, France, Italy and Germany, where sales are also concentrated in supermarkets.

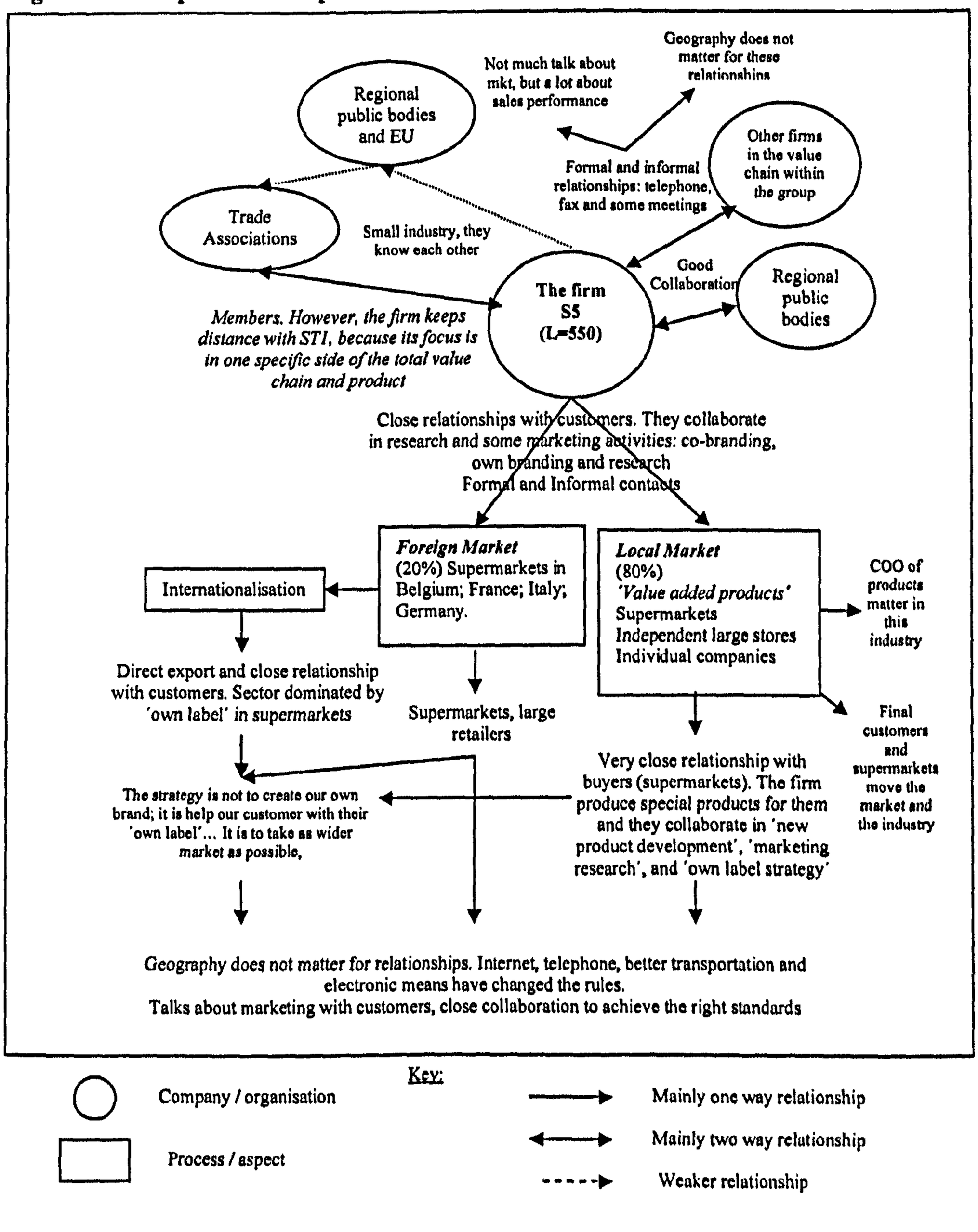
The firm is focused on customer service, especially with large supermarkets across the UK, having close relationships and working in 'partnership' through collaborative projects to satisfy the demand of final customers. New product development, own label strategy and market research are the most common joint projects conducted with large customers (supermarkets, large retailers). As the MD stated, *"Our aim is to satisfy those large retailers which are our main customers. The only manner to achieve that is working in partnership with them. Thereafter, collaboration with them is a key issue. This also applies to marketing..."*. It is important to notice that these kinds of collaborative arrangements are not with direct competitors, but with other partners in different stages of the value chain activities, for example suppliers and distributors. *"Cooperation in marketing is not easy with competitors as we target similar customers and we have to compete firmly to get our market share..."* (Managing Director, S5).

According to S5, geography and close proximity are on an everyday basis less important for successful inter-firm co-operation in marketing. As the MD commented, *"we use the internet, e-mail and fax to help our customers to develop their own brand strategy. We do not meet with them every day because they are mainly in London or Southeast England and we are located in northern Scotland..."* Moreover, both formal and informal relationships with customers, suppliers and other firms are important, because they help to create the *social glue,* of cooperation. However, talks about marketing are

not the most common topics with other competitors, as it is considered a strategic issue for their own business success.

S5 also agrees that Trade Associations do not have a key role or influence in their organisation, *"because they focus only on one specific side of the total value chain and products and we are interested in the total value chain in the salmon farming business..."*. Finally, multinational companies are seen as irrelevant in the creation or upgrading of inter-firm cooperation in marketing. As the manager stated, *"at the beginning of the industry, multinational companies were very important, as they helped to upgrade our technology as well as the research and development capabilities. Currently we produce our own technology and customer approach. So, we do not get benefits or more commercial upgrading from subsidiaries of multinational companies..."*.

Figure 7.6: Graphical Description of S5



7.3.2 Shetland Interviews

TSh1:

This is a trade organisation located in Shetland isles (L=3), where three full time people work. The trade organisation (TSh1) was funded in 1984 at a meeting attended by 8 of the salmon farming companies, representing a new emerging industry. Since that date, the industry has grown as well as its membership, which is entirely voluntary. It currently stands at 52 (46 salmon farms and 6 hatcheries). The meeting was conducted with the general manager (GM) at the premises of the association based in Lerwick. As figure 7.7 shows, Shetland salmon sales in the UK (50%) go mainly to processing plants, where the products get their value added processes. Alternatively, the main foreign markets for fresh Shetland salmon are France, Germany and the USA.

The aims of the Shetland Salmon Farmers' Association are: (1) To preserve and promote the interests of the members of the Association, (2) To provide legal assistance and advice to the members, (3) To provide a forum for mutual discussion and agreements, (4) To act as a voice for the salmon industry in Shetland when dealing with Governmental Departments and Agencies and, (5) To market and promote Shetland Salmon on a worldwide stage. As the general manager stated, *"the main mission of the association is to work for the best interest of our members. This includes: marketing, technical support, training, quality standards and political representation"* (see figure 7.7). TSh1 also has a strong role in public relations not only with the media, but also at political levels.

Most of the companies that participate in the Shetland region have a complex capital structure with some combination of Shetlander and Norwegian capital, operating in both geographical territories. Apart from the origin of the capital, there is a tendency that multinational companies take over smaller companies in order to achieve better economies of scale, or for the integration of their value chain activities. The organisation of companies in this region is highly dynamic and it changes over time.

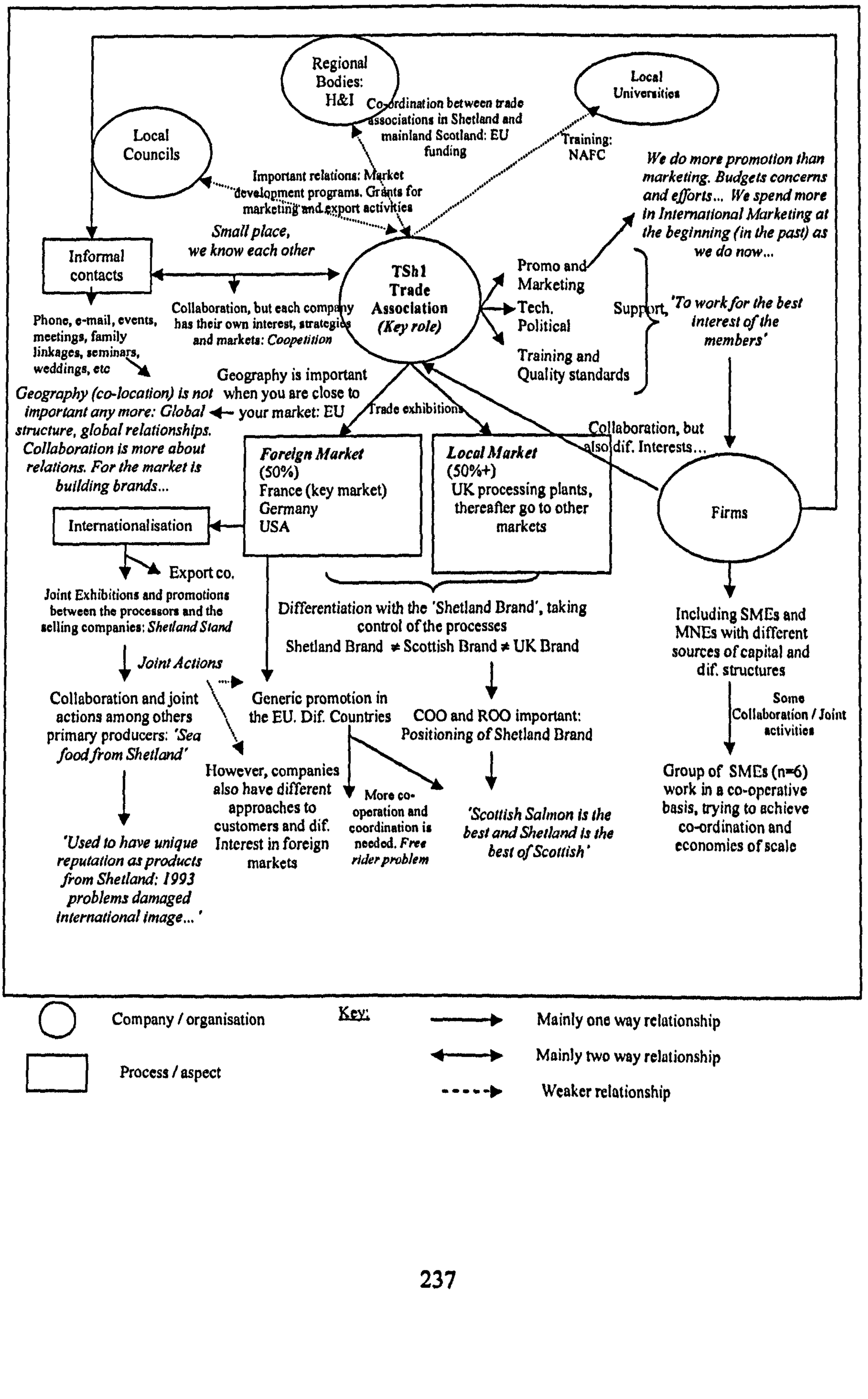
The structure of this industry (in Shetland), also includes the participation of 6 main owners of SMEs, which are part of a cooperative called 'The Shetland Salmon Group'. As the general manager stated *"working together and collectively is the only way of achieving better economies of scale and co-ordination of activities. In this way, we all contribute to the building of our Shetland salmon brand..."*

Although each member company is independent and each has particular business strategies, the Trade Association seems to have a key role in Shetland, especially in promoting generic campaigns for Shetland as a leading brand of salmon. Member companies not only meet formally every month at the TSh1, but also meet informally as part of their everyday life in rural and urban areas of a small community with strong regional identity. As the manager commented: *"Shetland is a small community,* we *know each other very well.... We also support each other for building our regional brand...." "As we say: Scottish Salmon is the best and Shetland Salmon is the best of Scotland...Then, having this in mind we work towards this objective...".* However, informal contacts developed over many years are seen as more important than just co-location. *"Knowing each other, informal meetings, seminars, workshops, meetings at the trade associations and social events are key elements for future collaboration".* Furthermore, there are many family owned enterprises in Shetland, which include not only the salmon industry, but also other economic business sectors. As a result, co-operative activities come from family business and through a socially constructed process of informal relations.

According to the interviewee, people in the Shetland salmon industry prefer to talk about 'promotion' instead of marketing strategies, as they are considered to be more practical for the short term business strategy of their business. Inter-firm cooperation in marketing also comes in joint promotions and sharing stands at international trade fairs between processors and selling / retailing companies, as well as with other primary processor producers. Hence, these joint efforts help to create a better-unified image of the Shetland brand.

As figure 7.7 shows, the coordination of the trade association with the local council and regional developmental bodies, plays a key role in the Shetland salmon farming strategy. As the manager of TSh1 explained, at public policy level, "*the support from the local council and regional bodies (Highlands and Isles Enterprises) are key issues for the future strategy of the Shetland salmon industry*". These bodies provide competitive funding for developing collaborative agreements among producers, international marketing and promotional strategies for Shetland companies and trade associations. At the same time, funding from the EU for collaboration between trade associations of Shetland and Mainland Scotland is also available. Public bodies also support the salmon farming industry because 'it is one of the biggest food export sector in Scotland' (see Chapter 6: The Salmon Farming Industry in Scotland), contributing heavily to the local economic development of rural-remote areas of the country.

Figure 7.7: Graphical Description of TSh1



Sh2

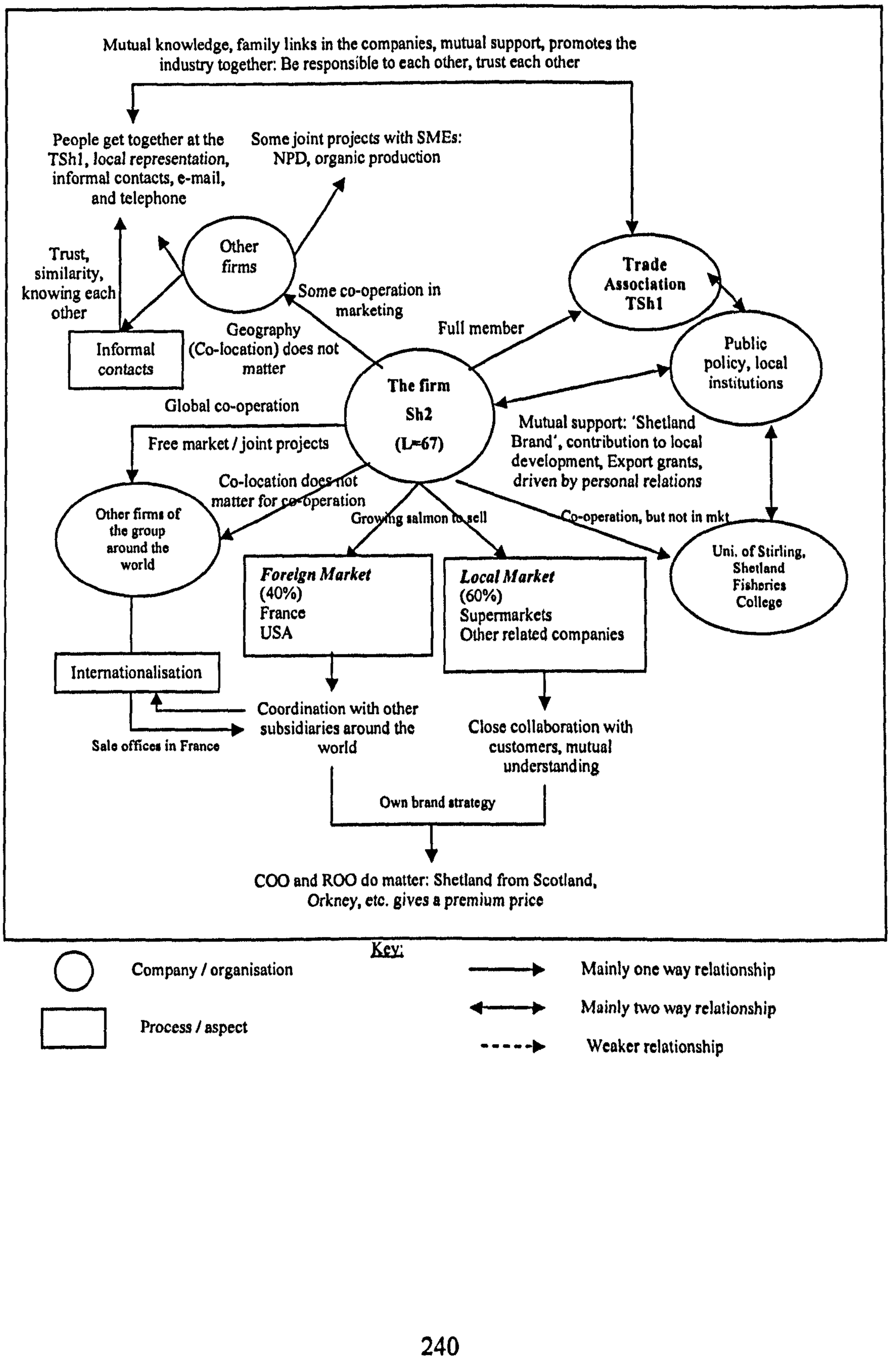
Sh2 is the Shetland subsidiary (L=67) of a foreign large multinational (Norwegian) conglomerate (MNE). This multinational company has operations in Chile, Canada, Scotland and Norway. At the same time, this conglomerate comprises a full integration of the value chain activities in the salmon industry. This includes having feeding, processing, distribution and R&D facilities in the main producing countries. The interview was conducted with the manager of the Shetland subsidiary at the company premises located in Lerwick. As figure 7.8 shows, the main markets for their products are the UK (60%), where Sh2 sells its products to supermarkets and re-processor companies, building a close collaboration with customers. The key foreign markets include France and the USA (40%), where the main customers are large supermarkets and retailers, which have their own brand strategy. The activities in foreign markets are coordinated by the sales offices in Paris, which represents the interest of the multinational conglomerate in France.

The manager of Sh2 emphasized the cooperation within the multinational corporation and the coordination of global operations: *"this is possible because as a multinational group we know each other as different subsidiaries and we work together to fill out the global corporative objectives of our company... we coordinate these activities globally, and the information and communications technologies facilitate this process.... Thereafter, geographical co-location is not the key issue for commercial cooperation. Having a common goal and understanding are the key issues..."*. It is apparent, according to Sh2, that co-location is not the key issue in inter-firm co-operation. Mutual knowledge, understanding and trust are the most important factors for marketing collaboration. Consequently, informal relationships are essential in this industry: *"our meeting with customers, trade association and other producing companies in Shetland, or in any location of the UK, are mainly at informal levels, we talk openly about our goals and we try to coordinate for the mutual success..."* (Sh2 manger)

Sh2 has some joint projects with other competitor firms in new product development (NPD) and creation of new organic products. In addition, the 'Shetland brand strategy',

communication with the press and politicians, is arranged in coordination with the Trade Association (TSh1). The relationships with local public institutions are vital for the local economic development of the region and the sustainable strategy of companies through grants and research support. Good cooperation with universities through research projects and trials also contributes to this strategy (see figure 7.8). Furthermore, it is perceived that local companies have acquired the necessary commercial capabilities for competing in global markets, an issue that was exclusively the territory of MNEs few years ago. However, according to Sh2 *"MNEs still have the capabilities of contributing to global competition, making local companies have higher commercial goals, as they are surrounded by a competitive environment...."*

Figure 7.8: Graphical Description of Sh2



Sh3

Sh3 is a small family-owned, local food processor company located in a rural-remote area of the Shetland isles. The company employs eighteen full-time employees (L=18), which belong to the local community. Sh3 has being in this business since 1996, and is now taking a new step in the business, selling worldwide through the Internet. The interview was conducted with the owner-manager of the company, who explained, as figure 7.9 shows, that the main business activity is concentrated in foreign markets (95%), including sales to restaurants and specialised retailers in Belgium, France, Italy, Greece, Japan, Hong Kong and the USA. The local UK market only represents 5% of its sales and they are concentrated in few large distributors.

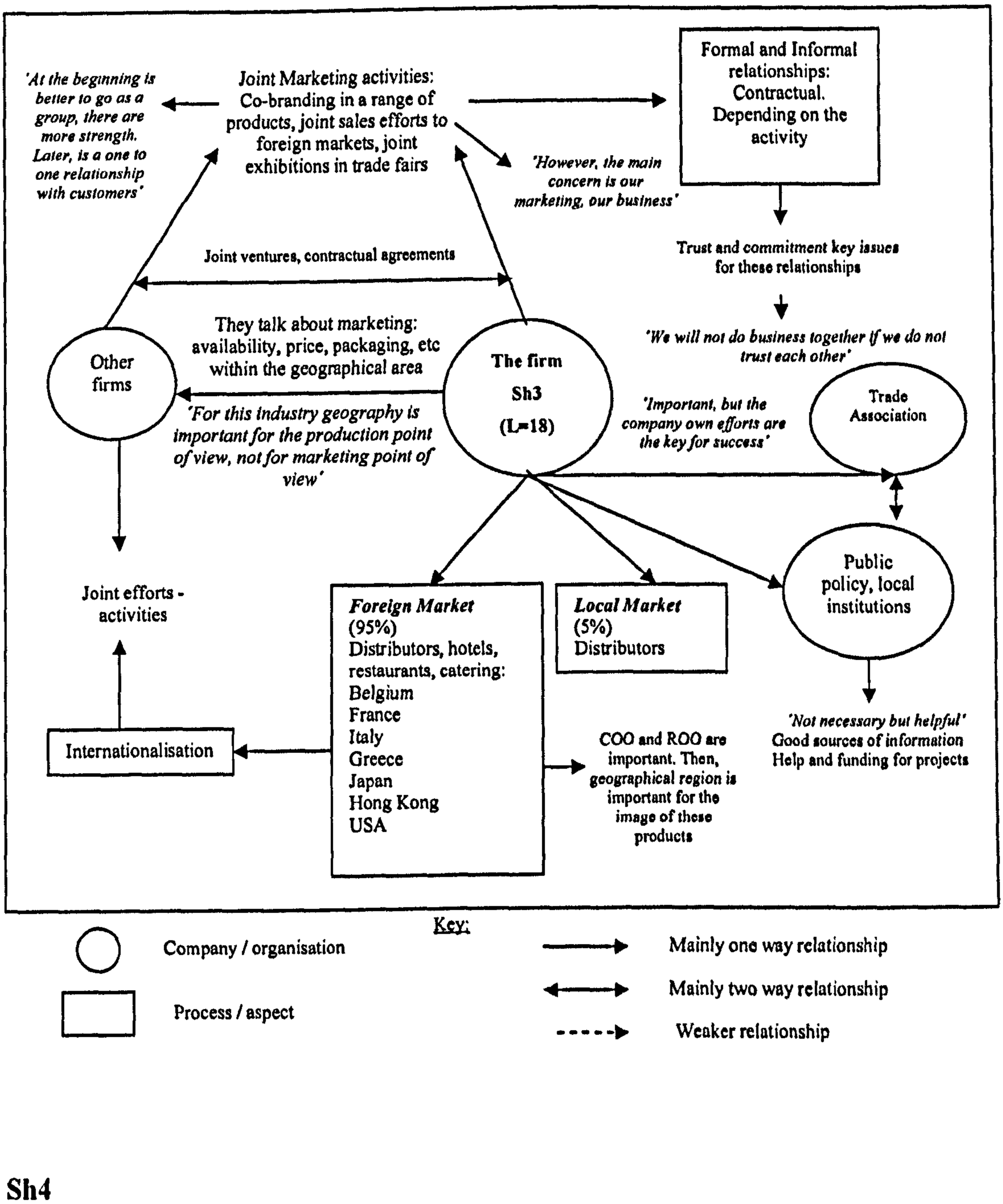
Sh3 stated that it has inter-firm co-operation in marketing activities and that this, is relevant to the business strategy and performance of the company: *"Co-branding, joint sales efforts in foreign markets and joint exhibitions in trade fairs, are the main joint marketing activities in which our company is involved in co-operation with other local and foreign firms..." "Inter-firm cooperation in marketing is good when you are small and start looking for new foreign markets. However, later when we learn this process, it is better to go alone as we want to develop our own, unique, business approach to customers..."* At the same time, some contractual arrangements in some specific projects are part of the inter-firm collaboration of this company. However, as the manager stated, *"to be in a group and have generic marketing is important just at the beginning of the business. Later the relationships are on a one to one basis with customers...".* As a result, inter-firm cooperation in marketing is seen as more necessary at the early stages of the business growth, as more commercial efforts are needed to look for new clients abroad. Later, when the business activity is more consolidated, more individualistic strategies are the norm. Thereafter, it can be suggested that industry and company life cycle may affect the levels and the necessity for marketing collaboration.

Although geographical co-location is considered important for the production and natural resources point of view, it is not perceived by Sh3 as the key element for inter-firm cooperation in marketing, as communication and information technologies facilitate

this process with companies located everywhere in the world. As the manager stated, "*Knowing each other, building common business goals and trusting our partners, which may be located anywhere, are the key issues for marketing cooperation...*" "*we will not do business if we do not trust each other...*" Clearly this means formal and informal relations at company and personal levels, trust, commitment and mutual understanding are key issues for inter-firm co-operation in marketing. At the same time, as described in figure 7.9, Sh3 talk about marketing with other firms, including customers, suppliers and competitors. Hence, in this way, the development of joint marketing activities becomes easier.

Sh3 sees multinational companies as having different business objectives and customer approach, compared to small companies. As the manager commented, "*We know each customer and we help them to build the right marketing strategies for selling our products, whereas the approach of multinational companies is not as personalized...*" Equally, the marketing strategies are different as their business objectives are dissimilar. Furthermore, commercial upgrading issues from multinational companies are not considered relevant in the case of small-family businesses. Finally, the role of the Trade Association (TSh1) is considered helpful in the promotion of the Shetland brand. However, as the Sh3 manager stated, "*the company's own efforts are the key for marketing success....*"

Figure 7.9: Graphical Description of Sh3



Sh4

Sh4 is a local subsidiary (L=160) of a multinational (Norwegian) conglomerate and UK holding. The interview was conducted with the regional manager of the Shetland subsidiary located in Lerwick. As figure 7.10 shows, the main business of Sh4 is the processing of farmed salmon (processing plant) for selling to the foreign (33%) and British markets (67%). Their sales and commercial efforts in the local market are

concentrated in large supermarkets, smoking companies and retailer outlets, which have their own brand development strategy. A very competitive cost and quick delivery service are the main marketing features that Sh4 offers to its local customers. Sales to foreign markets are concentrated in the European Union countries, Far East, the USA and Canada. In these markets, foreign competition is strong. Therefore, final price, economies of scale and differentiation strategies, which include a quick delivery services, are important for achieving competitiveness.

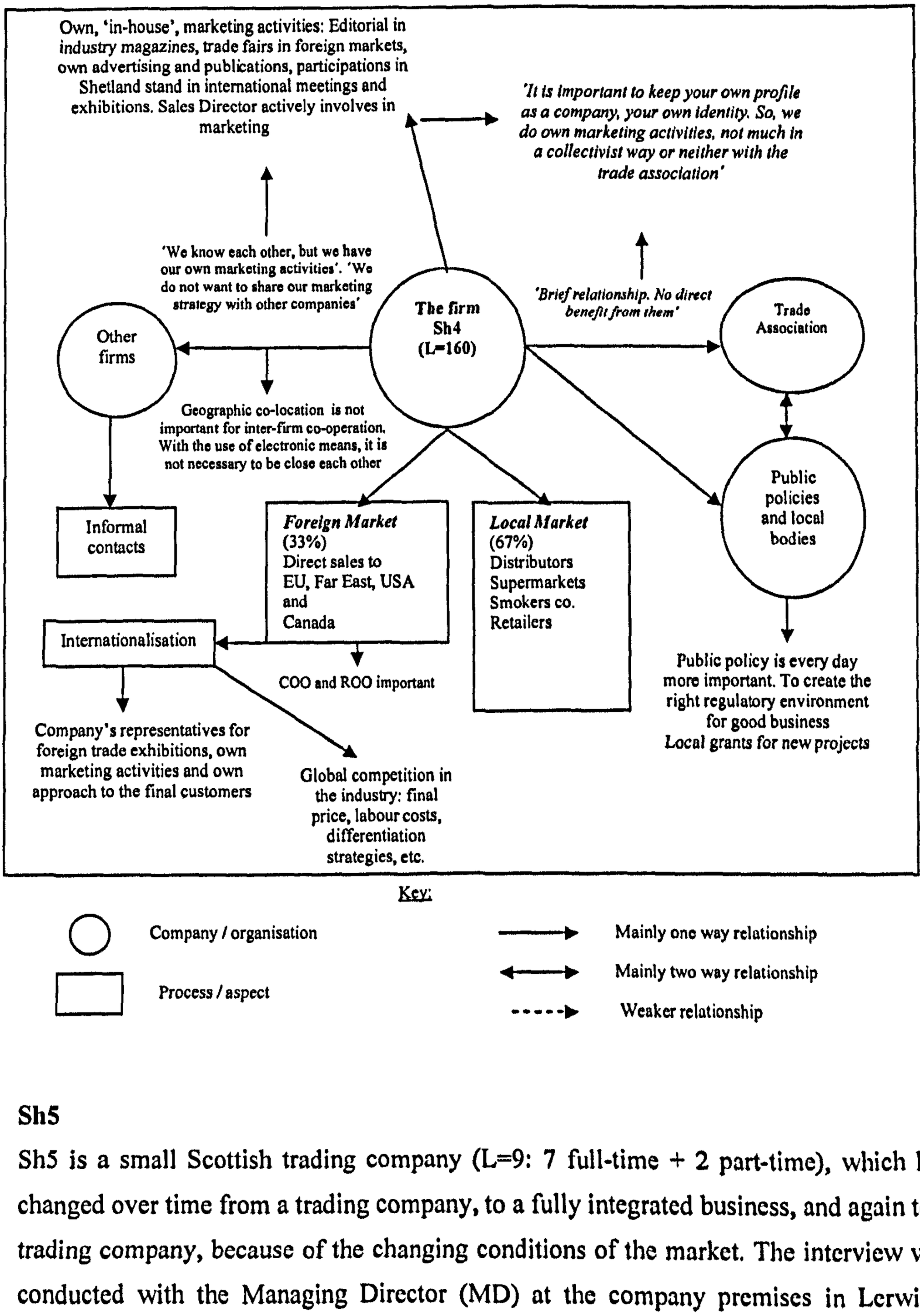
Although there is inter-firm co-operation in the production-technical process, and especially when there are common interests among companies, there is no current specific cooperation in marketing activities, because of the strategic issues of strong competition. However, Sh4 have had some collaboration in new product development and joint market research for organic products: *"we had cooperated with other companies in specific issues of new product development of organic salmon, where we were one of the first companies to introduce and commercialize this new concept in the UK. Later, we did our market research together with other competitor company. These joint efforts were good. However, we are independent companies, so after this joint marketing project we continue our independent business strategies as we may have different long-term objectives..."*. Currently, the marketing activities and strategic plans are performed individually. Furthermore, the company is actively involved with customer after sales service, public relations with the media, specialized publications and participation in trade fairs: *"with these activities we promote our brand and conglomerate name to the stakeholders; including the local community...we also show them the social responsible behavior informing our activities..."*

As global competition increases in the industry, the marketing strategies and differentiation is becoming more important. Furthermore, the role of the Trade Association is seen only as a facilitator of information, not as a key element for the development of marketing activities: *"we prefer to conduct our marketing and communication activities by ourselves, as the trade association may have different communication strategies which may not always represent what we want to say..."*. The

role of public policy seems to be important in the creation of the right environment for business, especially the cluster strategy for Scotland, as it allows participation with more research and development activities with other institutions.

Geographical co-location is not considered to be key issue for the development of inter-firm cooperation in marketing activities, as the information and communication technologies facilitate this process with companies worldwide: *"geographical proximity facilitates our face-to-face and informal interaction, but it is not the key element for collaboration... to know your partner and have mutual trust and understanding of the common business objective is more important...."* Sh4 also stressed the intra-group collaborative systems that multinational companies have for developing joint efforts: *"we communicate everyday with our headquarters to coordinate our production and commercial activities, we always collaborate in our group, as we all know very well the final objectives..."*. Consequently, inter-firm cooperation in marketing, with companies in the same conglomerate, is considered easer than collaboration with local embedded companies, as their business objectives are different.

Figure 7.10: Graphical Description of Sh4



Sh5

Sh5 is a small Scottish trading company (L=9: 7 full-time + 2 part-time), which has changed over time from a trading company, to a fully integrated business, and again to a trading company, because of the changing conditions of the market. The interview was conducted with the Managing Director (MD) at the company premises in Lerwick. Currently, as figure 7.11 shows, Sh5 sales are concentrated in foreign markets (90%),

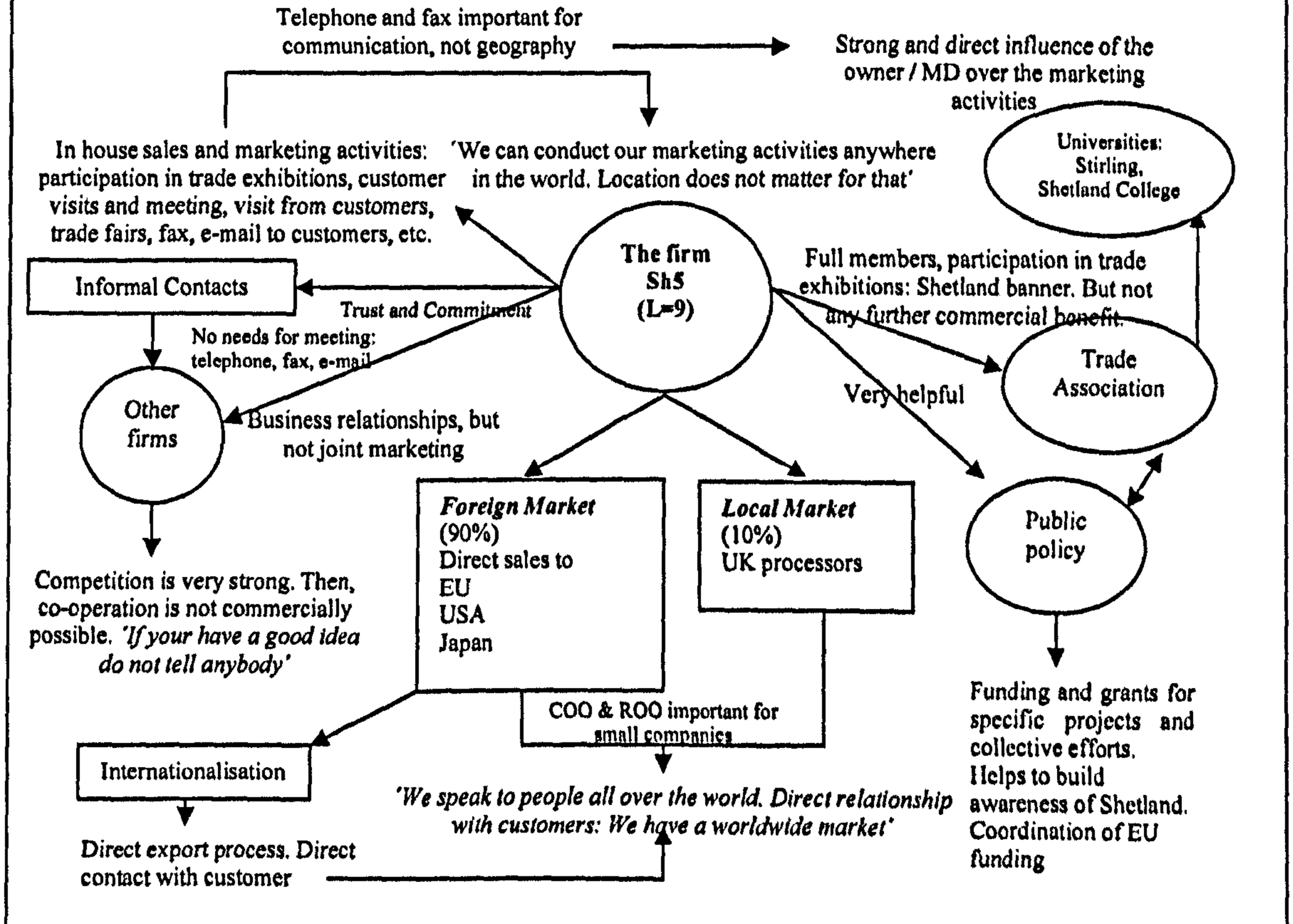
namely the USA, the EU and Japan being the most important export destinations, where having a direct and personalised contact with customers is considered the competitive advantage of the company. As the Managing Director stated: *"I deal personally with the most important customers. I know them, they know me, as well as our products... This is the basis of our marketing and customer satisfaction..."*

The business activities of direct contact with customers worldwide, planning and marketing strategy are highly concentrated in the owner / managing director of the company, where they have no marketing manager for these activities. At the same time, the relationship with other companies in the industry is mainly conducted at informal levels, sharing general business trends and the issues that affect the Shetland economy. However, Sh5 does not co-operate in joint marketing activities because of the issues of strong competition. As the MD stated, *"we all live here in Shetland. This is a small place where we all know each other, we meet informally with other managers at many social occasions, and we are good friends. However, business is business and we do not share our strategic information, as this is the secret of our personal and business success..."*. Thereafter, geographic co-location is not an important issue for the company's business strategy *"we can sell and conduct our business from everywhere in the world... we use the internet, e-mail and phone to contact our customers and partners, location does not matter anymore for conducting business, just for getting the raw materials and natural resources... this is the reason we are here in Shetland..."* Moreover, trust and commitment with customers and partners are seen as important for marketing collaboration.

The role of the Trade Association, Universities and Public Policy are seen as important, but not decisive for the business activity, marketing or company performance, as the key issue considered by Sh5 is the entrepreneurial effort and good business strategy (see figure 7.11). As the MD stated: *"if our company is successful it is because we have a long-term vision, we know where we want to go and we follow this objective until it is completed... This is my work!"*

Sh5 also argued that small companies are playing in this *'quasi commodity industry'* with strong global competition, marketing expenditures need to be very carefully planned, focusing all the efforts in niche marketing strategies with the aim of achieving better prices. Thereafter, SMEs need to be aware that they are different from multinational corporations (MNEs), having different levels of resources, business strategies and customer approach. Indeed, to have an effective marketing strategy and carefully planed budget is important for family and small businesses. Furthermore, MNEs are seen as not contributing new commercial capabilities to the industry, concentrating their efforts in global and massive production, which is totally different to the small business strategies competing on a one to one customer approach.

Figure 7.11: Graphical Description of Sh5



Sh6

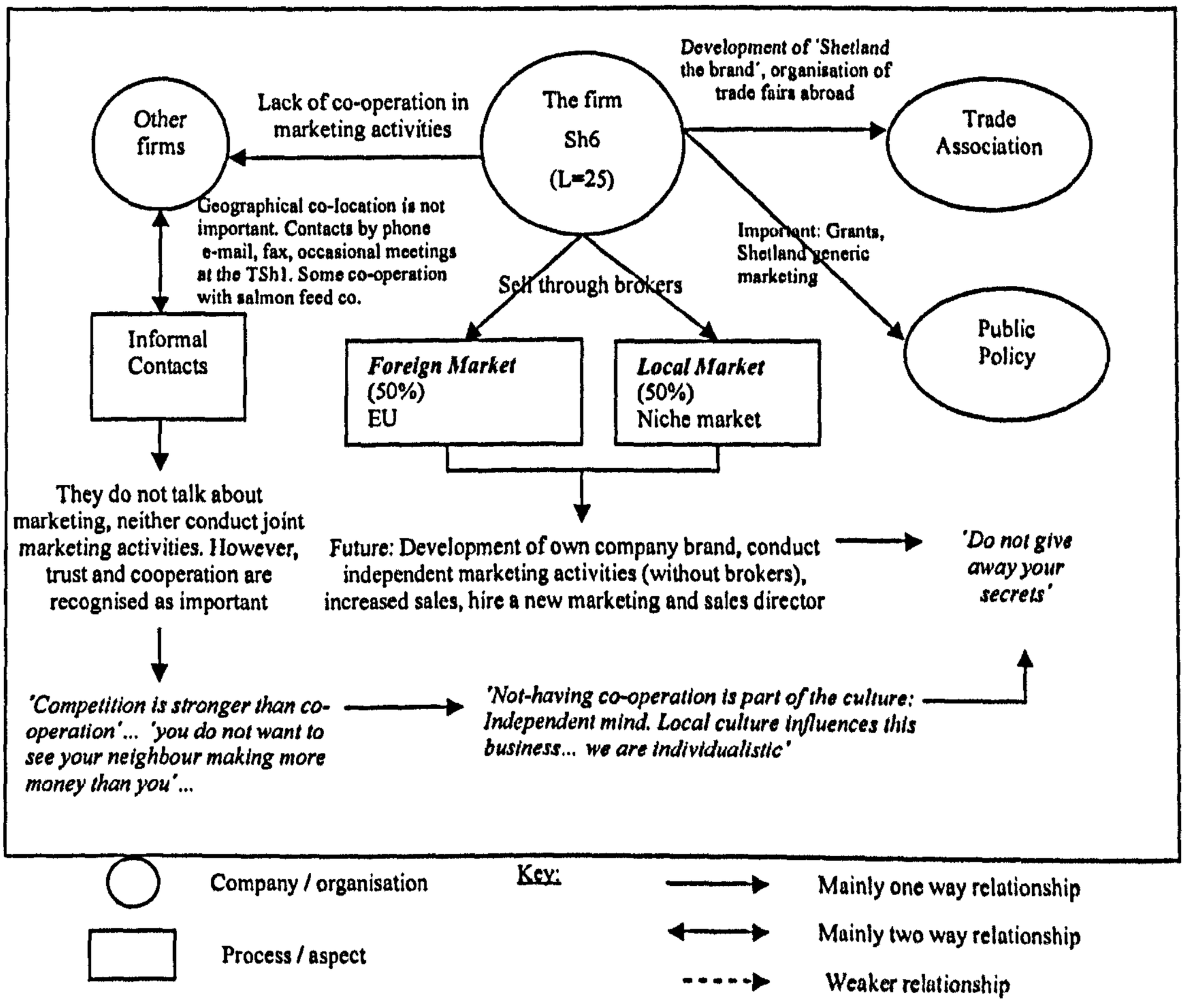
Sh6 is a small British-owned company (L=25) specializing in 'salmon farming growing solutions', selling their products through brokers in the UK (50%) and foreign markets (50%), especially those from the European Union (see figure 7.12). The interview was conducted with the owner-manager at the company premises located in a rural-remote area of Shetland, who explained that the company wishes to diversify its products and activities, hoping to achieve more vertical-forward integration through the direct coordination of their sales activities at local and international levels. Currently, Sh6 sells its products abroad through traders. However, they hope to change that having a stronger commercial and marketing involvement in a new business strategy led by the Managing Director: *"we are creating a new website, diversifying our production to new marine farmed species and value-added products, we are also recruiting a new commercial manager... we want to achieve better competitiveness and positioning in the market"*. Hence, the owner / Managing Director of the company plays a key role as a decision maker and influences every aspect of the business strategy, operations, marketing activities and planning.

Sh6 explained that although companies know each other and have informal relationships, they do not talk about marketing activities or conduct joint marketing activities because of the issues of strong competition and individualistic business culture. As the manager stated, *"you do not want to see you neighbour making more money than you... do not give away your secrets." "Close proximity with other companies in Shetland allows us to know more people, be friends and be all related in the industry. However, we do not share our business strategies with competitors. I will share strategic information if I trust a potential partner and there are clear possibilities for gaining more profits together... I like making my own marketing and business decisions by myself and this is part of our individualistic culture..."*. This suggests that geographical co-location is considered useful for sharing general ideas, rather than strategic marketing information. Moreover, individualistic culture seems to be an important component opposing inter-firm cooperation in marketing.

Sh6 also commented on the issues concerned with the changes in the structure of the industry, from SME dominated with some family linkages, to the main role played by multinational corporations (MNEs), which in certain cases transfer some research and development knowledge to the smaller companies, but not new commercial capabilities. As the manager acknowledged, *"multinational companies have many resources for research and new product development, but small companies have the special one-to-one customer approach, and this is our competitive advantage that we need to keep for our future..."*

As figure 7.12 shows, local public policy is seen as beneficial in its support with grants and the development of generic marketing strategy in the Shetland brand, helping the achievement of better country and region of origin effect.

Figure 7.12: Graphical Description of Sh6



7.4 Chile

Ten interviews were conducted in Chile. The Trade Association (TCh) and Ch1 were located in Santiago (central region). Six companies (Ch2 to Ch7) were located in southern Chile (X region). The other two companies (ChN8 7 and ChN9) were located in southern Chile IX region (outside the main cluster area). A description of each participating firm and their views related to the influences of co-location and social networking in inter-firm co-operation in marketing is provided. Later, a comparative analysis of these discussions and their theoretical and practical implications is presented.

7.4.1 Xth. Region and Santiago Interviews

TCh:

This is a Trade Association (TA) (L=7) funded by its own members, of which there are currently 45 member companies (35% of whom are subsidiaries of multinational companies) at the different levels of the value chain activities of the salmon farming industry. The interview was conducted with the general manager, who explained that the Chilean salmon industry is internationally oriented, exporting by 99% of its production to 62 foreign countries, including the USA, Japan and the European Union (see figure 7.13). TCh deals with public relations at local and international levels, having communication with public as well as private institutions. It also works closely with the Salmon Technical Institute-INTESAL (L=19), located in the main salmon cluster area of Puerto Montt. INTESAL deals with the environmental, technical, quality and training standards of the industry.

According to the TCh manager, the main mission of the Trade Association is *"to create an industry with social and environmental responsibility, achieving in this way a more competitive industry at international levels"*.

From 1990 to 1997 TCh had a marketing budget, which helped the development of generic marketing campaigns: fair trade participation, publications, advertisements, etc.

which positioned the Chilean salmon industry among foreign distributors and importers. Later, as the manager stated, *"individual companies were in charge of their own marketing approaches to foreign markets due to the different strategies and markets of the individual associate members"*. Nowadays, the TA leads a national generic marketing and communication campaigns to improve the positioning and social responsibility of the industry in the local market. Apart from that, TCh participates in a strategic alliance with Salmon of the Americas (strategic association between Chilean and North American producers) having joint generic communication campaigns with opinion leaders, promoting the advantages of consuming farm salmon (e.g. Healthy benefits). Furthermore, the trade association participates with ProChile (export promotion bureau office) in a joint generic marketing campaign abroad – 'flavours of Chile' - with wine and fresh fruit producers.

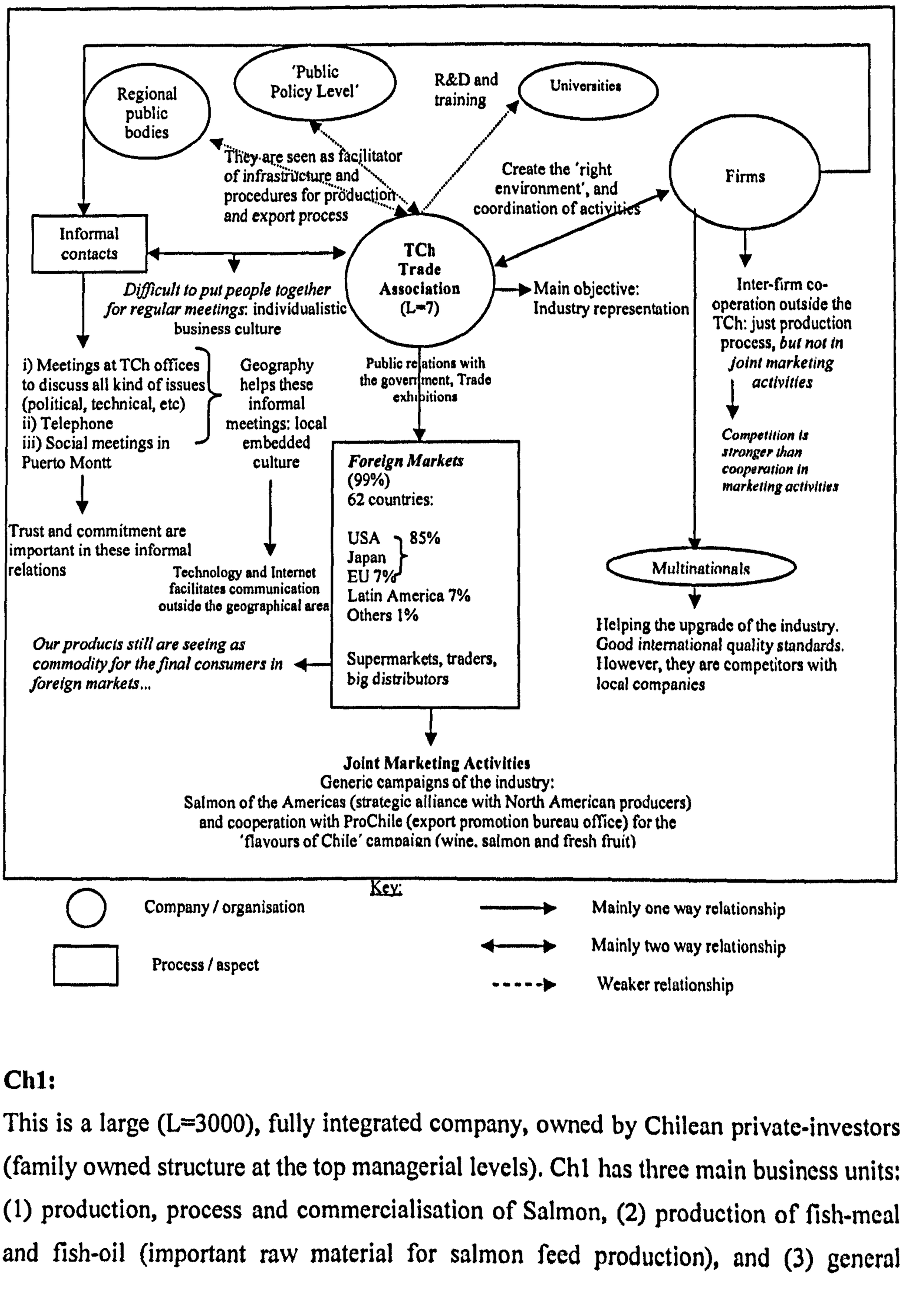
TCh believes that *informal relations* are important for the development of mutual trust among companies. Thereafter, as the manager stated, *"to be located in specific regions, helps the development of these social relationships and mutual knowledge, sharing an embedded local culture (e.g. the case of Puerto Montt in southern Chile)..."* However, *"...nowadays the information and communication technologies help in having direct contact with companies that are not located in a specific geographical area, and this has changed the rules of geography"*. Although companies may achieve trust between them, and geographical co-location may help in this process, they are always seen as competitors trying to attract similar customers worldwide. The inter-firm cooperation seems to come about more effectively when the industry has some problems, as for example dumping accusations coming from other competitors' countries (e.g. Scotland and Ireland).

The general manager of the TA also believes that the future of the industry would be characterised by the creation of strong brands, having more strategic alliances among companies in the different stages of the value chain. For this, joint marketing activities and marketing alliances will be necessary, although this is not easy to achieve as firms have different interests and business strategies. It is likely that inter-firm cooperation

will come with collaboration between buyers and suppliers, looking for complementarity, rather than rivalry among companies. Furthermore, the industry tendency is that larger companies acquire smaller-specialised companies to satisfy different market-segments achieving better economies of scale and more profits.

Multinational companies have also had an important role in the development of the industry at its early stages, contributing with research capabilities. However, nowadays, local-large companies have learned to build these competences themselves and can be as competitive as MNEs. In addition, marketing cooperation is rare between MNEs and local companies, as they have different business interests and individualistic marketing strategies. Hence, competition is stronger than cooperation in firms located at the same stage of the value chain.

Figure 7.13: Graphical Description of TCh



Ch1:

This is a large (L=3000), fully integrated company, owned by Chilean private-investors (family owned structure at the top managerial levels). Ch1 has three main business units: (1) production, process and commercialisation of Salmon, (2) production of fish-meal and fish-oil (important raw material for salmon feed production), and (3) general

seafood production and commercialisation. As figure 7.14 shows, the company exports 100% of its production to foreign markets, except the fish-meal and fish-oil production. The latter products have an important local market and they are used as key raw materials for salmon feed production.

Ch1 has commercial offices in Miami-USA as this is its main export market. Conversely, in the European Union, which is a smaller export market, the company uses independent-local agents as part of its internationalisation strategy. As the company's manager stated, communication with other managers in the local market is mainly through two different levels. Firstly, meetings in the Trade Association in Santiago or Puerto Montt (1000 kms south from Santiago, where the Ch1 also has regional and production offices), which are mainly concerned with technical, environmental and R&D issues. Secondly, meetings with others general managers at an *informal level* in the premises of the company or by a telephone calls.

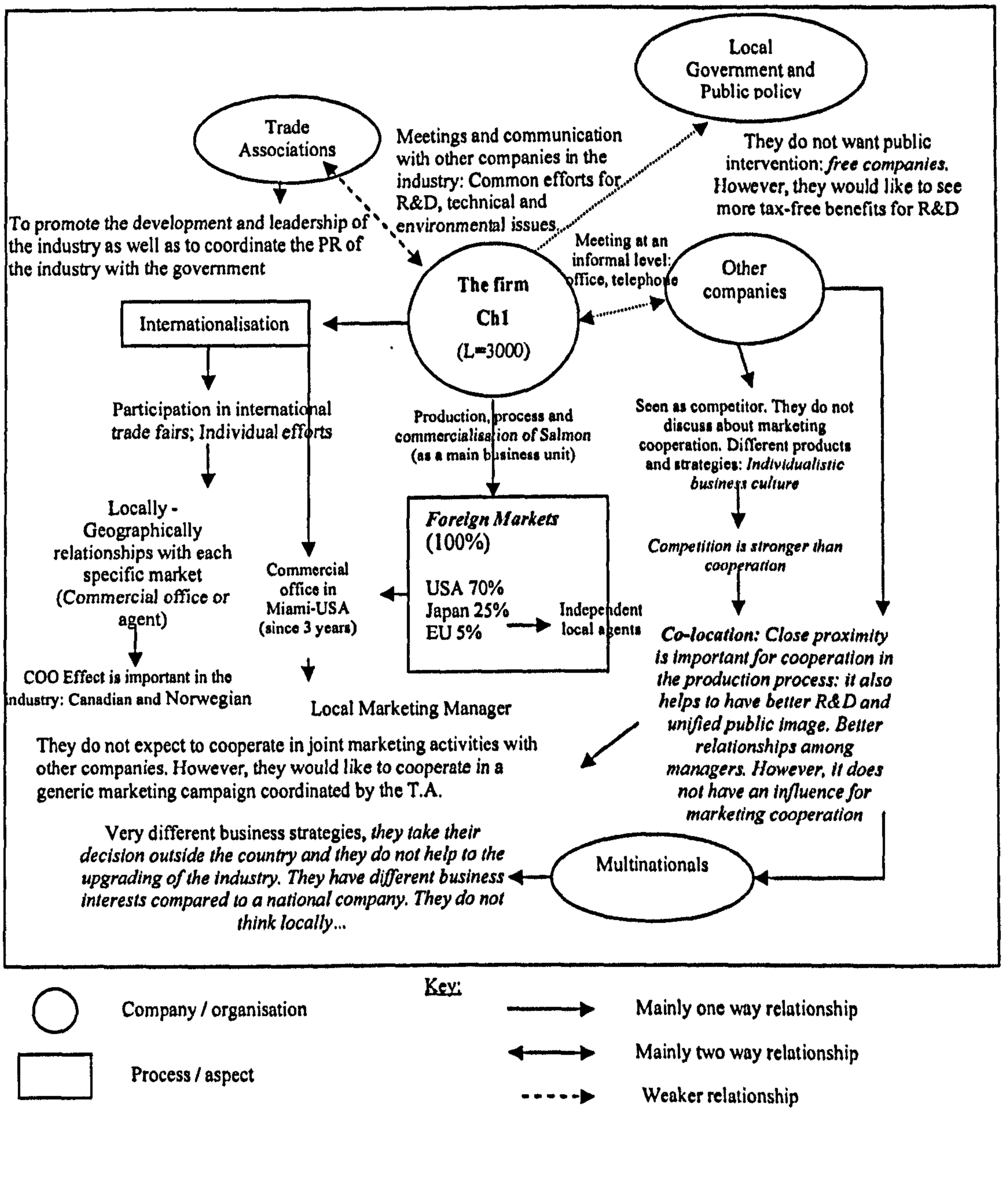
Informal meetings are considered very important for the development of the industry and the business itself, because using these informal meetings they build trust and share information about trends in the industry. At the same time, as the manager stated, Ch1 frequently talk to other companies about *"general tendencies of the markets, but not about marketing strategies or marketing cooperation because the products, quality, value added, differentiation levels and business strategies are different among competitors"*. Furthermore, the Ch1 manager commented, *"competition is stronger than cooperation in this industry"*. Then, sharing strategic information with competitors is difficult and risky. As a result, informal discussions are useful for sharing general information, rather than strategic or long-term marketing information. Moreover, the 'free-rider' and strong competition issues do not allow having inter-firm cooperation in marketing.

Ch1 sees the role of the Trade Association (TA) as important for the promotion and public relation of the industry at political, local and international levels. The TA also helps the industry to unify their interests. However, Ch1 does not want to see the TA

selling products and interfering in its private business. *"...the TA can also co-ordinate a generic marketing campaign at local and international levels, but cannot have any interference in our private business with our customers..." "...It is fair to contribute to the TA activities because helps to the image and unification of the industry"*. Ch1 also enjoys collaborating in generic marketing campaigns with SOTAS (Salmon of the Americas), based in Miami (strategic association between Chilean and North American producers). Hence, inter-firm cooperation in marketing with other companies located in other countries is easier than with those located in Chile, when they are not direct competitors. Furthermore, geographic co-location is useful for inter-firm cooperation in the production process, but not for collaboration in marketing activities or marketing strategies, as those issues are specific to each company.

According to Ch1, multinational companies (MNEs) contributed at the beginning of the industry with new production and research capabilities. However, nowadays the industry is mature enough with capable large Chilean companies contributing equally to this process and the upgrading of technology. Accordingly, MNEs do not contribute with new marketing capabilities, nor with more collaboration in this area, as they cooperate only among their own group of companies having different business strategies, compared to local firms.

Figure 7.14: Graphical Description of Ch1



Ch2:

Ch2 is a family-owned, fully integrated salmon company (L=340) located in Puerto Montt. The interview was conducted with the general manager, who explained that the company seeks to achieve better prices through the production and export of value added products, which are mainly sent to re-processors (smokers) located in the European Union, especially in Germany and Holland (see figure 7.15). The other main export

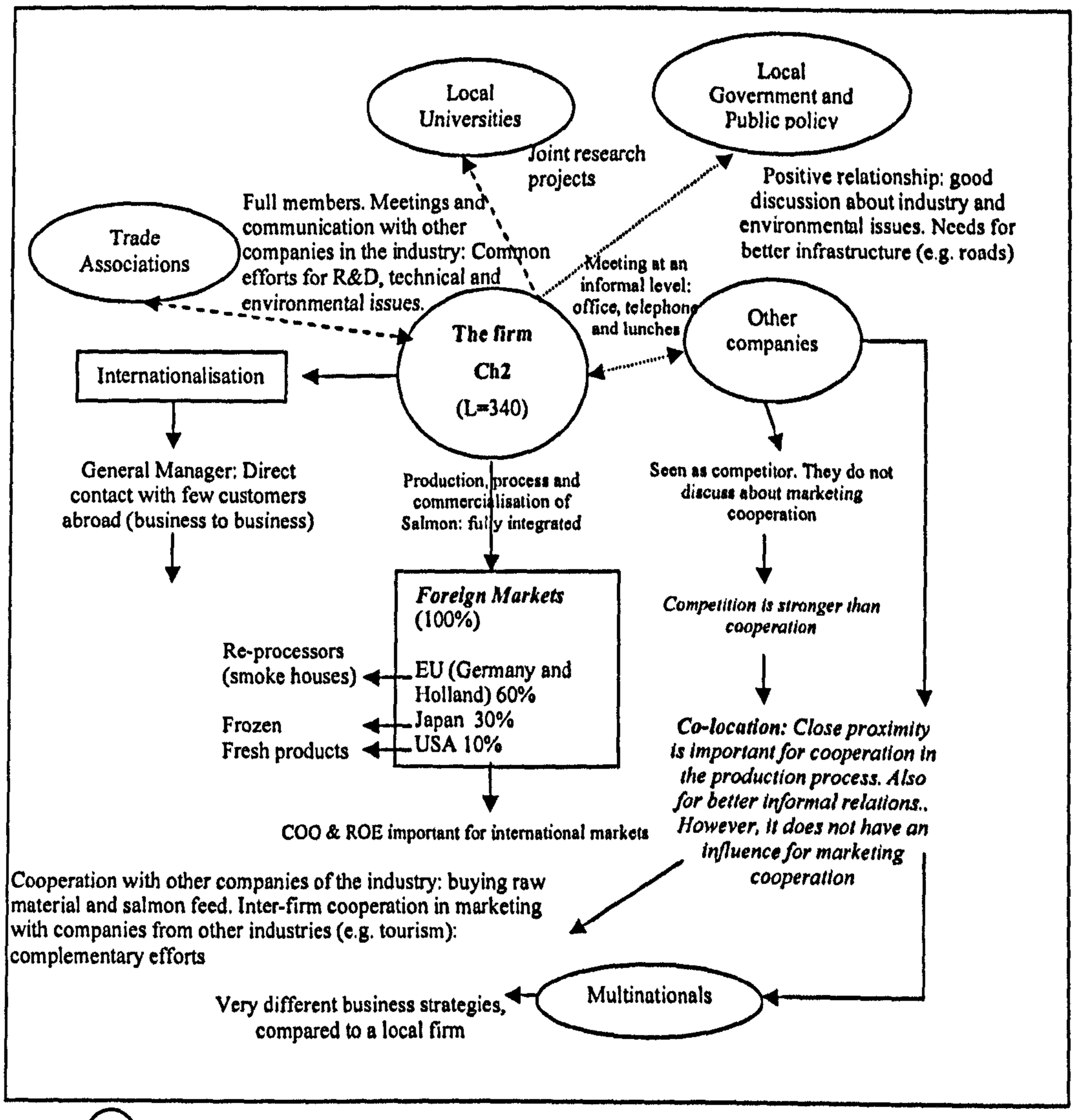
markets also include Japan and the USA. According to the manager, Ch2 wants to be an important and unique supplier of re-processing salmon companies in the EU (mainly located in Holland and Germany). Accordingly, the future plans do not include the creation of an individual brand for final customers.

The general manager is the person in change of the long-term relation and direct contact with the main customers abroad, not having a specialised commercial (or marketing) department within the company. According to him, the key company objective is *"to serve only a few specific customers abroad and concentrate the company's efforts on the specialisation and exclusive service to these customers (business to business relationships)"*.

Ch2 has some cooperation with other companies in the industry buying salmon feed at cheaper prices (bigger volumes). Furthermore, it has been involved in inter-firm cooperation with other industries (e.g. tourism, hotels) for promoting jointly their products and services. Thereafter, Ch2 stated that co-location (close proximity) is not the key issue for inter-firm cooperation in marketing. However, the mergers synergies among different industries and companies are seen as important for the creation of joint efforts. As the manager stated, *"geography helps to create the right environment for informal relationships in embedded local communities and regions, but is not the main factor for building inter-firm cooperation in marketing..."*

According to the manager, multinational companies are considered to have different business strategies and objectives compared to locals firms, selling their products globally and concentrating in achieving important economies of scale. Besides, as the manager stated, *"local firms prefer to have a one-to-one relationship with customers adding value to them... and this is our competitive advantage..."*. Thereafter, this is considered one of the reasons why inter-firm cooperation between local and multinational companies is difficult to achieve.

Figure 7.15: Graphical Description of Ch2



Ch3:

Ch3 is a Chilean fully integrated subsidiary (L=2400) of a large multinational conglomerate (MNE), which has operations in Canada, Scotland, Ireland, Norway and Chile. The interview was conducted with the general manager, at the company premises located in Puerto Montt, who explained that the company belongs to a wider agriculture

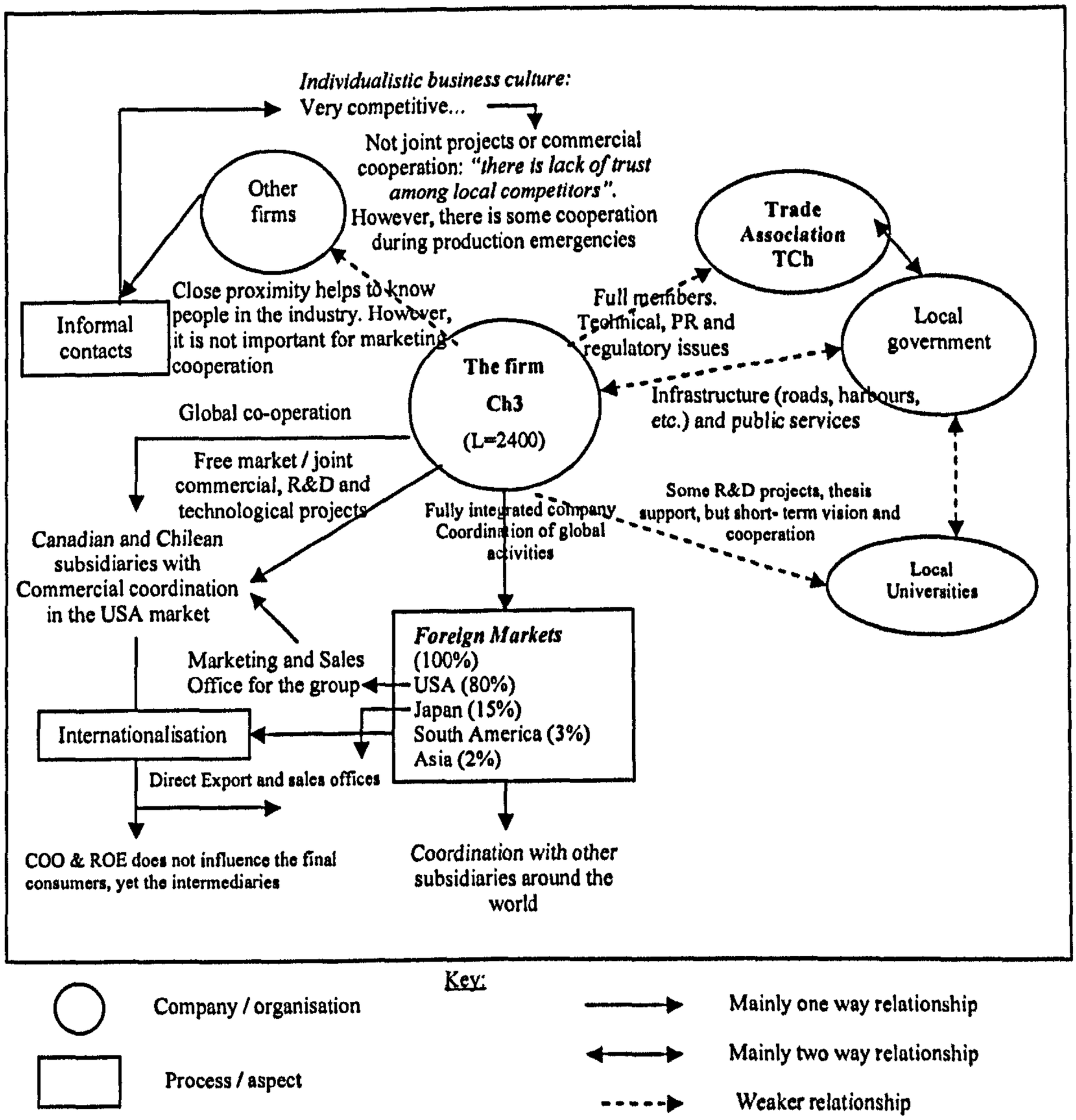
and aquaculture commercial group, which is an open public company in the Dutch stock exchange. As figure 7.16 shows, the Chilean subsidiary exports its products mainly to the USA and Japan, having sales offices and marketing staff in these markets.

The manager emphasized the high coordination and global strategies among subsidiaries within the conglomerate at the production and marketing levels. At the same time, he also stressed the high degree of resources (Managerial, Technological, R&D, etc.), which the conglomerate has for helping the upgrading of its subsidiaries around the world. Furthermore, there are joint commercial strategies among the American producers (Canada and Chile) for the USA and Japanese markets, apart from those agreed through the participation in SOTAS (Salmon of the Americas Association). However, there is no inter-firm marketing cooperation outside the group, mainly because of the lack of trust with local producer companies. As the manger stated, *"it is easier to coordinate activities and cooperate in joint projects at managerial levels within the same conglomerate than with local non-related companies..." "Geography – close proximity – is not a key issue for marketing cooperation... "*. Ch3 also stated that the role of multinationals is to coordinate their activities globally, achieving greater economies of scale leading then to better profits. Moreover, this coordination is possible through electronic means and the sharing of strategic information. However, this does not happen with local companies, as they are direct competitors and the sharing of information and knowledge is done only at general levels.

Geographic co-location helps meeting more people in the same industry sharing similar problems. However, it is does not influence inter-firm cooperation with competitors.

Ch3 believes that the central role of the local government is to contribute in the facilitation of the companies' activities through a good physical infrastructure and delivery of public services. Ch3 develops some research projects with local universities.

Figure 7.16: Graphical Description of Ch3



Ch4:

Ch4 is a large (L=1500) fully integrated Chilean company (private funding, due to family ownership, which is seeking to be an open company in the near future). The interview was conducted with the marketing manager located in Puerto Montt, who deals with all the commercial aspects of the company. As figure 7.17 shows, the firm exports 100% of its production, mainly to the USA (52%) and Japan (32%). Furthermore it has commercial and sales offices in the USA market. As the manager explained, Ch4 used to have a joint commercial office with a Chilean competitor in the USA, but

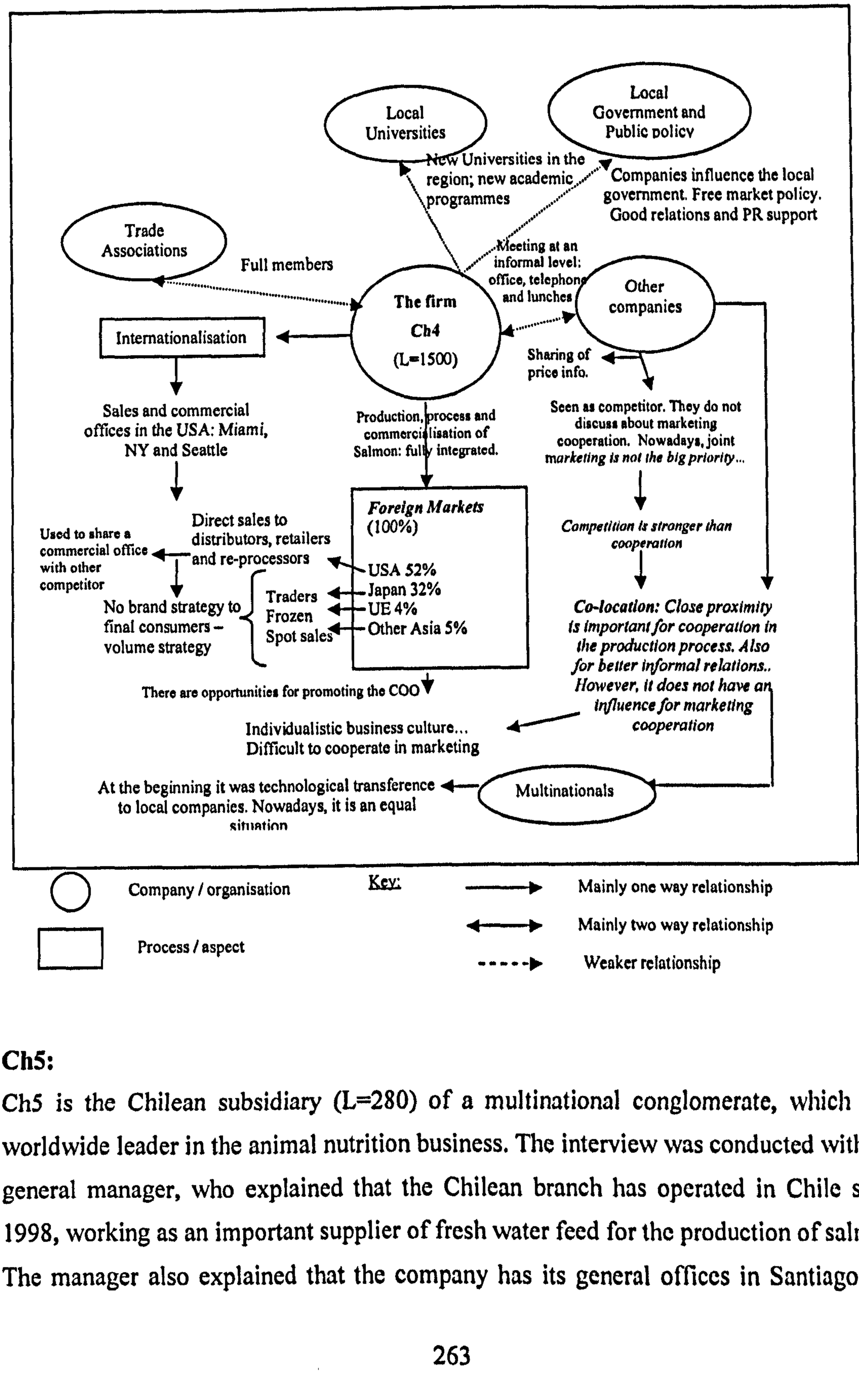
nowadays every company has its own commercial strategy in this market, because of the strong competition issues of the industry. Marketing and sales to other markets are mainly undertaken with traders (Japanese market) or direct importers (other markets, like the EU).

The marketing manager based in Chile, who coordinates all the commercial activities with the USA office, carries out the marketing activities of Ch4. Moreover, the manager stated that *"all marketing activities need to develop further in this industry, as there is space for a better commercial development, and then more sales, as a result". "The industry needs to understand better the importance of marketing, creating a better unified image and having more joint efforts..." "We need to use marketing more as an important commercial tool...we need to learn how to do it well..."* Furthermore, Ch4 recognised that the industry has started to understand the importance of communication and coordination for joint commercial activities with competitors: *"Only in this way can the industry grow more and we can all have better sales in foreign markets..." "However in the meantime, competition is stronger than cooperation, and this is a big mistake in our industry..."* Ch4 also stated that geographical co-location is not a key issue for finding partners and collaborating in marketing. However, it helps for meeting people from the industry and cooperating at the production process levels.

Ch4 is buying a competitor company, also located in Puerto Montt, with the aim of achieving better economies of scale and diversifying product range and markets. The two companies are expected to operate individually, but with a unified long-term commercial strategy. Therefore, achieving marketing complementarities is a key strategic issue.

Ch4 also considered that multinational companies transferred technological capabilities to the industry in its early stages. Nowadays, large local companies and multinationals are in a similar situation in technological and commercial capabilities.

Figure 7.17: Graphical Description of Ch4



Ch5:

Ch5 is the Chilean subsidiary (L=280) of a multinational conglomerate, which is a worldwide leader in the animal nutrition business. The interview was conducted with the general manager, who explained that the Chilean branch has operated in Chile since 1998, working as an important supplier of fresh water feed for the production of salmon. The manager also explained that the company has its general offices in Santiago and

production plants (as well as offices) in Puerto Montt and Isle of Chiloé, selling its products to salmon producers in the local market. Only 5% of its products are exported to other markets (see figure 7.18).

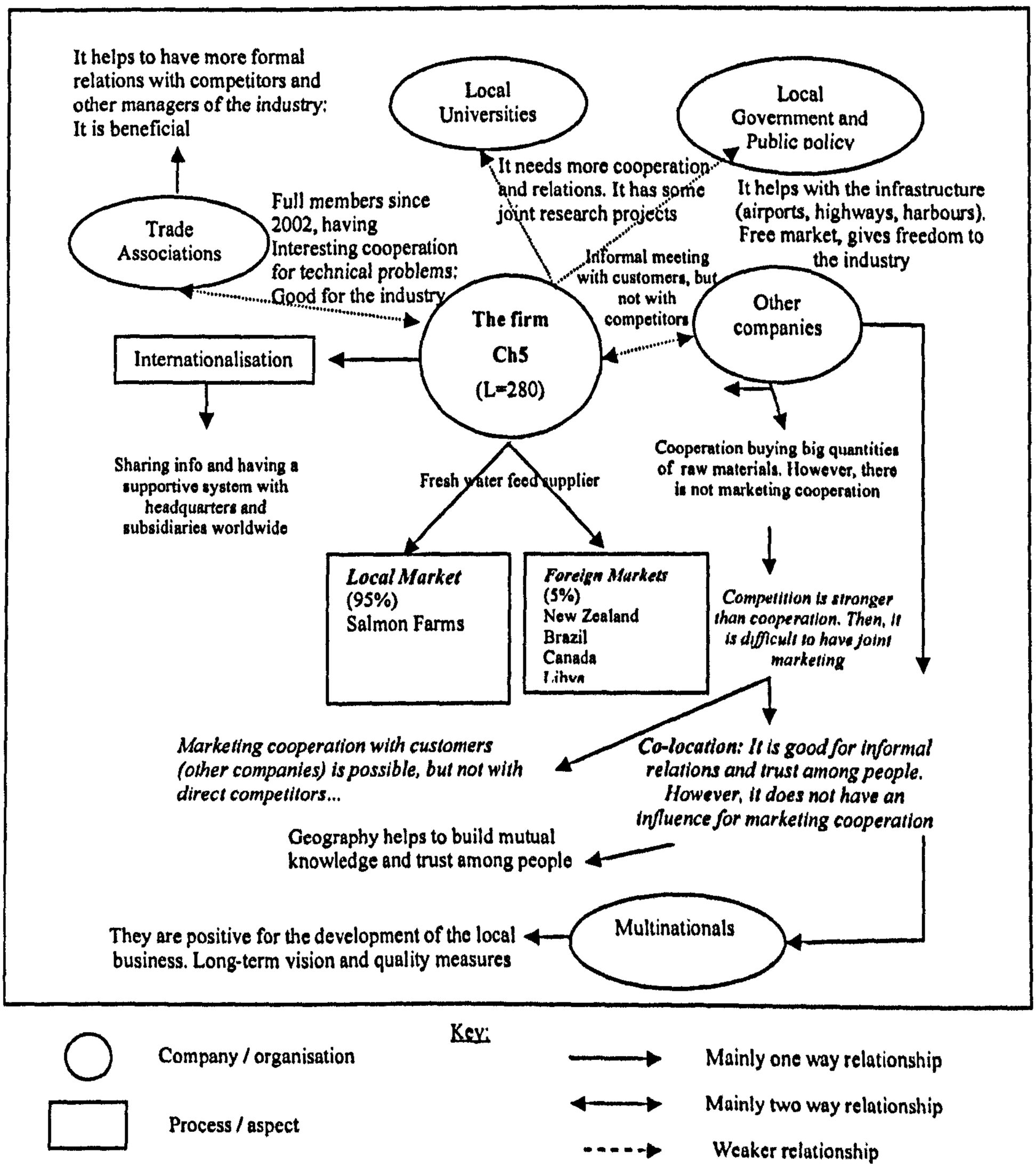
Marketing activities are considered, by the general manager of Ch5, as "*all the efforts for achieving new customers and generating more sales...also including market research...*" The company structure includes both a commercial and an export division manager, producing marketing and sales plans every two years. The company shares information and coordinates joint efforts for international markets with its headquarters and other subsidiaries around the world, "*having a supportive system for the business...*". The cooperation process with other subsidiaries worldwide is an important element of their strategy, as it allows them to have better economies of scale and a global coordination of marketing activities.

The Trade Association is seen as important for the development of relations with customers and competitors, "*knowing each other better and discussing common topics that concern the industry...However, we do not talk about joint marketing activities with competitors, but it may be possible and more viable in the future with our customers* (referring to salmon companies)". Therefore, inter-firm cooperation in marketing is possible with companies located in different levels of the value chain activities and not with competitors, as they do not want to share strategic marketing information and customer databases. Furthermore, co-location –close proximity of companies – is seen as "*...beneficial for the development of individual relationships and the building of trust among people within the industry. However, it does not have an influence in the creation of inter-firm cooperation in marketing...*". Internet and communication technologies are seen as helpful for the development of marketing collaboration, with companies located in any part of the world. But, geographical co-location is not a key factor for more inter-firm cooperation. It is, however, useful for the building of trust at informal levels.

Finally, Ch5 stated that multinational companies transfer their knowledge to local markets providing better products and services to their customers. At the same time,

sometimes this wider knowledge is captured by the whole industry helping its growth. This process is more visible at the early stages of the industry. Later, when it is mature, MNEs and large-local companies achieve similarities in technology, production and marketing strategies.

Figure 7.18: Graphical Description of Ch5



Ch6:

Ch6 is a large (L=1500), fully integrated in the value chain activities, Chilean salmon company located in Puerto Montt. The interview was conducted with the manager, who explained that the company has an international approach, exporting its products to different markets worldwide, including the USA (37%), Japan (30%) and EU (17%). These export activities are coordinated by a commercial director. Furthermore, as figure 7.19 shows, the company Ch6 has sales offices in the USA and strategic alliances in the Japanese market, building long term-relationships with its main customers, doing market research in each market, and looking to gather to the specific needs of its consumers *"...This is our international marketing perspective..."* as the CEO stated.

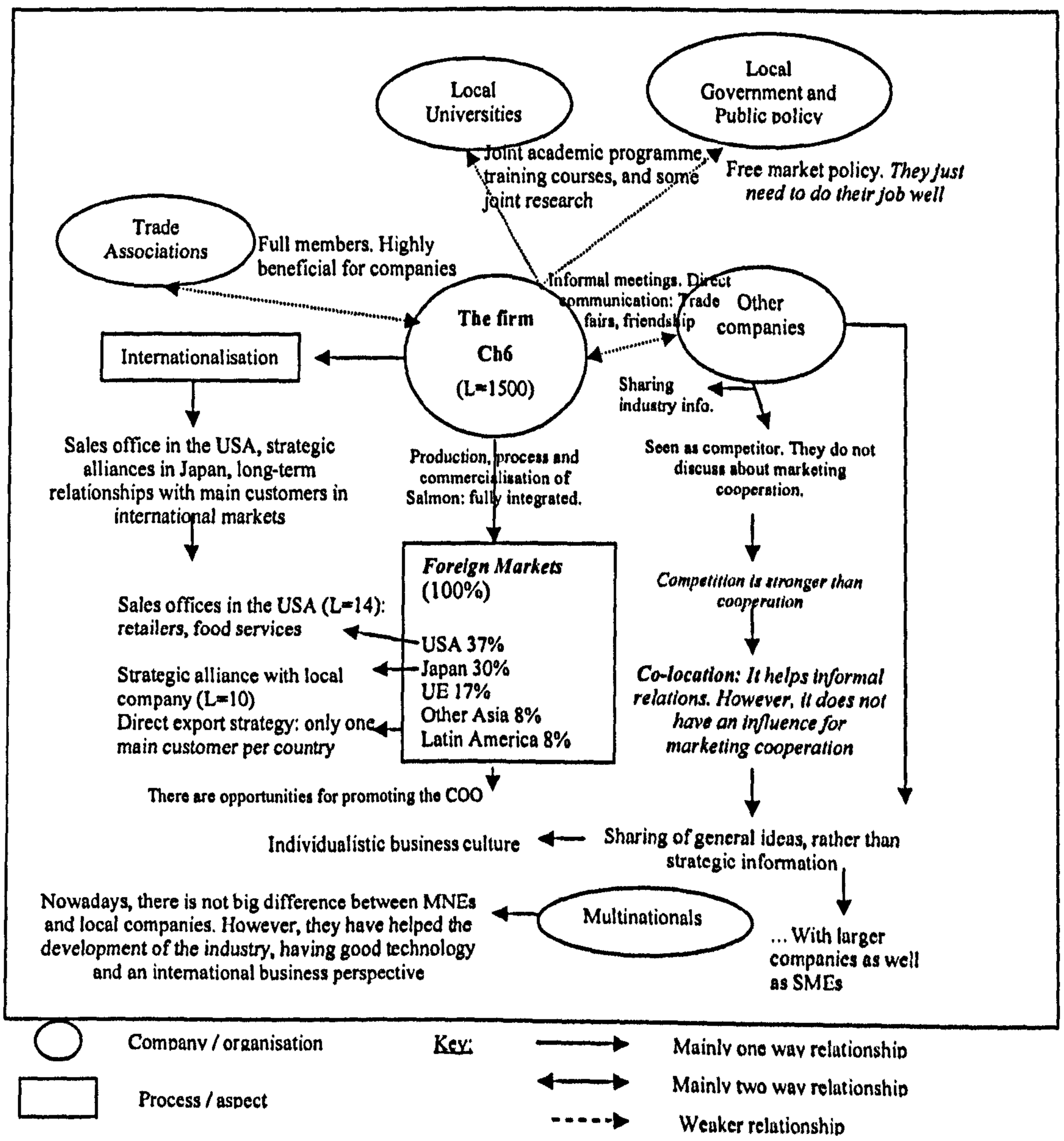
The CEO of the company also explained that there is a direct *informal communication* with other managers[4] of the industry, knowing each other and sharing general ideas, rather than strategic information. Furthermore, *"there is no inter-firm cooperation in marketing because the companies are getting larger..." "Then, each company has its own commercial strategies that may be different to the other competitors..." "...Our business culture is also very individualistic. So, we do not cooperate in joint marketing projects as we do not want to share our key customers in foreign markets..."* However, the CEO stated that inter-firm cooperation with main suppliers would be easier than with competitors, because they are complementary to the business (new product development, sharing new technology, new packaging)

Ch6 explained, *"it is easier to have a generic marketing campaign as an industry rather than joint marketing activities between two competitor companies, who may have different business approaches or who share the same customers..."* The CEO also stated that it is highly beneficial to be a member of the Trade Association, especially at the industry representation levels with the government, regarding technical issues and the international image of the industry. *"We are open to do joint projects with competitors in the future, but only if it is beneficial to our business..."*

[4] Informal meeting and friendship influenced by co-location – close proximity of companies

The role of MNEs was important for the early development of the industry, upgrading the research capabilities and commercial knowledge of the business. However, as the industry is more mature, larger local companies have the same production, technological and commercial capabilities as multinational companies. Besides, there is no sharing of marketing knowledge or marketing collaboration among them, as they are seen as competitors as well as the fact that MNEs only collaborate among their own group of companies.

Figure 7.19: Graphical Description of Ch6



Ch7:

Ch7 is a family-owned (L=7) re-processor company (smoker) that works sub-contracting the processing facilities, based on the customer's demand of its products. The interview was conducted with the company's owner in Puerto Varas (located 6 km. from Puerto Montt). As figure 7.20 shows, the company's key customer is mainly a large Chilean supermarket (80%) and a specific customer located in Miami, USA (20%). This single foreign customer re-sells the products (smoked salmon) to final buyers. Ch7 buys its raw material (fresh salmon) from local companies located in Puerto Montt.

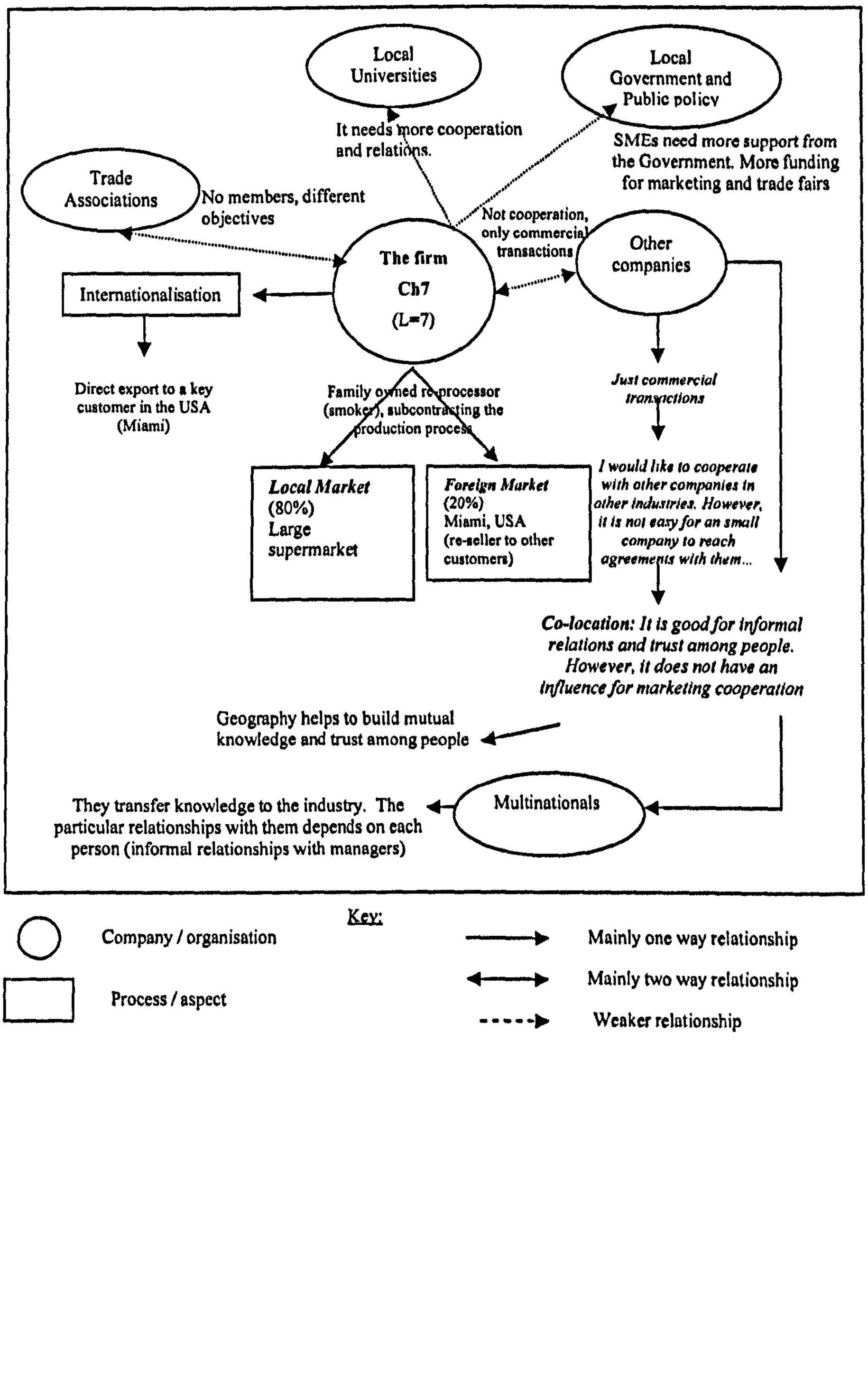
Ch7 also produces special packaging for its premium products (high quality special wooden boxes), which it sells with its smoked salmon to some key customers (mainly abroad). However, the company's owner also explained the resource constraints for the company to grow and the lack of an inter-firm cooperation culture in the industry (including other complementary industries). At the same time, co-location – close proximity among companies – is considered beneficial for the development of informal contacts, where people can share ideas about the industry situation. As the company owner explained *"Geographical co-location is very good for meeting people from the industry on an informal basis, for example at the local school, church and at the Rotary Club. However, it does not help in sharing strategic marketing information of your business, as we are all competitors... However, I would like to see more cooperation and more growth in my business..."* Hence, it can be suggested that close proximity aids the sharing of small ideas rather than strategic information. Therefore, inter-firm cooperation in marketing is seen as difficult to realise with direct competitors.

According to the Ch7 owner, the participation in the trade association is not considered relevant for SMEs *"because there are different business interests between a small company and large corporations"*. The company's owner stated that he would like to establish inter-firm cooperation with other industries (e.g. the wine industry). However, *"it is difficult to approach other companies when you are small and you do not have more resources..." "...It is difficult to find partners that support your ideas for joint marketing projects and activities..." "It would be beneficial if the local government*

could support our participation in trade fairs and support our marketing plans...This is important for small companies..." (owner comments). Therefore, micro and small family-owned companies with resources constraints, see as important the building of strategic alliances and cooperative agreements with other firm in complementary industries. However, they find it difficult to achieve that, as they may not have all the resources that this cooperation may involve or they lack credibility, compared to larger companies. It is clear that company size seems to matter in this Chilean industry for inter-firm cooperation in marketing.

Multinational companies are seen as a source of knowledge beneficial to the industry. This is especially evident at a production and research level. However, *"they do not share commercial-marketing information with other firms outside their worldwide group"*.

Figure 7.20: Graphical Description of Ch7



7.4.2 Chilean non-cluster area interviews

ChN8:

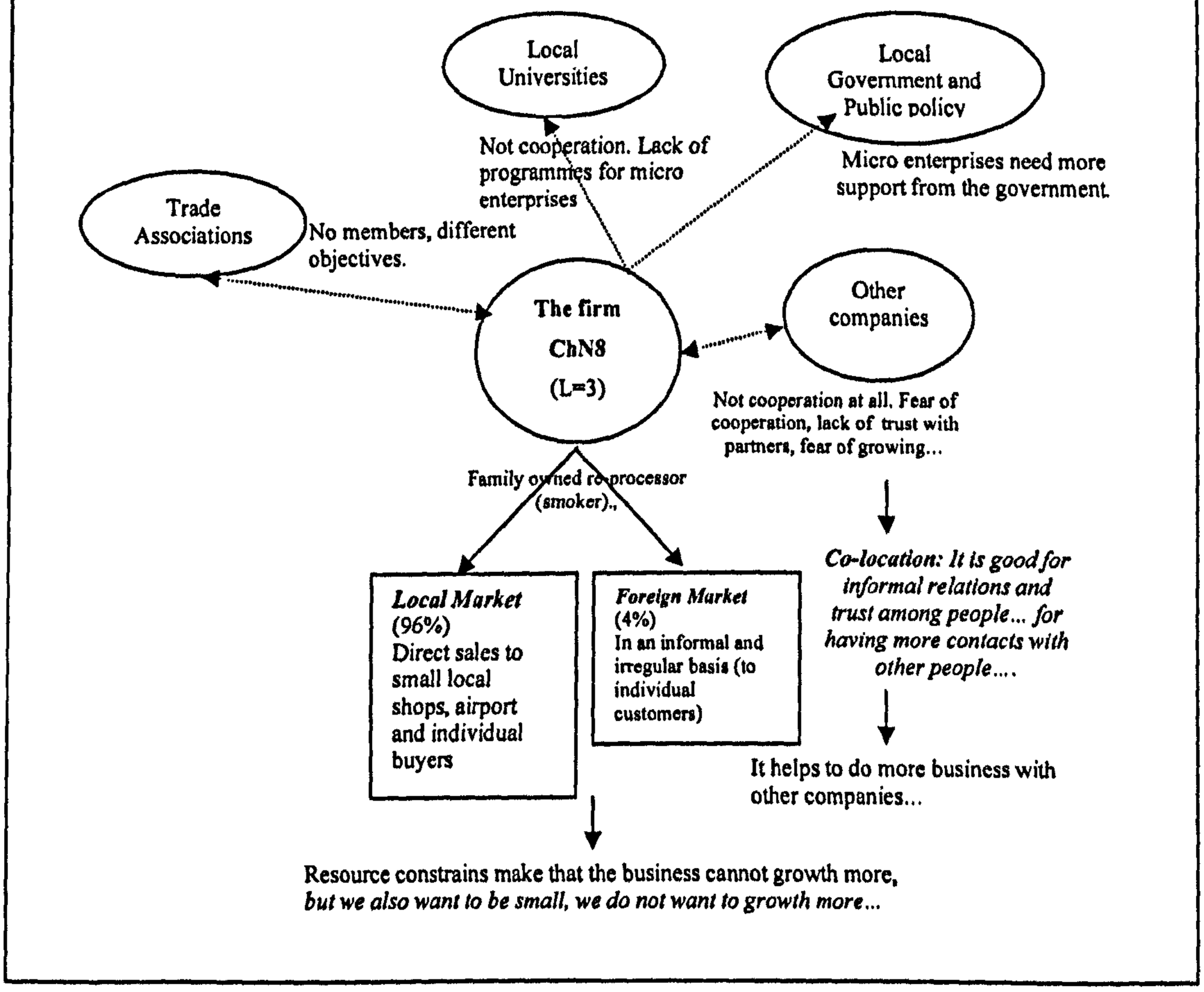
ChN8 is a family owned micro (L=3) re-processor company (smoker) that works in their own processing facilities located in a small town in the IX region of southern Chile (200 kms. outside the main salmon cluster area of the X region). The interview was conducted with the company's owner in their premises who explained, as figure 7.21 shows, that its key customers are mainly individual local buyers (Santiago airport, some local small shops and individual customers that buy directly from ChN8) (96%). However, the company also exports (on an informal and irregular basis) some part of its production (4%). The company buys its raw material (fresh salmon) from local companies located in Puerto Montt (main cluster area).

The company's owner stated that there is no cooperation with other companies or other people because there is a *"lack of trust in other people"*. Furthermore, the company wants *"to make their own decisions without interference from people outside the company (referring to the owner's family)"*. Co-location –close geographical proximity with other companies – is seen as *"useful for making more informal contacts with people from other companies..."* Accordingly, the owners have thought of moving further south and to be re-locate in the *"salmon area of Puerto Montt as we may achieve better contacts and expertise for the development of our business..." "Probably, being closer to other companies we can get more support from the government or have more alternatives for buying our raw materials (salmon) at cheaper prices...However, we do not want to have other people interfering in our business as we want to keep it under the control of the family...."* (owner comments) Hence, co-location seems to be helpful in achieving better economies of scale and economic marketing externalities. However, it is not seen as a key factor for more marketing collaboration.

ChN8 sees multinational companies as very different to its business. As the owner stated, *"MNEs sell their products abroad, we sell our products to other small businesses locally.... and this is not going to easily change..."* Therefore, it can be concluded that

MNEs and SMEs have different business objectives, horizons and marketing strategies for totally diverse segments of the market.

Figure 7.21: Graphical Description of ChN8



ChN9:

ChN9 is a family owned (L=6) re-processor company (smoker) and specialised smoked salmon restaurant, with their own processing facilities, located in a rural area near a small touristic town in the IX region of southern Chile (200 kms. outside the main salmon cluster area of the X region). The interview was conducted with the owner-manager who explained, as figure 7.22 shows, that the company's key customers are mainly two large up-market supermarket chains, as well as local hotels and restaurants, located in central Chile. At the same time, the company also wishes to start exporting, having some niche customers in Mexico, the USA and Germany. However, as the manager stated, *"we need to learn more about how to export and explore international markets with a good marketing approach..."* The company buys its raw material (fresh salmon) from local companies located in Puerto Montt (main cluster area). As a result, the manager believes that *"to know people in the main clusters area is important for getting informal contacts, more knowledge about the industry and achieve better quality product variety...."*. Hence, production and economic externalities seem to be important factors that co-location produce.

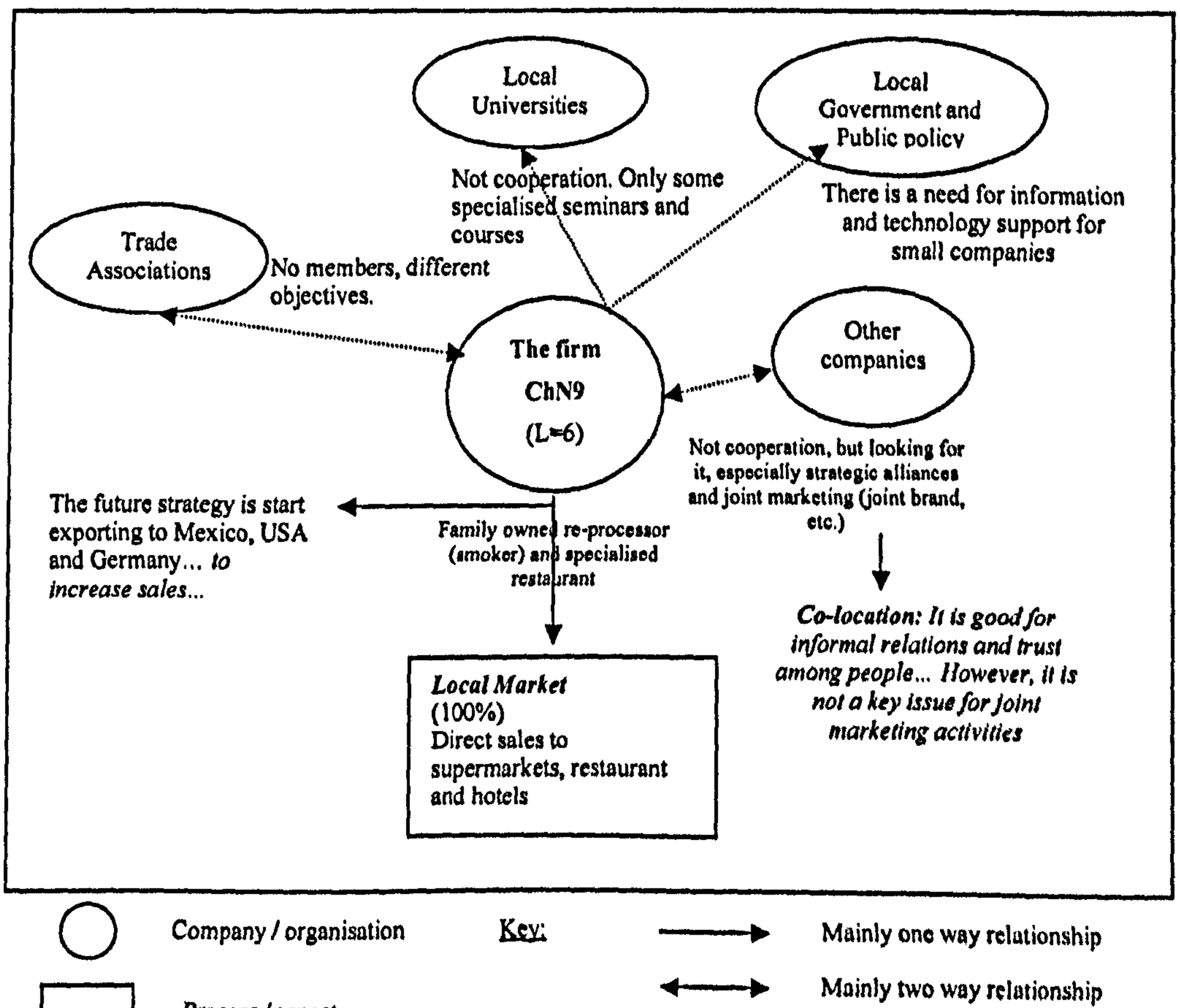
According to the company's owner, Ch9 is willing to have new partners in the business, strategic alliances and inter-firm cooperation with other companies from the same industry as well as from other complementary industries (wine, tourism, etc.), *"because in this way we can have more customers, more sales and more profits for our business..."*. However, the manager stated that it is difficult to find adequate partners in the same levels of the value chain activities and working with complementary industries seems to be easer.

Co-location – close proximity among companies - is seen as important for the development of trust. However, *"it does not influence inter-firm cooperation in marketing, which can be done with companies located everywhere..." "we use the internet for selling our products and e-mails for contacting customers and possible partners in central Chile. So, partners and customers can be located anywhere, geographical location not being the most important aspect for cooperation and business*

relations..." (manager comments). Hence, the use of communication technologies has changed the role of co-location, which is not seen as a key factor for inter-firm cooperation in marketing activities.

Multinational companies are seen as *"just different, with dissimilar objectives, strategies and customer orientation, compared to small-family companies....*". Consequently, according to this interview, MNEs do not have a critical role in the development of inter-firm cooperation in marketing, nor in the upgrading of commercial capabilities of smaller firms.

Figure 7.22: Graphical Description of ChN9



7.5 Comparative Analysis: Scotland vs. Chile

7.5.1 Summary of Interviews in Scotland and Shetland

Table 7.2 presents the summary of the interviews conducted in Scotland (Central belt and Northwest) and the Shetland Isles during July and August 2003. This is done by grouping the main topics, which cover the research objectives related to the development of inter-firm cooperation in marketing activities. The major issues for discussion are: (1) Geographical co-location; (2) Social networking, including informal relationships and trust; (3) Inter-firm cooperation; (4) Foreign ownership

Table 7.2: Summary of exploratory interviews in Scotland and Shetland isles

Co. / Org.	Close proximity is not important for joint marketing activities	Informal relationships are important for inter-firm co-operation in marketing	Trust, commitment or other social elements are important for inter-firm co-operation	Competition is stronger than co-operation / 'Free rider problem'	It has some joint marketing activities with competitors	It has other forms of co-operation (not marketing) with other firms	Rely on trade association for marketing activities	Foreign ownership is not relevant for marketing co-operation
S1	√	√	√	√		√	√	√
TS1	√	√			N/A	√	N/A	N/A
S2	√	√	√	√	√	√		√
S3	√	√		√		√	√	√
*S4	√	√	√	√	√	√		N/A
**S5	√	√				√		√
TSh1	√	√		√	N/A	√	N/A	N/A
*Sh2	√	√	√			√	√	N/A
Sh3	√	√	√		√	√		√
*Sh4	√		√	√		√		N/A
Sh5	√	√		√		√		
Sh6	√	√	√	√		√	√	√

T= Trade Association
S= Company in Scotland
Sh= Company in Shetland
N/A= Not applicable
(*)= Subsidiary of a multinational company (MNE)
(**)=Large company (more than 250 employees)

The results show that all the companies/organisations do not consider 'close proximity' as important for the development of inter-firm cooperation in marketing activities. Indeed S3 added, *"geography is not important for marketing relationships, but it is for collaboration in the production process...the Internet has changed the rules of geography"*. Another company (S2) stated *"distance is quite healthy for the development of long term inter firm co-operation in marketing...For this industry,*

geography is important from the production point of view, but not from the marketing point of view...". According to the results of these interviews, it seems that 'close proximity' is not the main element that facilitates the development of 'active marketing externalities' and inter-firm co-operation in marketing. Apart from that, the use of electronic means for communication and the Internet make it easier to contact people everywhere; facilitating cooperation with people located anywhere.

According to the interviews (11 out of 12), 'informal relationships' are important for the development of inter-firm co-operation in marketing. For example, TSh1 stated, *"collaboration is more about personal relations".* Others, as the manager of ST1 explained *"Scotland is a small country. Here, everyone knows everyone and informal relations are important in our day-by-day life, but we do not cooperate in marketing because of strong competition...".* Apart from informal relationships, trust, commitment and other social elements are seen by 7 companies (out of 12) as important factors that help with the development of joint marketing activities. *"Development of trust, confidence and commitment: Understanding of each other with professionalism are important issues for long term inter-firm co-operation in marketing"* (interview with S2). *"Yes, trust, similarity and knowing each other is important in informal contacts... Be responsible to each other...have mutual support"* (interview with Sh2). Although, as previously stated, there are plenty of informal relationships in the industry, which are considered important, but when people get together they do not talk about marketing, because of the issues of strong competition.

In relation to this, 8 out of 12 companies believe that competition is stronger than co-operation in this particular industry. These companies do not want to share their marketing strategies or work together in collaborative arrangements because of the 'free rider problem'. *"There is some general collaboration, but each company has its own interests, strategies and markets"* (interview with TSh1). Other companies are seen as competitors: no collaborative arrangements / no Joint marketing activities. *"We work independently...and this is an inherent part of the Scottish culture"* (interview with S1). According to Sh6, individualistic behaviour characterised this industry because

competition is very fierce: *"Competition is stronger than co-operation... you do not want to see your neighbour making more money than you..."*. According to these opinions from the interviews, it seems that competition is stronger than cooperation, and the cultural 'individualistic' behaviour may have some influence on that.

Although the interviews were conducted in the same country, the study involved two different regions: mainland Scotland and Shetland isles (for details see chapter 4), which represent two independent sub-cultures, as Shetland has stronger influences from Norway and they see themselves as 'just different' from the rest of the country. At the same time the issues of urban/rural areas may influence the cooperative process, as collective and individualistic behaviour seems to differ according to specific locations within a country. These issues are in agreement with Acs (2002) and Steyaert and Katz (2004) implying that not only the study of particular countries are important in the issues related to cooperative behaviour, but also the study of firms within specific regions, cities and embedded communities. Furthermore, although the network developed by each entrepreneur is 'unique' to individuals, based on Birley *et al.* (1991) and in the exploratory evidence presented in this research, it is possible to suggest that entrepreneurs in different communities within and between countries may exhibit different networking styles. This also implies the use of these networks in different intensities and with different levels of sharing information.

It seems interesting that although all the interviewed companies stated they had some kind of non-marketing co-operation with other firms (mainly in the production process), only three of them have, or had, some joint marketing activities with other companies. Among them, S2 has some close co-operation with other primary producers in the UK, *"having mutual understanding of our business and a unique niche strategy"*. These activities are mainly carried out at informal levels, *"because we need each other, and we know each other..." "Although we are not so close geographically, we understand each other, and then we co-operate, it is to out mutual benefit"*. In the case of S4, 'co-

petition'[5] and a close cooperation with the Scottish Enterprise promoted food and drink cluster in Scotland is a key issue for their long-term strategy. Therefore, *"developing specific projects with other producers and having joint market research, new product development, and creation of superior brands are part of our business strategy"*. Sh3 also develops co-operation in marketing, having co-branding in a range of products, joint sales efforts in foreign markets and joint exhibitions in trade fairs. However, these joint marketing activities seem to be in the short term: *"At the beginning is it better to go as a group, there is more strength in numbers. Later, it is a one to one relationship with customers..."* (Interview with Sh3).

It is interesting to note that not one of the previous companies, who have developed some kind of inter-firm co-operation in marketing, rely on the trade association for the development of marketing activities. Furthermore, in the case of S2, S4 and Sh3 the direct influences of the owner / Managing Director seem to be key issues in the development of co-operative marketing strategies. Moreover, they strongly believe in inter-firm co-operation as an important and an integral part of the success of their business. Thus, the *'entrepreneurial positive spirit of co-operation'* seems to be an important factor in the development of 'active joint marketing activities', more than just geographical co-location. Apart from that, these three companies agree that 'trust', 'commitment', and other 'social elements' are important for inter-firm co-operation in marketing. Indeed, the 'relational mix' (Van Dijk and Sverrisson, 2003) and the issues of 'social topography' (Lechner and Dowling, 2003), seem to be vital for collaboration in marketing.

Foreign ownership is considered by 6 SMEs (out of 7) as not relevant for the development inter-firm cooperation in marketing. Furthermore, it is not considered a key issue for the transference of commercial capabilities to smaller firms. However, at the very beginning of the life cycle of the industry, multinational companies helped in upgrading the research capabilities of the industry. As the S1 manager stated, *"MNEs*

[5] Mix of competition and cooperation

have different commercial objectives and market segments; they do not deal with small fishmongers at a personal relationship levels as we do. So their commercial contribution to us is minimal. They are our biggest competitors as they have big economies of scale..." The manager of S2 also stated, *"MNEs do not transfer these skills to SMEs at the beginning, but they encourage them to research specific issues of the industry. That's their only contribution to small companies... They do not transfer marketing knowledge or commercial capabilities. They are in a massive business, not customised service."*

The Shetland based manager of Sh6 commented that in certain cases MNEs transfer some research and development knowledge to the smaller companies, but not new commercial capabilities. As the manager acknowledged, *"multinational companies have many resources for research and new product development, but small companies have the special one-to-one customer approach, and this is our competitive advantage that we need to keep for our future..."* According to these facts, the issues of foreign ownership seems to be more important at the early industry life cycle, where MNEs may contribute with more general capabilities to the upgrading of the industry. Later, competition within the industry seems to have no consideration of differences in foreign or local ownership. Thereafter, the issues of achieving a competitive advantage through better economies of scales, in the case of multinational companies, or a clear differentiated strategy, in the case of SMEs, is the norm.

Others issues that are important to recognise, are related to marketing approaches and channel choices. Subsidiaries of multinational companies and large firms in Scotland, distribute their products using large retailers and supermarket chains. Some of these supermarkets have their own brand strategy, which may impact the issues of joint marketing activities. Marketing cooperation can be found among subsidiaries of the same business group. This cooperation is mainly done in the areas of new product development and market research. Most of the small and medium size firms in Scotland have some degree of vertical integration and participate in generic marketing activities with the trade association (Tartan Quality Mark and Label Rouge programmes). Some of

them have developed a one-to-one relationship with restaurants and customers at local and international markets.

Companies located in Shetland seem to have more cooperation with the trade association for generic marketing campaigns, generic and co-branding using the region of origin effect. The exploratory interviews suggest that geographic co-location is important for generic marketing activities among firms and trade association based in Shetland.

7.5.2 Summary of Interviews in Chile

Table 7.3 presents the summary of the exploratory interviews conducted by the researcher in Chile (Santiago and southern Chile) during December 2003 and January 2004.

Table 7.3: Summary of exploratory interviews in Chile

Co. / Org.	Close proximity is not important for joint marketing activities	Informal relationships are important for inter-firm co-operation in marketing	Trust, commitment or other social elements are important for inter-firm co-operation	Competition is stronger than co-operation / 'Free rider problem'	It has some joint marketing activities with competitors	It has other forms of co-operation (not marketing) with other firms	Rely on trade association for marketing activities	Foreign ownership is not relevant for marketing co-operation
TCh	√	√	√	√	√	√	N/A	√
**Ch1	√			√		√		√
Ch2	√	√	√	√		√		√
*Ch3	√		√	√		√		N/A
**Ch4	√	√	√	√		√		√
*Ch5	√	√	√	√		√		
**Ch6	√	√		√		√		√
Ch7	√	√	√			√		
ChN8		√	√					√
ChN9	√	√	√			√		√

T= Trade Association
N= Company located outside the main cluster area
N/A= Not applicable
(*)= Subsidiary of a multinational company (MNE)
(**)=Large company (more than 250 employees)

The results show that the vast majority of companies/organisations (9 out of 10) consider 'close proximity' as not really important / not a key issue for the development of joint marketing activities among companies. For example, Ch2 stated that co-location (close proximity) is not the key issue for inter-firm cooperation in marketing. However, the synergies among different industries and companies are seen as important for the creation of joint efforts: *"geography helps to create the right environment for informal relationships in embedded local communities and regions, but is not the main factor for building inter-firm cooperation in marketing..."* (General Manager of Ch2). Another company manager stated, *"Co-location is beneficial for the development of individual relationships and the building of trust among people within the industry. However, it does not have an influence on the creation of inter-firm cooperation in marketing..."* (General Manager of Ch5). Accordingly, co-location is seen as useful for sharing general ideas with other people, rather than for sharing strategic information (CEO of Ch6).

Thus, according to the results of these interviews, it seems that 'close proximity' is not the main element that facilitates the development of 'active marketing externalities' and inter-firm co-operation in marketing. However, in the case of micro-enterprises with resource constraints (case of Ch8) there seems to be a different situation: *"close geographical proximity with other companies is useful for making more informal contacts with people from other companies..."* This means that the resource capability, company size and structure may play a key role for the usefulness of location in creating 'active marketing externalities'.

According to the interviews (8 out of 10), *informal relationships, trust, commitment and other social elements* are seen, more than close proximity – co-location, important for the development of inter-firm co-operation in marketing. However, as the manager of Ch2 stated *"geography helps to create the right environment for informal relationships in embedded local communities and regions"*. Nevertheless, according to the companies, having informal relationships does not mean that they share marketing information,

because competition is very strong in the industry as well as the influence of an individualistic business culture in the Chilean country.

Related to the previous issues, 7 out of 10 companies located in Chile believe that competition is stronger than co-operation in this particular industry. Evidently, these companies do not want to share their marketing strategies or work together in collaborative arrangements with competitors because of the competitive issues (same customers, similar export markets, etc). At the same time, companies find it easier to have collaborative marketing efforts with other complementary industries or with customers and suppliers (independent of their geographical location) rather than with direct competitors: "*we do not talk about joint marketing activities with competitors, but it may be possible and more viable in the future with our customers...*" (General Manager of Ch5). *"Each company has its own commercial strategies that may be different to the other competitors..." "...Our business culture is also very individualistic. So, we do not cooperate in joint marketing projects as we do not want to share our key customers in foreign markets...* " (CEO of Ch6)

According to these opinions from the interviews, it seems that competition is stronger than co-operation, and the cultural 'individualistic' business behaviour is confirmed as an important factor that influences this. Apart from that, it seems that inter-firm cooperation in marketing is easier at the early stages of the industry. Later in the industry development, where companies' increase in size and stronger competitors become a factor, chasing similar markets and customers contributes to the creation of individualistic - competitive strategies (not collaborative as before).

The trade association is the only one that stated it had collaborated in marketing activities with competitors. This is done at an international level and induces active cooperation with other trade associations in the USA through 'Salmon of the Americas', which comprises producers from Canada, the USA and Chile working together in a generic marketing campaign in the USA market. This issue confirms again, to an extent, that geographical co-location is not the key issue when it comes to marketing

collaboration. Furthermore, companies and organisations may have joint marketing activities if they have aligned their common strategic objectives, independent of location.

The results of the interviews, also showed that local subsidiaries of multinational companies work better in joint projects and collaborative arrangements when coordinating this activity with other subsidiaries of the same business conglomerate (or headquarters), but not engaging in joint marketing projects with other local companies, which are seen as competitors. In this respect 7 out of 10 companies believe that foreign ownership is not relevant for the development of inter-firm cooperation in marketing. For example, according to the manager of Ch1, multinational companies are considered to have different business strategies and objectives compared to locals firms, selling their products globally and concentrating in achieving important economies of scale. Besides, as the Ch1 manager stated, *"local firms prefer to have a one-to-one relationship with customers adding value to them... and this is our competitive advantage..."*. This is considered one of the reasons why inter-firm cooperation between local and multinational companies is difficult to achieve. Small companies also perceive this issue similar, as the manager of Ch8N stated, *"MNEs sell their products abroad, we sell our products to other small businesses locally... and this is not going to easily change..."*. Thereafter, according to the qualitative results for Chile, it can be suggested that MNEs and SMEs in this industry have different business objectives, horizons and marketing strategies for totally diverse segments of the market. Vertical marketing collaboration between firms in different stages of the value chain activities also seems to be easier than horizontal marketing cooperation with competitors.

7.6 Conclusions

On the basis of data collected so far, the following tentative conclusions can be drawn

The exploratory evidence tends to suggest that 'close proximity' is not a key issue for the development of inter-firm cooperation in marketing. Co-location is, however, beneficial for the development of the *'social glue'* (Porter, 1998) and the building of trust among people within the specific industry (Bucklin and Sengupta, 1993; Rosenfeld, 1997; Enright, 2000; Huggins, 2000; Hoang and Antoncic, 2003). This close proximity also enhances face-to-face communication helping the development of relational ties, which are special for inter- firm interactions (Rosenfeld, 1997; Porter, 1998; Wolfe, 2003).

The exploratory research also suggests that the use of electronic means for communication facilitates inter-firm collaboration with partners located anywhere. This issue is also related to previous studies that argue that information and communication technologies are leading to the 'death of distance' (Hoffman and Novak 1996; Naudé and Holland, 2004). Moreover, according to Nonaka *et al.* (2000) and Ganesan *et al.* (2004), e-mail is generally considered as effective as face-to-face communication in transmitting technical knowledge, as in this case is marketing knowledge and information. Firms and future research into clusters needs to consider both relational closeness (Gertler, 1995; Ghemawat, 2000), as well as strong ties in industrial districts (Ganesan *et al.*, 2004).

The previous issues imply that the elements of networking are important for inter-firm cooperation and that the potential role of 'communication and social networks' (Szarka, 1990; Johannisson, 1995; Mackinnonn *et al.*, 2004) as well as 'extra local networks' (Mackinnon *et al.*, 2004) are relevant in providing information to firms in local and regional clusters.

Companies who engage in inter-firm cooperation in marketing do not rely on the trade association for doing so. Owners and managers of these companies have a clear active entrepreneurial cooperative behaviour, where they lead these activities and an important part of their long-term business strategy. This shows that entrepreneurial positive spirit towards cooperation in marketing activities plays an important role in collaborative arrangements. This issue is related to previous research (Brown and Bell, 2001) which shows that 'active marketing externalities' require active action between participants of a specific regional cluster and therefore, they are different from the traditional externalities used in the economic literature[6].

The results show that, in the case of Chile, larger companies and subsidiaries of multinationals develop their formal networks through the trade association. Small companies in the salmon farming industry do not feel part of this trade association. Therefore, they do not have space for the development of a similar formal network. Generic and vertical collaboration, instead of horizontal marketing cooperation, is the norm in the Chilean industry. On the contrary, small companies located in Scotland feel that they are an important part of their Trade Association. As a result, they seem to have an active participation in this kind of formal networks. Thus, more opportunities for horizontal marketing collaboration may arise, especially in the case of smaller communities, as Shetland.

Subsidiaries in Chile and Scotland relate their marketing activities and cooperate easier with their headquarters and other subsidiaries of the same group located anywhere around the world, than with local embedded companies. These findings are someway related to previous research conducted by Hewett, Roth and Roth (2003), which suggests close relationship in marketing activities between subsidiaries and headquarters aligned by common business objectives and market conditions.

[6] The benefits (or costs) of which are outside the firm's control

Competition seems to be stronger than co-operation in this industry, and the cultural 'individualistic' business behaviour is stated as an important factor which influences that. Therefore, the issues of opportunistic behaviour and 'free-rider' in competitive environments (Bucklin and Sengupta, 1993; Gulati, 1999; Ahuja, 2000) seem to be some of the elements that contribute to not having collaborative arrangements in marketing. The exploratory results also show that inter-firm cooperation in marketing is easier at the early stages of the industry, where a more cohesive generic strategy is needed and that company size affects the need for this co-operation. Small-innovative companies seem to be the ones that lead the process of marketing collaboration, in the case of Scotland. However, this situation does not occur in the case of Chilean companies. Later in the industry development, where companies increase in size and stronger competitors become a factor for the similar markets and customers, the creation of individualistic - competitive strategies (not collaborative as before) are the norm.

Not only does company size and the country's general business culture affect inter-firm cooperation in marketing activities, but also the 'special' characteristics of specific regions within countries (e.g. the case of Shetland isles), where a more cohesive - 'collectivistic' behaviour, as an embedded part of the *'local industrial atmosphere'* (Marshall, 1919), may create the special environment for the complex mix of co-operation and competition (Becattini, 1989; Brusco, 1990; Dahl and Padersen, 2003). The results also suggest that although the network developed by each entrepreneur is 'unique' to a particular individual (Birley *et al.*, 1991), the cultural differences at both country and regional levels may affect this networking style affecting the necessity, intensity and levels of collaborative marketing. Similarly, the concept of embeddness is of particular importance when emphasising the extra-firm dimension of networks (Granovetter, 1985; Morgan, 1997) including, as this research shows, the contacts with external institutions including, trade associations, developmental agencies and local authorities.

The evidence implies that the study of particular regions, cities and urban/rural communities within countries, are crucial factors in the study of localised clusters (Acs

2002; Steyaer and Katz, 2004). Furthermore, particular rural and remote areas of countries may have a diverse – more collectivistic - business culture, which differ from the generalisation that research conducted in urban areas may provide. Although, at this stage, there is not enough empirical data to present a definitive conclusion about the influence of culture and industry structure in developing inter-firm cooperation in marketing, further quantitative research and analysis in this topic is presented in the next chapter in order to confirm these exploratory findings.

The next Chapters 8 and 9 present the quantitative results of a questionnaire survey conducted in the Scottish and Chilean industry. Later, in Chapter 10, this evidence is compared with the qualitative exploratory results that this Chapter presented.

Chapter 8

Results: The Influences of Geographical Co-location

8.1 Introduction

This chapter presents the results of postal questionnaire distributed to companies operating within the salmon industry in Scotland and Chile. The chapter presents the statistical analysis performed in order to gain a better understanding of and to explore the influences of geographical co-location in developing inter-firm cooperation in marketing. The issues under investigation in this chapter are structured to cover the research objectives and propositions. Specifically, the chapter is divided into the following main sections: the characteristics of the sample; the benefits based on location, which includes the types of co-marketing activities that companies perform; and the overall usefulness of co-location. Discussions of cross-cultural issues and comparative analysis between countries are also presented in this chapter.

8.2 Characteristics of the sample

In this section some general characteristics of the sample companies that answered the questionnaire are examined. These include geographical location; sources of capital, company size and age, competitor's characteristics, main markets and the people who carry out marketing activities in the participants companies.

8.2.1 Geographical location

As Table 8.1 shows, the respondent companies are located in Scotland (56.6%) and Chile (43.4%). The majority of Scottish companies (63%) are located in the northwest area, followed by Western Isles (26%) and Shetland (10%). In the case of Chile, most of the companies are located in Puerto Montt (52%), followed by Chiloe (17%), and with the remaining companies located in a wider area of southern Chile. This suggests a high density of companies located in specific areas, forming an

industrial district or regional cluster in each country, as discussed in the industry chapter. It is important to state that the northwest of Scotland represents a geographical area which comprises cities (like Inverness), but also rural-remote areas (such as Lochinver in Sutherland, among others). In contrast, the city of Puerto Montt represents the fastest growing urban area in southern Chile. This differentiation has implications when analysing urban-rural firm's behaviour differences (Ritsila, 1999; Acs, 2002; Steyaer and Katz, 2004). It also important to note that, as was explained in Chapter 2, there is no single definition of 'clusters', its boundary areas or dimension of its territorial space. Close proximity in this industry sector may have a different meaning than 'close proximity' in other industries, for example the high-technology sector. As such the regions and geographical areas explained in this research are only applicable to the specific industry under analysis.

Table 8.1: Geographical Location

	No.	%
Country:		
Scotland	**30**	**56.6**
North West	19	63
Western Isles	5	26
Shetland	3	10
Central belt of Scotland	1	3
Orkney	1	3
Chile	**23**	**43.4**
Puerto Montt	12	52
Chiloe	4	17
XI region	2	9
Puerto Varas	1	4
Other area X region	1	4
IX region	1	4
Overall Geographic Area of Location		
North West	19	35.8
Puerto Montt	12	22.6
Western Isles	5	9.4
Chiloe	4	7.5
Shetland	3	5.7
Other	3	5.7
XI region	2	3.8
Central belt of Scotland	1	1.9
Orkney	1	1.9
Puerto Varas	1	1.9
Other area X region	1	1.9
IX region	1	1.9
Total	**53**	**100**

While it would have been interesting to explore in more depth the respondents in the sample by type of activity (e.g. food suppliers, hatcheries, harvest process, processing plants and re-processors), this was not possible as the questionnaire survey lacked identification by these types of activities. Indeed, given the vertical integration trends as well as mergers and acquisitions among complementary companies in this industry, it is becoming more difficult to identify the specific activities of individual firms in an exploratory research. However, it is clear that this issue requires further investigation.

8.2.2 Sources of capital, company size and age

According to the respondents (see Table 8.2), the main sources of capital in company ownership are regional (58.5%) and national (22.6%). Only 6 companies (11.3%) declared some foreign ownership and 4 companies (7.5%) have a mixed capital base. The majority of companies (88.7%) are not part of any multinational conglomerate and only 6 companies (11.3%) declared to be a subsidiary of a MNE. This means that the sample comprises of a robust number of local embedded companies, with more than 80% comprising local capitals (regional or national). This is an important dimension of the sample, as the industry is becoming more international and cross-border operations from multinational subsidiaries are becoming the trend. However, small firms have the challenge of transforming themselves into niche players, where marketing collaboration may be one of their competitive advantages for reaching both the local and the international markets.

The vast majority of companies (94%) had been in existence for less than 30 years, with 68% of them having existed between 11 to 30 years, and 26% less than 10 years. As Chapter 4 reported, the salmon farming industry is a relatively young industry, which started its full expansion to a global basis during the 1980s. The sample also comprised many small and medium sized companies, 83% of them having less than 250 full-time employees, of which 68% having less than 50 employees. This may suggest that small businesses still have the chance to survive in

a highly competitive industry, where differentiation strategies may help them to compete with larger companies with significant economies of scale.

The chi-square test was performed with the aim of detecting any significant differences between countries. A significant difference between countries was found for the sources of capital (p=0.025), where Scotland was more inclined to have companies with regional capital, in comparison with Chile where the number of respondent companies with regional, national and foreign capital are more alike. These results support the discussion within Chapter 4, which explained the importance of foreign capital in the Chilean industry.

Table 8.2: Firm characteristics

	No.	%
Main Sources of Capital		
Regional	31	58.5
National	12	22.6
Foreign	6	11.3
Mix	4	7.5
Total	53	100
Subsidiary of MNE		
Yes	6	11.3
No	47	88.7
Total	53	100
Company Age (years)		
Less than 5	5	9.4
6 to 10	9	17.0
11 to 30	36	67.9
More than 30	3	5.7
Total	53	100
Full time employees		
Fewer than 10	13	24.5
11 to 50	23	43.4
51 to 100	3	5.7
101 to 250	5	9.4
More than 250	9	17.0
Total	53	100

These results may suggest that issues of reinvestment policies from foreign companies (MNEs) at national and regional levels may be seen as key elements for the long-term development, growth and longevity of this industry in Chile. Furthermore, the relationship between subsidiaries and embedded local firms should be a key issue in the development, sustainability and balance between cooperation and competition in the industry. Nevertheless, these issues need further research.

8.2.3 Competitor's characteristics

As Table 8.3 shows, nearly half of the respondent companies (45.3%) considered that their major competitors are located in the same local area, compared with 30.2% who reported that their competitors were located worldwide. This suggests that there is strong competition among companies that are geographically co-located. At the same time, global competition from companies located in other countries still remains an important issue in an industry in which the trend is global scale operations for achieving better economies of scales, as discussed in the industry chapter.

The size of the main competitors (Table 8.3) reveals that the major competitive threats are perceived to come from an undifferentiated mix of small, larger and MNEs subsidiaries (52.8%). However, it is important to note that the larger firms with national capitals are also considered by 21% of the respondents as key competitors. This implies that small companies are seeing larger companies, which usually have important economies of scale, as their main competition.

A chi-square test was performed with the aim of detecting significant differences between countries with regards to competitor's characteristics. No significant differences were found.

Table 8.3: Competitor's characteristics		
	No.	%
Location of major competitors		
Same local area	24	45.3
World wide	16	30.2
Other location within the country	13	24.5
Total	53	100
Size of major competitors		
A mix of them	28	52.8
Mainly larger, but national	11	20.8
Mainly subsidiaries of MNEs	8	15.1
Mainly small firms	6	11.3
Total	53	100

8.2.4 Main markets

Companies were asked to state the proportion of sales that comes from each of their main markets. As Table 8.4 shows, the local market, the EU, and the USA were the most important markets, in sales terms, for the respondent companies.

Table 8.4: Number of firms selling more than 50% to these markets

	Scotland	Chile	Total	χ^2
Local	22	11	33 (70%)	13.32*
EU	7	1	8 (27%)	1.12
USA	0	4	4 (14%)	7.212*
ASIA	0	4	4(14%)	5.87*

(*) significant differences: USA (p=0.007) Local (p=0.001) ASIA (p=0.015)

Table 8.4b: Percentage of firms with majority of sales in local market

> 50%*	Scotland	Chile
	81.5	55

(*) significant differences χ^2 =8.246

Table 8.4b shows that the local market is more important for Scottish firms, which seems to be less internationally oriented than Chilean firms. More than 80% of Scottish firms sell their products in the local market, compared with 55% of Chilean firms.

The numbers of respondents are too small to make statements about the relative importance of the EU, USA and Japan. However, it can be said with confidence that Chilean firms are more internationally oriented. Additionally, the data tend to suggests that the USA and Asian markets are more important for Chilean companies. The data does not, however, permit confidence statements about the significance of these differences in these markets.

The above results support the broad findings of the qualitative data, which suggested that Scottish companies have the advantage of a growing local market with high levels of disposable income, whereas Chilean companies are more reliant on foreign markets, such as Japan, Asia and the USA. Additionally, Table 8.4b also shows that 55% of Chilean companies sell their products in the local market. This may be the case of companies selling to re-processors and smokers in the country, rather than to retailers or final customers.

The previous results and differences between countries may also imply distinctions in local and international marketing approaches, as different markets require diverse entry strategies. These divergences may also influence the degrees and forms of marketing collaboration among firms participating in this industry, as they may involve specific differences according to the target markets. However, these issues need further investigation.

8.2.5 Marketing activities carried out by different people

The results of the questionnaire show that marketing activities within each respondent company are mainly conducted by either specialist marketers (which

include functional marketers), non-specialist marketers (which include other people in the firm) or managing directors (see Table 8.5[1]).

Table 8.5: Marketing activities are carried out by different people

In your organisation, marketing activities are carried out by:	Scotland (No.)	Chile (No.)	Total (No.)
Specialist marketers	17	13	30
Non-specialist marketers	17	8	25
The managing director	11	11	22
External people*	9	2	11
No marketing activities	1	3	4

Number of respondents answering 4='agree' and 5='strongly agree'
(*) significant differences χ^2 =8.246

The results reported in Table 8.5 show that over 80% of Chilean firms responding to this question disagree with the statement that external people were an important source of marketing. This compared with less than a 1/3 of Scottish firms. It would seem that external sources of marketing are significantly more important to the Scottish companies (p=0.016). This result may imply that some Scottish companies may outsource their marketing activities, probably aiming to reduce their fixed costs and being more competitive or, alternatively, Scotland is more specialised in this external services, which includes marketing activities carried out by the trade association. Significant differences by company size were not found with regards to marketing activities carried out by different people.

The above results can be related to Coviello *et al. 's* (2001, 2002, 2003) five aspects of marketing practices, classified by exchange and managerial dimensions. In Coviellos' work, marketing activities conducted by senior managers, the equivalent of MDs and CEOs in this study, are related to the 'network marketing' dimension where they are willing to commit resources to develop their firm's position in a network of inter-firm relationships. This leads to more interaction with other companies and helps to create the necessary environment for inter-firm collaboration.

[1] Categories: functional marketers and specialist marketers; non-marketers and specialist marketers; external people and trade association, were compressed for statistical purposes.

This issue of networking is also related to industrial districts and the 'industry atmosphere' (Marshall, 1920), discussed in Chapter 2, which may also influence the interaction between firms. However, it is important to remember that this inter-firm relationship may be independent of the geographical co-location.

Specialist marketers, which include functional marketers, were considered to be the most important people that conduct marketing activities in the companies. This can also be related to what Coviello *et al.* (2001, 2002, 2003) classified as the 'transactional marketing' dimension, which involves a firm attracting and satisfying potential buyers by managing the traditional elements of the marketing mix, an approach commonly used in the agri-business and 'traditional' sectors (Troughton, 1989; Kaynak, 2000; Verhaegen and Van Huylenbroeck, 2001). However, as the qualitative analysis in Chapter 7 showed, it is managing directors, rather than functional marketers that have the responsibility of managing the inter-firm strategic interaction and collaboration.

8.3 Benefits based on location

This section discusses the results of a key question that this research investigates: that is, whether geographical co-location is a determining factor in inter-firm cooperation in marketing? The results surrounding this enquiry are organised as follows:

(a) The usefulness of co-location for the creation of general externalities
(b) The usefulness of co-location for developing active marketing externalities
(c) The overall usefulness of geographical co-location for providing opportunities for inter-firm cooperation in marketing.

8.3.1 General externalities

Variables from this question (see section 2 Q1 in the questionnaire: appendix 3) were identified from the literature review (Brown and Bell, 2001) and where necessary, adapted for use on this specific industry. The usefulness of geographical co-location was measured on a five-point 'Likert-type' scale, where 1=not at all useful and 5=extremely useful.

Overall, as Table 8.6 shows, enhanced reputation or credibility of the firms and products, buying intermediate goods from other firms, providing access to better specialised suppliers, and finding new customers in new markets, are the main externalities that the respondent's firms found more useful as benefits of geographical co-location. The 'enhance reputation' and the 'finding new customers in new markets' variables, correspond to a 'passive marketing externality' that certain geographical places may create (some discussion of this concept is provided in Chapter 3). The 'buying intermediate goods' and 'access to better specialised suppliers' are traditional economic externalities. These results confirm previous research in economic geography which specifies the importance of production related benefits that industrial districts and regional clusters can bring (see for example Marshall, 1919; Weber 1929; Becattini, 1992; Porter, 1998; Bellandi, 2001; Van Dennerg *et al.*, 2001). Inter-firm transactions and the creation of economies of scale are the main benefits derived from geographical co-location. However, this research also shows that active marketing externalities are not the main benefits that simple geographical co-location brings to companies. As a result, other factors are needed to stimulate marketing cooperation, as it may be the case of social networks.

Table 8.6 Externalities produced by co-location				
How useful is being located in a specific region of your country for providing the following opportunities to your firm/organisation:	Scotland (%)	Chile (%)	Total (%)	X^2
Traditional externalities:				
Buying intermediate goods from other firms	41	61	50	3.508
Providing access to better specialised suppliers	28	52	39	3.289
Selling intermediate goods to other firms	14	57	33	12.037*
Access to a skilled labour pool	38	26	33	3.475
Providing access to new technology	10	44	25	7.556**
Marketing externalities:				
Enhanced reputation or credibility of firm and products	66	35	52	4.966***
Finding new customers in new markets	35	35	35	0.071
Greater international market demand	41	22	33	2.332
New customers find your firm	24	44	33	2.470
Greater local market demand	28	35	31	0.601
Greater market and marketing information / knowledge	14	44	27	5.843***
Greater innovation and new product development	10	48	27	10.866*
Inter-cluster referrals to your firm	10	39	23	6.159**
Inter-cluster referrals from you to other firms	10	23	16	1.936

Percentage of respondents answering 4='useful' and 5='extremely useful'
(*) significant at 1% level
(**) significant at 5% level
(***) significant at 10% level

Table 8.6 shows that Chilean firms seem to appreciate greater benefits of agglomeration, with the exception of 'access to a skilled labour', 'greater international market demand' and 'enhance reputation or credibility of firms and products'. This may be because agglomeration is more obvious in the specific urban location of the industry in Chile, or it may be the case that there is a better perception of the benefits of the cluster. These issues need further research, but they are supported by the issues discussed in Chapter 4.

Significant differences were found between Scotland and Chile in the following factors: 'selling intermediate goods to other firms' (p=0.002), 'access to new technology' (p=0.023), 'greater market knowledge' (p=0.054), 'greater innovation/new product development' (p=0.004) and 'inter-firm referrals to your firm' (p=0.046). Chilean companies were more likely to rank these factors as useful or extremely useful. Similarly, significant differences were found in 'enhance reputation' (p=0.083), with Scottish companies being the ones that perceived it as more useful. This issue may be seen to be related to the country of origin effect in agro-food and aquaculture products (see Tootelian and Segale, 2004). Further work is needed to see its specific effects in this industry.

The analysis of traditional externalities (first part of Table 8.6) shows that 'buying intermediate goods from other firms' and 'access to specialised suppliers' ranked in the first perceived benefits from geographical co-location. These results differ partially from Brown and Bell's (2001) study, conducted in an electronics cluster in New Zealand, where access to labour pool and access to new technology ranked as the first preferences. This may suggest that the traditional benefits that geographical co-location brings are industry dependent. For example, 'traditional agri-business' industries may look for different benefits in their location search, compared to technological based industries. In this specific case, it can be seen that intermediate buyer-seller transactions (Schmitz, 1995; Kalafatis, 2002; Sanzo *et al.*, 2003; Baxter and Matear, 2004) are crucial in this industry cluster.

The second part of Table 8.6 shows that 'enhanced reputation or credibility of the firms and products' and 'finding new customers in new markets' were the main marketing externalities that respondents perceived as a benefit from geographical co-location. Scotland presents a higher proportion of companies considering 'enhance reputation or credibility' to be a perceived benefit of geographical co-location. Significant differences were found in this variable among dissimilar company sizes (p=0.072)[2]. Smaller companies with less than 50 employees, found that co-location in specific territories enhance their reputation and credibility of their firms.

[2] χ^2 =14.390

These results suggest that certain geographical areas in the agri-business/food sector are important for enhancing reputation and credibility of their products, especially for new and small company entrants. This passive marketing externality factor, may be seen to be linked to the literature on country of origin effects in food products (Gold and Ward, 1994; Tootelian and Segale, 2004; Felzensztein *et al.*, 2004; Felzensztein and Dinnie, 2005), where specific regions and precise locations within regions may enhance reputation, serving as a point of differentiation and adding value to the product (if the country has a positive image, of course).

The country of origin effect is specifically obvious in the case of Scotland, where the country of origin benefits because of their particular location is considered important in this industry. This result is also in accordance with the qualitative analysis, where it was found out that some companies use the names of specific places to show differentiating characteristics of their products (see the case of Shetland in Chapter 7).

'Finding new customers in new markets' ranked as the second marketing benefit from co-location. This may suggest that networking among companies looking for customers abroad, and sharing the costs that this activity involves, is considered useful in this industry.

It is interesting to observe that Chilean companies found 'greater innovation and new product development' a more useful benefit of co-location, compared to Scottish companies. This may be linked to the fact that some leading edge companies and local universities in southern Chile interact in order to achieve new, or improve existing food-products and feeding solutions, issues that are key in the Chilean industry.

These results partially differ from Brown and Bells' (2001) research, where 'clusters referrals' variables were found among the three main marketing benefits that regional clusters bring. In their research context, referrals to customers among firms were regular practices. These differences in the results may be an indication of fierce

competition among companies in the salmon farming industry, issues that were also discussed in Chapter 7.

Although the magnitude of the significant differences is small, Chilean firms seem to find more benefits in geographical co-location, than do the Scottish firms. These results may suggest that Chilean companies perceive, or use more, the benefits that clusters and industrial districts bring. This also may imply more communication and direct transactions between Chilean companies located in specific urban locations, as the case of Puerto Montt, where most of the producing (e.g. processing plants) and supplying firms (e.g. feeding and smolt suppliers) of this industry are located. Besides, significant differences in the variable 'inter-clusters referrals to your firm' suggests an active marketing externality from Chilean companies which, according to these results, tends to refer customer to other firms if they are unable to assist customers directly.

8.3.2 Joint marketing activities

Joint marketing activities represent the clearest form of active marketing externalities that require the active involvement of managers. Although the literature does not provide a detailed definition of 'marketing cooperation' and 'joint marketing activities', these can be seen as a group of firms using combined resources in a contractual (formal) or non-contractual (informal) basis to cooperate in the marketing mix and sales at local and international levels. They also involve generic (secondary branding/quality assurances at industry levels) and marketing activities particular to individual organisations collaborating with their pairs. Aiming to differentiate these two main economic categories/ drives for marketing activities, marketing activities are divided into 'joint marketing with other firms' and 'joint marketing with the trade organisation'.

The first part of this sub-section shows the results related to marketing cooperation among firms, which does not refer to generic marketing. Specifically, it refers to activities between firms involved in the same industry, and which can be conducted

with direct competitors or with vertically integrated units (e.g. suppliers and buyers). One of the weaknesses of this kind of information is that it does not specify in which section of the value chain these activities are carried out, nor does it specify the detail of activities. For example, joint distribution activities include the use of some logistic systems, joint contracts with physical distribution companies and/or all of them at the same time. Variables for this sub-section were identified from the literature review (Brown and Bell, 2001) and adapted when necessary to the specific context of this research. Usefulness of geographical co-location was measured on a five-point Likert-type scale, where 1=not at all useful and 5=extremely useful.

Table 8.7a shows that joint participation in trade fairs, joint market information research and joint marketing delegations are the main marketing activities in which companies collaborate with other firms. This may suggest a low intensity in this specific kind of cooperation among firms. However, these results should be interpreted carefully, as the proportions are relatively low.

These results differ, in some way, from Brown and Bell's (2001) research which suggested that joint trade missions to new markets, joint marketing delegations and joint trade participations were not among the main joint marketing activities in the high tech cluster of New Zealand. Besides, new product development was among the most useful marketing externalities of co-location in Brown and Bells research. This suggests that industry specificity when analysing inter-firm cooperation in clusters is important to consider, as different industries present different needs and dissimilar stages of development that may affect this collaboration.

Table 8.7a: Marketing cooperation with other firms				
How useful is being located in a specific region of your country for facilitating the following opportunities for CO-OPERATION IN MARKETING:	Scotland (%)	Chile (%)	Total (%)	χ^2
Joint trade fairs participation	44	41	43	0.34
Joint market information research	26	43	34	1.375
Joint marketing delegations	21	46	33	4.856**
Joint distribution strategies	38	24	31	1.024
Joint new product development	13	48	29	7.932*
Joint trade missions to new markets	17	41	28	4.469
Joint sales to foreign markets	17	19	18	0.054
Joint branding (co-branding)	9	19	14	1.194
Joint sales to local markets	4	24	13	4.564

Percentage of respondents answering 4='useful' and 5='extremely useful'
(*) significant at 5% level
(**) significant at 10% level

Significant differences between countries were found in joint marketing delegations (p=0.088) and joint new product development (p=0.019), with Chilean companies being the ones that tend to perceived more usefulness of geographical co-location for these kind of cooperation in marketing. This may be because agglomeration is more obvious in the specific urban location of the industry in Chile, or it may be the case that there is a better perception of the benefits of the cluster. These issues need further research, but they are supported by the issues discussed in Chapter 4.

The second part of the analysis of joint marketing activities (Table 8.7b) corresponds to marketing cooperation with the trade association. This is an apparent difference from the previous table (Table 8.8a), as the analysis involves a clear distinction between generic marketing and other marketing activities among firms. This is important in the analysis because their economic drivers and the rationale for cooperation may differ in these marketing approaches.

As Table 8.7b shows, joint trade fairs participation, joint market information research, and joint marketing delegations are the main marketing activities where companies collaborate with the coordination of the trade association. These three main activities are the same that appear in the previous analysis of marketing cooperation between firms (Table 8.7a). However, they present a higher intensity of

usefulness when they are developed with the trade association. This suggests that participation in trade fairs, marketing delegations and sharing of market information are key perceived benefits that geographical co-location brings to this industry cluster, and especially when they are developed in collaboration with the trade association. This may also imply a key role of the trade association in developing active marketing externalities among firms. This issue also suggests that generic marketing activities are a key issue for aquaculture companies, as they imply a specific advantage of geographical co-location, especially for small firms.

Table 8.7b: Marketing cooperation with trade association

How useful is being located in a specific region of your country for facilitating the following opportunities for CO-OPERATION IN MARKETING:	Scotland (%)	Chile (%)	Total (%)	χ^2
Joint trade fairs participation	41	50	45	2.874
Joint market information research	36	50	42	1.011
Joint marketing delegations	36	44	40	0.817
Joint trade missions to new markets	27	27	27	1.398
Joint distribution strategies	18	38	26	2.868
Joint new product development	14	38	24	3.352
Joint branding (co-branding)	23	13	18	0.672
Joint sales to local markets	9	19	13	0.876
Joint sales to foreign markets	14	6	11	0.966

Percentage of respondents answering 4='useful' and 5='extremely useful'

Although significant differences between countries were not found, Chilean companies seems to be the ones that most benefit from geographical co-location and marketing cooperation with the trade association. The only exceptions are in the variables 'co-branding' and 'joint sales to foreign markets', where Scotland seems to have more cooperation in these activities. Significant differences, using the chi-squared test, in company age or company size were not found with regard to marketing cooperation with the trade association.

8.4 Overall usefulness of co-location

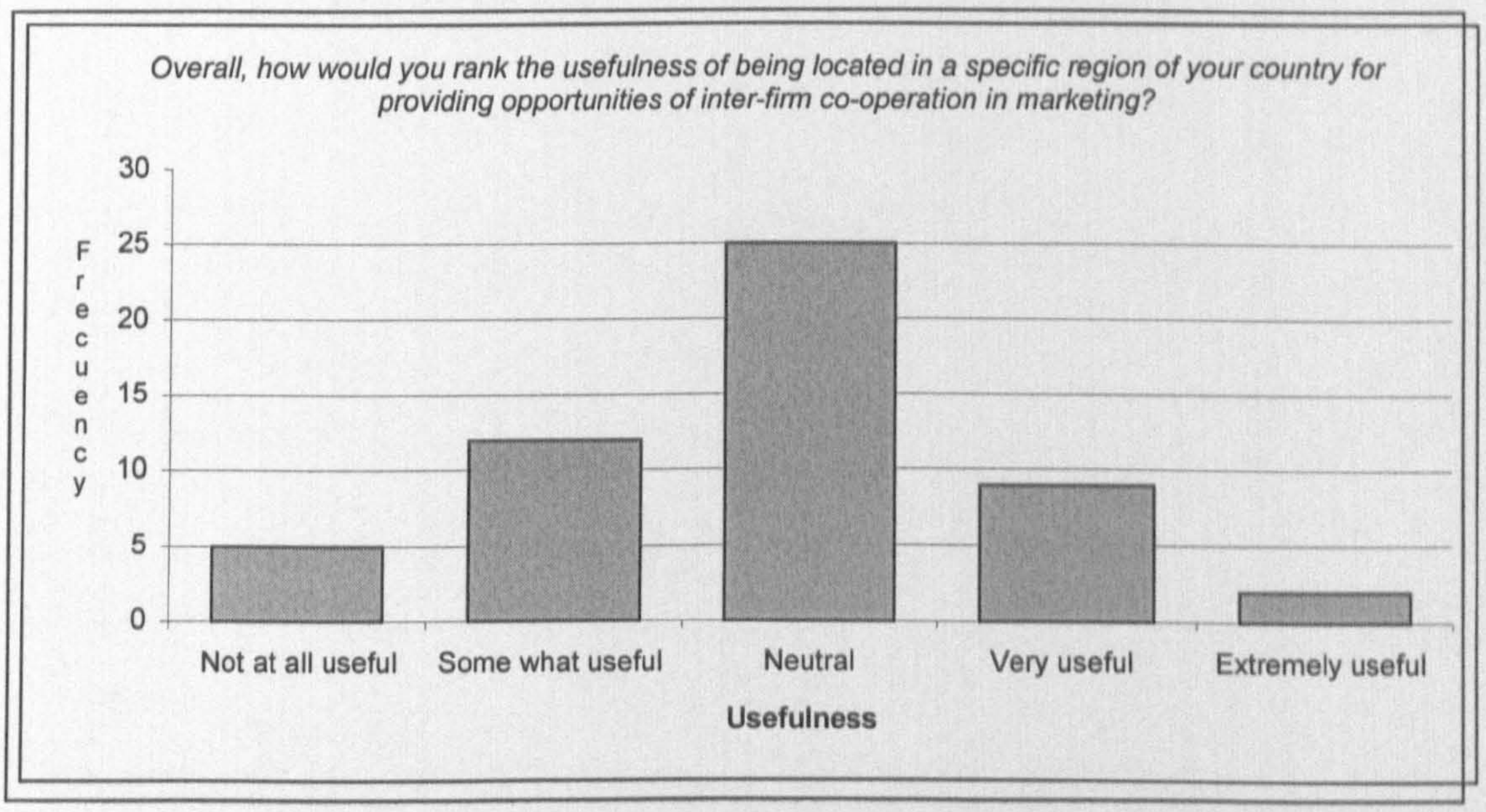
Throughout the previous sub-sections, the analysis has focused on the different perceived benefits of co-location with regard to economic and marketing factors. The overall results of this analysis suggest that 'traditional' externalities still play an important perceived role of geographical co-location. However, 'enhance reputation or credibility of the firm and products' emerges as the key passive marketing externality that place-specificity brings to companies, in this case, food/aquaculture related firms. As previously stated, the variable 'enhance reputation' is related to the issue of country and region of origin effects (Tootelian and Segale, 2004; Felzensztein and Dinnie, 2005). The analysis of active marketing externalities found that 'joint trade fair participation', 'joint market information' and 'joint marketing delegations' are the preferred joint marketing activities between companies. Nonetheless, marketing externalities seem to be perceived as relatively more beneficial when they are conducted with the coordination of the trade association, than only with other competitors companies. It is interesting to note that the previous three marketing externalities are concentrated in achieving marking sharing costs for reaching foreign markets, rather than achieving long-tem innovation or new product development, which may be considered as a part of a well-thought out marketing strategy.

Throughout this section, it was important to understand the different externalities that companies investigated perceive more useful as a result of geographical co-location. Moreover, significant differences among countries were found in some variables, generally being the case that Chilean firms were the ones that perceived more benefits of their geographical co-location / regional cluster, compared to their Scottish counterparts.

Although all the previous analyses are relevant for the exploration of traditional and marketing externalities, one important question remains unanswered: what is the perceived overall usefulness of co-location for marketing cooperation? To put it in another context, is geographical co-location the key issue for developing marketing collaboration? So far, the quantitative analysis indicates that overall, geographical

co-location has a neutral influence in developing marketing cooperation (see Graph 8.1). This result may be contrasted to Brown and Bell's (2001) research, where they concluded that the electronics cluster in New Zealand produces benefits for the internationalisation process of small firms and that certain active marketing externalities were created. If this result is expanded to wider marketing activities, this may suggest that marketing externalities of regional clusters have an industry effect. This means that industry specificity should be considered in the usefulness of geographical co-location in providing opportunities for marketing cooperation.

Graph 8.1 Overall usefulness of co-location for marketing cooperation



Significant differences between Scotland and Chile were found with regard to the usefulness of co-location, Chilean companies being the ones that perceived more benefits from their regional cluster ($p=0.004$). Significant differences among company size or company age were not found. However, the results indicate that younger companies, those less than 5 years, tend to find more benefits from geographical co-location. This may be related to the new entrants' factor in the creation of regional clusters, where subsequent attraction of more firms depends on the final economics of scale and positive externalities that territorial agglomeration (co-location) may offer (Porter, 1998; Scott, 1998; Brown and McNaughton, 2001,

2002). This may also suggest different behaviour of smaller firms, compared to larger firms in regional industry clusters (Lee *et al.*, 1999; Forsman, 2003).

Other significant differences across variables were not found in the analysis of the overall usefulness of co-location. Nevertheless, firms that expect to engage in some inter-firm cooperation also tend to be the ones that found more benefits in the geographical co-location. This might imply that some younger companies, with willingness for inter-firm cooperation, may be more active or have more active managerial capabilities for the future creation of active marketing externalities.

8.5 Inter-firm cooperation in marketing

This section analyses the issues relating to: (a) firm's actual cooperation in marketing and main levels of collaboration, (b) geographical co-location: its importance for the firm and industry, and (c) current or expected investment and intentions for developing joint marketing activities.

8.5.1 Firm's actual cooperation in marketing and main levels of collaboration

Tables 8.8a and 8.8b show that nearly 25% of the respondent companies expect to engage in some inter-firm collaboration in marketing activities in the near future. Other companies have already developed some inter-firm collaboration (20.8%) or do not collaborate and have never thought about it (20.8%). The main reasons for not collaborating in marketing activities are that 'industry competition is stronger than collaboration' (20.8%), or 'the company just did not try it' (15.1%). Significant differences among countries were not found. However, more Scottish companies (9), compared to their Chilean counterparts (2), stated that they had already developed some inter-firm cooperation in marketing. Smaller companies, with less than 50 employees, are also more likely to have already developed this marketing collaboration. This may suggest that small Scottish companies may be more

prepared, or willing, to engage in inter-firm cooperation in marketing, compared to Chilean firms.

Table 8.8a: Firm's cooperation in marketing today		
Which of the following statements best summarises your company today:	No.	%
Expect to engage in some inter-firm collaboration	13	24.5
Already developed some inter-firm collaboration	11	20.8
It has collaborated in the past, but currently no	11	20.8
It does not collaborate and have never thought about it	11	20.8
It does not collaborate and has no intention	7	13.2

Table 8.8b: Reason for not collaboration in marketing		
If your firm has not developed inter-firm collaboration in marketing, could you please specify the main reason?	No.	%
I do not want it, because competition is stronger than cooperation	11	20.8
I have not tried it, but I want it	8	15.1
I want it, but I have not find a good partner	5	9.4
Other	3	5.7
I tried it, but it did not work out	2	3.8

According to the respondents that developed some marketing cooperation with other firms, the main areas for collaboration have been: joint sales to customers (22.6%) and joint distribution channels (20.8%) (see Table 8.9).

Table 8.9: Areas of collaboration		
If your firm has developed inter-firm co-operation in marketing, please select the relevant items below:	No.	%
Joint sales to customers	12	22.6
Joint distribution channels	11	20.8
New product development	6	11.3
Co-branding	6	11.3
Joint website strategy	5	9.4
Other	5	9.4

It is interesting to note that 'joint sales' and 'joint distribution channels', were not among the most perceived active marketing externalities (see Table 8.7a) that firms noticed as a benefit from geographical co-location. The question that naturally arises

is therefore: What is the role of geographical co-location in developing this cooperation in marketing activities? In other words, is co-location a key issue for these activities? According to the respondent companies (Table 8.10), that have already developed some inter-firm cooperation in marketing, this is done with firms located in the same district and with firms located outside the local area.

Table 8.10: Location of inter-firm cooperation in marketing

If your firm develops any inter-firm co-operation in marketing activities, these are done:	Scotland (%)	Chile (%)	Total (%)	χ^2
with firms located in the same district	58	67	62	1.819
with firms located outside the district	64	33	52	10.055*
with firms located outside the country	27	33	30	0.135
with firms located outside the wider region	36	11	25	3.42

Percentage of respondents answering 4= 'agree' and 5= 'strongly agree'
(*) significant at 1% level

Significant differences between countries were found in the cooperation with firms located outside the district (p=0.007), where Scotland seems to prefer cooperation with companies outside their region. This may imply fierce competition with companies located in close proximity in Scotland.

As Table 8.11 shows, this kind of cooperation occurs mainly with suppliers and buyers. These results suggest that it is easier and more feasible to establish inter-firm cooperation in marketing with buyers and suppliers than with more direct competitors. This also may suggest that competition between companies located in the same stage of the value chain activities, is fierce in this industry. Clearly, buyer-selling relationships are the key components for the development of deeper collaboration and marketing understanding.

Table 8.11: Value chain position of inter-firm cooperation in marketing				
If your firm develops any inter-firm co-operation in marketing activities, these are done:	Scotland (%)	Chile (%)	Total (%)	χ^2
mainly with suppliers	64	50	59	6.576*
mainly with buyers	64	50	59	0.43
mainly with one or more local producers	54	50	53	0.038
Other	0	67	50	1.333
with the trade association	33	55	43	1.037
mainly with one or more non-local producer	27	25	26	0.12
mainly with one or more direct competitors	9	33	20	1.818

Percentage of respondents answering 4= 'agree' and 5= 'strongly agree'
(*) Significant at 5% level

Significant statistical differences between countries were found in the variable 'mainly with suppliers' (p=0.037), with Scottish companies being more likely to conduct marketing cooperation with suppliers.

It is interesting to note that 'marketing cooperation with the trade association' did not rank as highly as marketing cooperation with either suppliers or buyers. It is important to remember that joint marketing activities with trade associations and with other firms (like suppliers and buyers) are different aspects of the value chain activities. Therefore, they are different economic drivers and represent a diverse rationale for cooperation. Probably, this may suggest that buyer-seller relationships are important as they impact on the cost structure of companies. For example, buying raw material and direct relationship with distributors (especially supermarkets) may be the key activities that impact most on the cost of production of firms in this industry. More work is need in the area of supply chain management to provide a more complete insight about the relative impact of buyers and suppliers in the marketing cooperation activities of the salmon farming industry.

Market research/intelligence, sharing distribution channels and international advertising/promotion were found to be strongly cooperative activities with other firms (see Table 8.12). This may suggest that general cost reduction and increasing

customer base activities may be important elements to consider when companies choose collaborating among them. Clearly, these activities help firms to reduce and achieve economies of scale in marketing expenditure when targeting customers in the similar markets. This may also have implications for generic marketing activities in the industry. However, the data does not allow having inside information about these specific issues. Further research is needed to explain the reasons for collaborating in different marketing activities.

Table 8.12: Inter-firm cooperation by different marketing activities

If your firm develops any inter-firm co-operation in marketing, overall how would you rate this co-operation in terms of each of the following activities?	Scotland (%)	Chile (%)	Total (%)	x^2
Market research / intelligence	62	45	55	1.119
Sharing of distribution channels	75	13	50	8.611*
International advertising and promotion	50	38	45	0.556
Customer services	50	25	40	4.464
Local / regional advertising	46	25	37	4.935**
Pricing strategy	42	25	35	1.235
Promotional discounts	33	25	30	1.852
Sales training	36	13	26	4.232
Internet strategy	20	22	21	1.738
Other	0	50	20	2.917
New product development	10	25	17	4.235
Inventory holding	18	0	11	5.139**

Percentage of respondents answering 4='cooperative' and 5= 'strongly cooperative'
(*) Significant at 5% level
(**) Significant at 10% level

Significant differences between countries were found in 'sharing of distribution channels' (p=0.013), 'local/regional advertisement' (p=0.085) and 'inventory holding' (p=0.077), with Scottish companies being the ones that would prefer to conduct marketing cooperation in these activities. Price strategy may be also considered a 'cooperative' activity due to the specific market conditions, and international price competition, in which the industry is involved (see Chapter 4 for analysis of price factor).

8.5.2 Geographical co-location: its importance for the firm and industry

Respondent companies were asked to state their opinions about the relative importance of geographical co-location for joint marketing activities, and the issues of cooperation in marketing, at different levels. Table 8.13 shows that inter-firm co-operation in marketing is considered important for the development of their industry sector. At the same time firms wish to cooperate more actively with other firms in joint marketing activities, and this factor is considered important for the development of their business. The results may also suggest that close proximity among companies is considered not important for co-operation in marketing because of the use of information and communication technologies.

These results tend to confirm those presented in Chapter Seven, that geographical co-location seems not to be the key factor for the development of marketing collaboration among clustered firms. Nevertheless, it is important to reiterate that these results are applicable to the specific industry under study, or food/aquaculture related firms, and not necessarily to other dissimilar industry sectors. This is because industry specificity may influence the types and approaches of companies when engaging in inter-firm cooperation in marketing. Significant differences between countries were not found with regards to the issues of co-location and inter-firm cooperation in marketing.

Table 8.13: Co-location and inter-firm cooperation in marketing				
Based on your experience or expectations, to what extent do you agree with the following statements?	Scotland (%)	Chile (%)	Total (%)	X^2
Inter-firm co-operation in marketing is important for the development of the industry sector	59	76	66	2.081
Firm wish to co-operate more actively with other firms in joint marketing activities	61	38	51	3.200
Inter-firm co-operation in marketing is important for the development of the business	46	57	51	2.083
Close proximity among companies is not important for co-operation in marketing because of the use of ICT	43	57	49	0.981
Co-location is important for inter-firm co-operation in marketing	29	32	30	1.994
Inter-firm co-operation in marketing is not at all important for the business nor for the industry	25	15	21	0.708

Percentage of respondents answering 4= 'agree' and 5= 'strongly agree'

8.5.3 Current or expected investment and intentions for developing joint marketing activities

This sub-section analyses the current, or expected, investment and intentions of firms in developing marketing collaboration. Here, it is important to state that some of the respondent companies may have not developed joint marketing activities. However, the analyses also include companies that have not yet, but are expecting to develop this kind of cooperation within the near future.

Table 8.14 shows that the main current, or expected, areas of investment in marketing collaboration are joint promotion strategy and joint distribution activities. This suggests, as Table 8.14 shows, that companies are willing to invest resources in areas that increase their long-term sales, attract new and retain existing customers. Significant differences between countries were found in joint distribution activities ($p=0.030$) and co-branding ($p=0.000$), with Scottish companies being the ones that prefer to invest more in these marketing areas, compared to their Chilean counterparts. Significant differences were not found in different company size.

However, it is important to recognise that the variable 'joint distribution activities' shows that small companies with less than 50 employees are the ones that are more willing to invest in this area. This may imply that the sharing of physical distribution systems may be a key element for reduction of costs in small companies. However, the current empirical evidence does not allow further interpretation of this issue.

Table 8.14: Current or expected areas of investment in marketing collaboration

If your firm develops or expects to engage in inter-firm collaboration in marketing, the resources for the development of these joint marketing activities are invested (or would expected to be invested) in:	Scotland (%)	Chile (%)	Total (%)	X^2
Joint promotion strategy	86	80	83	0.137
Joint distribution activities	79	33	61	4.707**
Developing firm's network relationships with markets(s) or wider marketing systems	50	67	57	0.583
Establishing and building joint personal relationships with individuals customers	54	56	55	0.002
A combination of all the above	44	50	47	0.52
Joint price strategy and planning	46	44	46	0.006
Co-branding	77	0	46	12.692*
Joint product development	27	50	38	1.265
Joint database technology and internet to improve communication with our customers	27	50	38	1.147

Percentage of respondents answering 4= 'agree' and 5= 'strongly agree'
(*) significant at 1% level
(**) significant at 5% level

It is important to note that the variable 'developing firms' network relationships with markets(s) or wider marketing system', which is presented in Table 8.14 is related to Coviello *et al.'s* (2001, 2002, 2003) five aspects of marketing practices, classified by exchange and managerial dimensions. The firm is focusing on developing its position in a network of firms, which is classified as the 'network marketing' dimension. This implies that companies expect to invest more in developing their intra-networks contacts for marketing cooperation activities. Alternatively, in the intentions for developing marketing collaboration (Table 8.15), 'develop cooperative relationships with customers, suppliers and buyers' is related to Coviello *et al.'s* dimension of interaction marketing.

Table 8.15: Current or expected intentions for developing marketing collaboration				
If your firm develops or expects to engage in inter-firm collaboration in marketing, the joint marketing activities with other firms/ organisations are principally intended to (or would be expected to) be:	Scotland (%)	Chile (%)	Total (%)	X^2
Increase sales in the long term	93	90	92	2.101
Attract new customers	93	73	85	3.094
Retain existing customers	80	91	85	1.604
Develop cooperative relationships with our customers, suppliers and buyers	75	91	82	1.3
Coordinate activities between company, customers, and other parties in our wider marketing system	79	82	80	0.852
Increase sales in the short term	87	46	69	5.196

Percentage of respondents answering 4='agree' and 5= 'strongly agree'

Significant differences, using chi-squared test, were not found between countries, company age or company size in the current or expected intentions for developing marketing collaboration variables.

According to Coviello *et al.* (2003), interaction marketing implies face-to-face interaction between individuals, investing resources to develop a mutually beneficial and interpersonal relationship. In contrast, network marketing occurs across organisations, where managers commit resources to develop their firm's position in a network of various firm-level relationships. These two concepts and their relationship with the results presented in Tables 8.14 and 8.15, implies that the social elements of networking are important and a key issue for the development of marketing collaboration. The influences and characteristics of these social elements are analysed in detail in the next chapter.

8.6 Conclusions

So far the results tend to suggest that geographical co-location *per se* does not influence marketing collaboration among participant clustered firms. However, geographical co-location does have some influence in the creation of traditional

externalities, especially those related to intermediating business to business transactions and expanding customer base. Nevertheless, geographical co-location contributes to enhance the reputation or credibility of the firms' products in certain areas, creating a passive marketing externality. This issue may be seen as specifically important for co-located firms producing agri-food products, as in the case of farmed salmon, taking advantage of their positive country of origin effect where, for example, Scottish producers may find more benefits compared to their Chilean counterparts.

The trade association was found to have a key role. Specifically, trade associations seem to have a stronger influence in the collaborative behaviour for companies participating in trade fairs, marketing delegations and sharing of market information. This implies an important role for the local trade association in developing active marketing externalities among firm. This also may imply that geographical co-location and supporting institutions, like trade associations, may benefit from their spatial proximity. This may be especially the case for meeting firms in the same industry, including competitors, as well as for establishing their priorities for generic marketing.

On the whole, Chilean companies generally found more benefits of the geographical co-location for developing inter-firm cooperation in marketing, in selling intermediate goods to other firms, having access to new technology and having greater innovation and new product development. This may imply that there are more business to business transactions between Chilean companies, including processing and supplying firms and it may also be related to their urban geographical concentration in the city of Puerto Montt, compared to those in Scotland, which are mainly located in rural-remote areas. These issues are related to the industry analysis in Chapter 4 and may require further research for more definitive conclusions.

Significant differences were found between countries in the variable 'co-branding' and 'joint distribution activities', with Scottish companies being the ones that prefer to invest more in this marketing area, compared to their Chilean counterparts. Differences in export markets may also imply different marketing approaches, as

different markets require diverse entry strategies. This also influences the degrees and forms of marketing collaboration among firms participating in this industry. This result supports the results discussed in Chapter 7, where it was found that some companies use the names of specific places to show differentiating characteristics of their products.

Chapter 9

Results: The Influences of Social Networking

9.1 Introduction

The findings presented in the previous chapter suggested that the contribution of geographical co-location for the development of collaborative marketing activities is limited within this specific industry. If co-location is not the only explanatory factor in inter-firm cooperation in marketing, the question remains as into the role of social networking in this process.

This chapter continues the presentation of the analysis of the questionnaire, focusing on the influences of social networking in developing inter-firm cooperation in marketing. The issues under investigation in this chapter are structured to accommodate the research objectives and propositions. Specifically, the social networking elements are analysed in detail including: (a) marketing discussion at different social levels, (b) the role of informal contact and the frequency of interaction, (c) social sources of marketing advice, and (d) the social expectations of marketing interaction. The role of multinational companies and relational benefits are also analysed. Finally, a discussion of cultural influences and a comparative analysis between Scotland and Chile is also presented in this chapter.

9.2 Social Networking Elements

The analysis of the social networking issues presented in this section are: (a) marketing discussion at different social levels, (b) the role of informal contact and the frequency of interaction, (c) social sources of marketing advice, and (d) the social expectations of marketing interaction.

9.2.1 Marketing discussion at different social levels

Table 9.1a shows that the majority of respondent companies (62.3%) claimed to discuss marketing activities with people from other firms/organisations. A much smaller proportion (13.2%) did not discuss marketing activities, but they expected to in the near future. Similarly, 13.2% of the companies have no intention to talk about marketing with other firms. Chi-square analysis shows significant differences between countries on the variable 'no, but it is expected in the near future' (p=0.015): Chilean companies (13.2%) were the only ones to state this option.

Table 9.1a: Discussion about marketing activities

Do people from your organisation discuss with people from other firms/organisations about marketing activities?	Scotland (No.)	Chile (No.)	Total (No.)	%
Yes	20	13	33	62.3
No, but expected*	0	7	7	13.2
No, and no intention	5	2	7	13.2
Discusses before	3	0	3	5.7
no discussion and never thought about it	2	1	3	5.7

* Significant differences, χ^2 =12.396

These results suggest that there is a group of companies that are discussing marketing with other firms in their industry sector. However, it is also important to recognise that a large minority (37.8%) of companies do not discuss marketing issues with their counterparts. This issue was highlighted and developed in Chapter 7. Companies recognise the difficulties of discussing strategic topics, such as marketing collaboration with competitors. A key concern is that of strong competition, individualistic business behaviour and the fact that marketing is considered a strategic topic among competing firms located in the same industry (Dahl and Padersen, 2003). Das (1998) identified strong competition as an inevitable phenomenon of industrial clustering.

As Table 9.1b shows, many companies stated the reason for not discussing marketing collaboration is because 'competition is stronger than cooperation' in the industry (28.3%). Although these numbers are too small to make definitive statements about the main reason for not discussing marketing collaboration, the results confirm the qualitative findings (Chapter 7), which suggested that fierce competition inhibits firms from sharing strategic knowledge. Significant differences between countries were not found with regard to the reasons why companies do not discuss marketing collaboration.

Table 9.1b: Main reason for not discussion about marketing collaboration

If you do not discuss marketing collaboration with other people from other firms/organisations, What is the main reason?	Scotland (No.)	Chile (No.)	Total (No.)	%
There is intention, but not time or opportunity	1	2	3	5.7
Not tried it, but I will do it	1	2	3	5.7
No intention, competition is stronger than cooperation	7	8	15	28.3
Other	1	1	2	3.8

Companies that stated that they discuss marketing activities with other firms expressed that this discussion is mainly at 'informal level and social level' and at 'formal and informal levels on a one-to-one basis' (see Table 9.2a). Using Coviello *et al.'s* (2001) five aspects of marketing practice, this suggests that the formality of exchange is related to the 'interaction' and 'network' marketing aspects. The use of face-to-face interaction between individuals, as well as communication across organisations, where managers commit resources to develop their firm's position in a network of various firm-level relationships, are important within the industry.

Table 9.2a: Formality of current or expected discussion about marketing (with firms)				
When people from your organisation meet (or if they expect to meet) with other people to discuss about inter-firm co-operation in marketing, it is (or they will expect it to be):	Scotland (%)	Chile (%)	Total (%)	X^2
Mainly at an informal, social level (e.g. informal meetings)	75	66	71	0.292
Mainly at a formal and informal levels on a one to one basis	58	87	71	3.748
Mainly at a formal, business level (e.g. formal meetings)	50	50	50	0.701
At both a formal, business and informal, social level (but not in a one-to-one basis)	50	38	44	1.077
Mainly at a formal level, yet personalised via the use of technologies (e.g. fax, e-mail)	38	27	32	0.445

Percentage of respondents answering 4= 'agree' and 5= 'strongly agree'

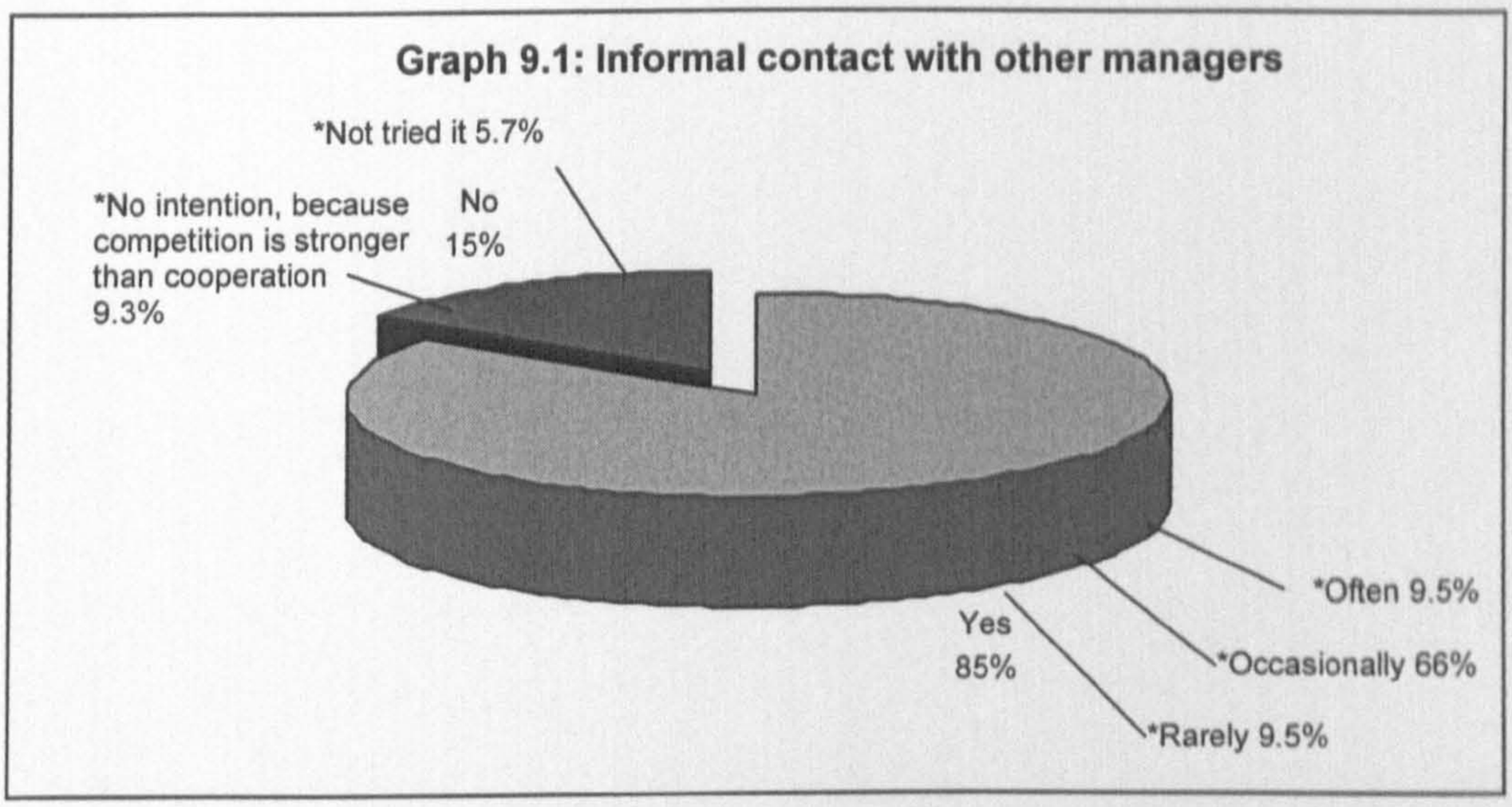
It is interesting to note that the formality of marketing discussion is different if discussions take place between firms, rather than with the trade association. Table 9.2b shows that discussion about marketing with the trade association is mainly done, or expected to be done, at a formal business level. Communication at a formal level can be personalised via the use of information technologies, but still remains formal. Taking into consideration Coviello *et al.'s* (2001, 2003) research, marketing practices with trade associations tend to be more focused on 'transaction' and 'database' marketing practices. In other words, these are transaction relationships with the aim of capturing more buyers by managing the elements of the marketing mix. The use of data base technologies in creating firms' relationships with the trade organisations and customers is a key feature of these interactions. Significant differences between countries were not found with regards to the formality of marketing discussion.

Table 9.2b: Formality of current or expected discussion about marketing (with trade association)				
When people from your organisation meet (or if they expect to meet) with other people to discuss about inter-firm co-operation in marketing, it is (or they will expect it to be):	Scotland (%)	Chile (%)	Total (%)	χ^2
Mainly at a formal, business level (e.g. formal meetings)	57	77	68	1.312
Mainly at a formal level, yet personalised via the use of technologies (e.g. fax, e-mail)	42	50	46	1.354
At both a formal, business and informal, social level (but not in a one-to-one basis)	15	29	22	1.122
Mainly at an informal, social level (e.g. informal meetings)	14	21	18	0.291
Mainly at a formal and informal levels on a one to one basis	7	21	14	1.4

Percentage of respondents answering 4= 'agree' and 5= 'strongly agree'

9.2.2 The role of informal contact and the frequency of interaction

A large majority of respondents (85%) stated that they have informal contact with other managers in the industry. Those that have no informal contacts (15%) stated that this was because competition is stronger than cooperation (9.3%) or simply because they have 'not tried it' (5.7%) (Graph 9.1). In addition, most of those companies that declared having informal contacts with other managers within the same industry (85%), only meet occasionally (66%). Using Granovetter's (1973) scale, the term 'occasionally' was operationalized as meaning more than once a year, but less than twice a week.



These results may be related to Coviello *et al.'s* (2001, 2003) 'duration of exchange' variable, and interpreted as continuous (ongoing) informal relationships within the industry. This corresponds to the 'interaction' and 'networking' marketing practices discussed earlier in this chapter. At the same time, the results also relate to Granovetter's (1973) analysis of interpersonal networks and the concept of 'weak ties' mainly developed as a consequence of informal meetings, involving shorter time commitments. Knowledge spillovers, through informal contacts, are also considered as one of the externalities that Marshall (1919) and Krugman (1991) argued to be the main forces behind industrial clustering. The development of these weak ties is useful in obtaining information that would otherwise be unavailable or costly to locate (Davidsson and Honig, 2003). This implies that these informal relationships and meetings may influence the exchange of marketing information.

These interpretations are also supported by Table 9.1a, which shows that 62.3% of the companies reported that they discuss marketing issues with people from other firms and organisations, and also by the qualitative data which found that informal communication and friendship were the best facilitators for the exchange of information among firms aiming to collaborate in marketing activities. While issues related to informal contacts and strengths of these social interactions are important, they fail to reveal the real social sources that influence collaborative marketing decisions. This is explored and discussed below.

9.2.3 Social sources of marketing advice

Table 9.3 shows that 'other Managing Directors' and 'people or employees from the firm' are the most important sources of marketing advice for companies that develop, or intend to engage in inter-firm cooperation of marketing. These results suggest that external people, particularly at the same organisational level, are considered the most important and appropriate sources of marketing advice. This may be due to the communication among managing directors (MDs), which may be more direct and specific, or due to the strategic nature of the exchange of information process, as it is marketing cooperation.

The variable 'people or employees from the firm' may also be considered important, as the marketing issues need to be coherent with the overall corporate strategy and company culture, where all the people at the organisation may understand the marketing values that the firm may want to transmit to other organisations and customers.

Table 9.3: Sources of marketing advice

How important would you consider the following sources of marketing advice if you want to develop inter-firm collaboration in marketing?	Scotland (%)	Chile (%)	Total (%)	x^2
Other Managing Directors	78	80	79	1.67
People or employees from the firm	67	50	60	3.594
Trade Associations	42	70	54	4.366
Local Enterprises	50	42	47	2.394
Friends	4	39	19	8.574*
Local Chamber of Commerce	4	21	12	2.986
Family members	8	11	9	3.491
Social groups (e.g. Rotary Club)	0	6	2	3.914

Percentage of companies answering 4= 'important' and 5= 'crucial'
* Significant at 5% level

Significant differences between countries were found in the variable 'friends' (p=0.014), where Chilean respondents reported that these were more important sources of advice. Significant differences were also found among different

company size in the variables 'family members' ($p=0.033$)[1], 'local enterprise' ($p=0.041$)[2] and 'other MDs' ($p=0.022$)[3]. Smaller companies (with less than 50 employees) were more likely to find these options as important sources of marketing advice. These results may suggest that locally embedded social groups (Van Dijk and Sverrisson, 2003; Lechner and Dowling, 2003) are the most used sources of marketing advice in smaller firms.

Issues related to who is the most important source of marketing advice, when companies expect to develop inter-firm cooperation in marketing, cannot be seen in isolation without knowing what the firm is expecting from it. Table 9.4 shows that trust and respect-reciprocity are the most important features of the relationship between respondent companies and their primary source of advice regarding inter-firm collaboration in marketing. Overall, 96% of respondents considered 'trust' and 95% of respondents considered respect-reciprocity as the most important features of the relationship. These results suggest that the social elements (trust, respect, reciprocity, etc) of the relationship are also crucial and expected for inter-firm cooperation in marketing activities.

Previous research (Coutler and Coutler, 2003; Coote *et al.*, 2003) suggests that trust is a complex construct that implies the active participation of the soft social elements of any inter-firm cooperation. Previous studies have also found that social networks make potential partners aware of each other's existence, helping to develop the trust necessary for any type of alliances (Gulati, 1999; Gulati, Nohria and Zaheer, 2000). They also confirm that trust is an important influence on inter-group behaviour (Hoang and Antoncic, 2003) as well as a critical element of competitive success in firms (Wolfe, 2003).

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[1] $\chi^2 = 16.768$
[2] $\chi^2 = 16.111$
[3] $\chi^2 = 17.857$

Table 9.4: Features of the relationship for the most important source of advice

For the one that you consider the most crucial source of advice for inter-firm collaboration in marketing, how important are the following features of the relationship?	Scotland (%)	Chile (%)	Total (%)	χ^2
Trust	100	91	96	2.974
Respect Reciprocity (i.e. Give and Take)	97	95	95	0.073
General Business Knowledge	86	90	88	0.158
Marketing Knowledge	76	87	80	5.768
Commercial Acumen	70	81	75	7.929*
International Knowledge	64	80	71	1.63
Local Knowledge	55	67	60	1.206
Length of relationship	52	67	58	1.208
Friendship	21	50	33	4.8
Personal or emotional support	17	33	24	4.496
Geographical co-location	11	33	20	4.351

Percentage of companies answering 4= 'important' and 5= 'crucial'
* Significant at 5% level

Significant differences between countries were found in the variable 'commercial acumen' (p=0.019). Chilean companies considered this feature relatively more important than their Scottish counterparts. Overall the variable 'geographical co-location' was the least important feature for marketing cooperation.

9.2.4 Social expectations of marketing interaction

Table 9.5 shows that the social expectations of managers when meeting with their counterparts in other companies are to maintain 'some future personalised contact' (74%) and a 'one-to-one personal contact' (63%). This suggests that managers value their personal contact among them and that personal relationships are something expected when dealing in business. At the same time, as suggested by Chen *et al.* (1998), Hawett and Bearden (2001), Hoang and Antoncic (2003), these personal interaction may have an effect in the cooperative behaviour of firms. These social elements have also been found to be important in previous research (Morgan and Hunt, 1994; Coulter and Coulter, 2003; Coote *et al.*, 2003), being a critical element of competitive success in firms (Wolfe, 2003). This

confirms that they are a key issue when analysing interaction and communication processes between firm.

Significant differences were found between countries in the variable 'some future personalised contact' (p=0.035). Chilean companies seem to be more willing to keep in regular contact with their possible partners or other related companies in the industry.

Table 9.5: Social expectations from meetings

When people from your organisation meet with other people from other firms, from the same industry cluster, you believe they expect...	Scotland (%)	Chile (%)	Total (%)	x^2
Some future personalised contact	69	80	74	6.684*
One-to-one personal contact	59	67	63	3.002
Ongoing one-to-one personal contact with people and the wider marketing system	39	55	46	4.457

Percentage of respondents answering 4= 'agree' and 5= 'strongly agree'
* Significant at 5% level

Table 9.6 shows that business partners are expected to provide 'regular feedback on business and marketing performance' (82%). This result suggests that social interaction and regular communication, which may be independent of geographical co-location, are strongly expected by company managers when engaged in inter-firm cooperation in marketing activities. Significant differences between countries were not found with regard to partners' behaviour expectation.

Table 9.6: Partners behaviour expectation

If your firm was to be involved in inter-firm collaboration in marketing, indicate how you expect your partner to behave:	Scotland (%)	Chile (%)	Total (%)	x^2
Provide us with regular feedback on our business and marketing performance	83	81	82	3.285
Communicate well their expectations	75	85	79	1.119
Keep us informed of new developments in their business, products and marketing plans	76	80	78	1.684

Percentage of companies answering 4= 'agree' and 5= 'strongly agree'

Table 9.7 shows that the most important social expectation from the partner, if the firm was to be involved in inter-firm collaboration in marketing activities, are 'frankness' (96%), 'competence' (92%) and 'knowledge' (90%). These results can be related to Porter's (1998) concept of 'social glue', which includes the building and expectation of trust among companies participating in the same industry. The building of a common knowledge base and frankness can also be assumed to be further aspects of the social element, part of the concept of 'trust' previously found in past research (Morgan and Hunt, 1994; McKelvey *et al.*, 2002; Coutler and Coutler, 2003), helping the development of relational ties, which are special for inter-firm interactions.

Significant differences between countries were found in the variables: 'frankness' (p=0.096), 'competence' (p=0.055) and 'reliance' (p=0.000). It appears that Scottish companies have higher levels of social expectations, compared to their Chilean counterpart. However these issues need further research to explain why these differences are produced.

Table 9.7: Social expectations from the partner

If your firm was to be involved in inter-firm collaboration in marketing, indicate what you would expect from your partner...	Scotland (%)	Chile (%)	Total (%)	χ^2
Frankness: Be frank and truthful in their dealings	100	90	96	2.877**
Competence: Be capable and competent	100	81	92	5.807**
Knowledge relevant to the marketing alliance	93	86	90	1.485
Reliance: Be able to depend as partner	100	33	72	26.852*

Percentage of respondents answering 4='agree' and 5= 'strongly agree'
(*) Significant at 1% level
(**) Significant at 10% level

As Table 9.8 shows, the variables 'be honest' (100%) and 'keep dealings, business and marketing plans confidential' (92%), are also important expectations that partners should accomplish if the company was to be involve in marketing cooperation. It is important to note that, according to the respondents in both countries, 'being honest' (100%) is a more important characteristic expected from partners, than for example 'having similar marketing background' (46%) or

'being located in the same geographical area' (24%). These results again suggest that the social networking elements of cooperation are key to partners' expectations.

Table 9.8: General expectations from the partner

If your firm was to be involved in inter-firm collaboration in marketing, indicate what you would expect from your partner...	Scotland (%)	Chile (%)	Total (%)	x^2
Be honest	100	100	100	-
Keep dealing, business and marketing plans confidential	97	86	92	4.970*
Have similar values and beliefs	69	68	69	0.836
Have similar marketing background	50	41	46	0.861
Have similar social background	17	38	26	4.042
Have similar economic background	21	32	25	1.273
Be located in the same geographical area	25	22	24	0.232

Percentage of respondents answering 4= 'agree' and 5= 'strongly agree'
(*) Significant at 10% level

Significant differences between countries were found in the variable 'keep dealing, business and marketing plans confidential' (p=0.083), where Scottish companies appear to consider this aspect as being more important than their Chilean counterparts. This supports the qualitative results, which found that confidentiality issues were vital among partners in the Scottish organisational environment.

These results build on Morgan and Hunt's (1994) and Coutler and Coutler's (2003) work, which deals with the importance of trust and commitment in relationship marketing, as discussed in Chapter 3 and 5. Once again, the importance of all the elements related to trust in inter-firm cooperative behaviour is indicated in this research. Furthermore, the results of this study appears to confirm that within strategic alliances, in this case marketing alliances, "the biggest stumbling block to the success of alliances is the lack of trust" (Sherman 1992, p.8) and, moreover, make opportunism more costly because of reputation effects (Gulati, 1999; Hoang and Antoncic, 2003). Trust and its related features such as honesty, frankness and so on, have been a central topic to all relational exchanges in previous studies conducted by the Industrial Marketing and

Purchasing Group over the last few years. The evidence gained on the qualitative and quantitative data confirms the importance of the social exchange process, an issue that has been seen as relatively more significant than simply geographical co-location.

9.3 Multinational Companies and Relational Benefits

The previous section emphasised the role and importance of the social elements of networking, which play a key role in the collaborative marketing arrangement between companies. This section presents the quantitative results relating to the perceived influence of multinational companies (MNEs) in developing inter-firm cooperation in marketing. At the same time, the analysis of the main benefits which the firm would expect from cooperative marketing relationships is also presented.

9.3.1 Influence of multinational subsidiaries

This sub-section presents the analysis of the role of multinational companies in creating marketing externalities, which were initially discussed in detail in Chapter 3. Table 9.9 shows that, according to respondents, multinational subsidiaries are irrelevant or do not help in the creation of marketing externalities. This appears to suggest that, within this industry, multinational subsidiaries were not seen as having a special role in the creation of a cooperative marketing culture among firms.

Table 9.9: Influences of MNEs subsidiaries

According to the experience of your own industry, to what extent do the following statements reflect your experience?	Scotland (%)	Chile (%)	Total (%)	χ^2
Foreign ownership per se is irrelevant	41	48	44	2.601
Do not help the development of inter-firm co-operation in marketing activities	53	30	43	7.664*
They contribute with leading-edge marketing ideas	14	9	12	0.553

Percentage of respondents answering 4= 'agree' and 5= 'strongly agree'
* Significant at 5% level

Significant differences between countries were found in the variable 'do not help the development of inter-firm co-operation in marketing activities' (p=0.022). Scottish companies were more likely than Chilean firms to deny that MNEs helped the development of inter-firm cooperation in marketing activities. These results may demonstrate the influence of foreign ownership in the Chilean industry, as described in Chapter 4.

So far, previous research has failed to produce any robust and reliable scales for measuring the influence of MNEs in collaborative processes. Clearly, this is knowledge a gap which requires further work by international business researchers as multinational companies and embedded local companies may interact, or not interact, in cooperative-alliances arrangements. At the same time, future research in international business and marketing should perhaps also consider the strategic role of individual subsidiaries in marketing activities within the cluster and the role of trust and other social networking elements on it.

9.3.2 Expected Marketing Benefits

This sub-section presents the results of the benefits expected by companies as a consequence of inter-firm cooperation in marketing, which involve increases in sales, improvements of future gross profits and better customer satisfaction, among others.

Table 9.10 shows that 'increase sales' (94%) and 'better gross profit in the future' (90%) are the main expected benefits by companies if they were to be involved in inter-firm cooperation in marketing. These results suggest that increasing sales, and in general terms, increasing overall performance, is the main goal expected when entering into marketing cooperative arrangements. This is an important issue as the results highlight specifically what the 'marketing networking benefits' are (Gilmore *et al.*, 2001; Coviello *et al.*, 2002) and what companies are looking

for in this specific industry. This also facilitates an understanding of the benefits that companies may expect entering into marketing related alliances.

Significant differences were found in the variable 'reduce distribution costs' (p=0.005), where Chilean companies expect to reduce these costs as a direct benefit of marketing cooperation. This may suggest that one of the biggest problems that affect the competitiveness of the Chilean industry is being far away from their main export markets, the USA and Japan.

Table 9.10: Expected benefits of marketing collaboration

If your firm was to be involved in inter-firm collaboration in marketing, what benefits would you expect from these relationships?	Scotland (%)	Chile (%)	Total (%)	χ^2
Increase sales	97	91	94	0.65
Better gross profit in the future	93	87	90	0.62
Better customer satisfaction provided by common marketing activities	83	87	85	0.174
Building of competitive strengths	75	87	80	1.145
General economies of scale	72	64	69	4.211
Reduce the threats of competition	62	74	67	4.665
Reduce distribution costs	62	70	65	10.800*
Reaching more customers in foreign markets	54	77	64	3.02
Actual gross profit provided	56	46	51	2.7
Reaching more customers locally	39	57	47	3.804

Percentage of respondents answering 4= 'agree' and 5= 'strongly agree'
* Significant at 1% level

9.4 Conclusions

The results presented in this chapter showed that the social networking elements, like 'trust' (Morgan and Hunt 1994; Hoang and Antoncic, 2003; Coote *et al.*, 2003) and 'respect reciprocity' (Coutler and Coutler, 2003) play a key role in inter-firm cooperation in marketing. Clearly, elements of networking are important for inter-firm cooperation. The empirical evidence presented in this chapter suggests that the concept of 'proximity' (Amin and Cohendet, 1999; Gertler, 2001) needs to be considered as being not only spatial but also social,

assuming organizational and relational forms in which firms and entrepreneurs relate to each other. Companies also recognised the difficulties of discussing strategic topics, as marketing collaboration with competitors. The use of face-to-face interaction between individuals is a key element in the discussion of strategic topics among managers. Respondent companies also specified the importance of informal relationships in the development of inter-firm co-operation. Informal contacts play a key role for collaborative marketing activities, acting as channels of knowledge flows (Dahl and Pedersen, 2003; Soh, 2003). In addition, the results also showed that informal meetings and 'weak ties' (Granovetter, 1973) are useful for sharing marketing information among managing directors.

Multinationals are not perceived to play any active role in the development of inter-firm cooperation in marketing. However, issues related to subsidiaries of multinational companies and their influence in the creation of marketing externalities among embedded local companies geographically co-located, need further analysis and development.

Some significant differences were found among countries in the sources of marketing advice, where 'friends' are considered more important among Chilean companies, compared to those located in Scotland. At the same time, Chilean companies were the only ones to state that they would expect, in the near future, to be involved in some inter-firm cooperation in marketing. Respondent companies in both Scotland and Chile expressed the view that competition was stronger than co-operation.

These results provide some insight into the role of country specificity and cultural influences in the development of marketing strategies within this industry. The study of particular regions, cities and urban/rural communities within countries, are crucial factors in the study of localised clusters (Acs, 2002; Steyaer and Katz, 2004).

Chapter 10

Conclusions, Recommendations and Limitations

10.1 Introduction

This chapter concludes the thesis and draws together the different issues raised by the research. The chapter starts by summarising the conceptual approach of the study and the main findings related to each proposition and research objective. The chapter then discusses some implications of the results and the contribution of the study in terms of both theory development and methodology. Finally, the limitations of the study are discussed and directions for future research are proposed.

10.2 Summary of the results

This study was concerned with the relative influences of geographical co-location and social networking in inter-firm cooperation in marketing activities. The extant literature has discussed these two concepts separately. Consequently, this thesis sought to link these two main concepts (geographic co-location and social networking) and explore their relative contribution to marketing collaboration within the farmed salmon industry.

The literature review, presented in Chapters 2 and 3, helped to clarify, define and conceptualise the problem under study. Propositions were developed based on a review of the previous literature and frameworks established by previous work. In this study, the main research propositions were explored using two main data collection techniques: (1) twenty-two semi-structured in-depth interviews with managing directors of companies located in Scotland and Chile, and (2) a questionnaire survey distributed to the companies in both countries.

On the basis of the qualitative (Chapter 7) and quantitative (Chapters 8 and 9) evidence, some broad conclusions can be drawn regarding each of the research propositions.

10.2.1 Geographical co-location and social networking

Objective one sought to build an understanding of the relationship between the issues related to regional clusters (geographical co-location) and social networking in developing inter-firm cooperation in marketing. Objective two was concerned with exploring how and to what extent co-location and networking influence inter-firm co-operation in marketing. These two main objectives were investigated under proposition one:

P1: *Social networking has a greater influence than geographic proximity in facilitating inter-firm cooperation in marketing activities.*

The first proposition suggested that social networking would have a greater influence than geographic proximity in facilitating inter-firm cooperation in marketing activities. Both the qualitative and quantitative results suggested that 'close proximity' is not a key issue *per se* for the development of inter-firm cooperation in marketing. Co-location, however, may be someway beneficial for the development of 'social glue' (Porter, 1998). Geographical co-location was also perceived to be useful in sharing general knowledge with other individuals within the industry, but not in sharing strategic marketing information. These results are in agreement with Brenschi and Lissoni's (2001) research, explained in Chapter 3.

The relationship between co-location and social networking is complex and the interaction between both elements often difficult to separate. For example, co-location assists in the social elements of networking which, in turn, help build strategic collaborative arrangements, for example in marketing, which contribute to enhanced performance (Wolfe, 2003).

The qualitative and quantitative results also emphasized the use of electronic communication as a mechanism to facilitate inter-firm collaboration with partners irrespective of location and confirm previous studies that argue that information and communication technologies are leading to the 'death of distance' (Hoffman and Novak, 1996; Cairncrooss, 1997; Kotlin, 2002; Ganesan *et al.*, 2004; Buckley and Ghauri, 2004; Naudé and Holland, 2004). The empirical evidence also found e-mail to be an effective means of transmitting technical knowledge including marketing information, confirming the results of Nonaka *et al.* (2000) and Ganesan *et al.* (2004). This finding suggests that future cluster theory needs to place greater emphasis on the role of electronic communications in transmitting technical content and the ways in which this affects the inter-firm cooperation process. Consequently, individual firms operating in clusters and future research investigating clusters both need to consider relational closeness (Gertler, 1995; Ghemawat, 2000) as well as the strength of ties in industrial districts (Ganesan *et al.*, 2004).

In short, the qualitative and quantitative evidence suggests that proposition one may be accepted. However, more empirical work should be done to confirm that social networking has a greater influence than geographic proximity in facilitating inter-firm cooperation in marketing activities.

According to the above results and discussion, the concept of 'proximity' (Amin and Cohendet, 1999; Gertler, 2001) needs to be considered as being not only spatial but also social, assuming organizational and relational forms in which firms and entrepreneurs relate to each other. Moreover, participation in inter-firm networks may also provide small firms with access to a broader pool of resources and knowledge, helping them to overcome size-related disadvantages. Sharing resources and marketing knowledge may also help smaller firms to act as channels of innovations (Morgan, 1997; Mackinnon *et al.*, 2004). Consequently, the 'relational mix' (Lechner and Dowling, 2003) and issues of 'social topography' (Van Dijk and Sverrisson, 2003) appear to be vital for developing inter-firm collaboration in marketing.

10.2.2 The elements and importance of social networking

The third research objective was to understand the relative importance of the social elements of networking in influencing inter-firm co-operation in marketing. This objective was investigated through propositions two and three:

P2: *The social elements of networking are positively correlated to the development of inter-firm cooperation in marketing activities.*

P3: *Compared to formal relationships, informal networks are positively correlated with the development of inter-firm cooperation in marketing activities.*

Proposition two suggested that the social elements of networking are positively correlated to the development of inter-firm cooperation in marketing activities. Clearly, the qualitative and quantitative results suggested that the elements of networking are important for inter-firm cooperation. Moreover, 'communication and social networks' (Szarka, 1990; Johannisson, 1995; Mackinnonn *et al.*, 2004) and 'extra local networks' (Mackinnon *et al.*, 2004) were found to be relevant in providing marketing information to firms in the industry cluster studied. For example, in the exploratory interviews, respondents' viewed the notion of networks as being closely related to the concept of a 'personal community' (Wellman *et al.*, 1998), composed of informal ties, which are socially close but may be physically distant.

Among the social elements of networking, the importance of communication and trust (Coote *et al.*, 2003) among partners and managing directors were highlighted throughout the results chapters. This also confirms Morgan and Hunt's (1994) research in which communication and trust were found to be positively correlated, promoting the quality and intensity of strategic communication among partners. These elements were especially reflected in Chapters 7 and 9.

The qualitative and quantitative evidence suggests that proposition two should be accepted: the social elements of networking are positively correlated to the development of inter-firm cooperation in marketing activities.

The importance of informal relationships in the development of inter-firm co-operation was also found in the qualitative and quantitative analysis, playing a key role for collaborative marketing activities, acting as 'channels of knowledge flows' (Dahl and Pedersen, 2003; Soh, 2003). In addition, the results also showed that informal meetings and 'weak ties' (Granovetter, 1973) are useful for sharing marketing information among managing directors.

The quantitative results presented in Chapter 9 showed significant differences among company size in the variables 'family member', 'local enterprise' and 'other Managing Directors', with smaller companies being more likely to find these options important sources of marketing advice. This evidence is in agreement with recent research by Van Dijk and Sverrisson (2003); Lechner and Dowling (2003) and Forsman (2003), suggesting that among locally embedded small companies, social groups are the most used (?) source of guidance. It also suggests differences in social behaviour between smaller and larger firms.

The qualitative results in Chapter 7 showed that small companies engaging in inter-firm marketing cooperation do not rely on their industry trade association to facilitate this collaboration. Owner-managers of these companies demonstrated active and entrepreneurial cooperative behaviour, where taking a lead role in these activities is seen as an important element of their long-term business strategy. Adopting an active stance towards cooperation in marketing activities is crucial to the development of collaborative arrangements. These results confirm previous research (Brown and Bell, 2001) which illustrated that 'active marketing externalities' required action between participants of a specific regional cluster and therefore, they are different from the traditional economics-based view of externalities where the benefits or costs are outside the firm's control.

The above results also provided insight into the development and use of 'entrepreneurial networks' (Drakopoulou and Patra, 2002), which is the sum of the total relationships in which an entrepreneur participates, providing important sources of information on his or her activities. However, more work needs to be done in this area of research.

Although the evidence of this thesis suggests that informal networks tend to facilitate the development of collaborative marketing activities, especially among small firms, the verification of this issue requires further empirical-confirmatory analysis investigating the different degrees of influence between formal and informal networks.

According to the qualitative and quantitative evidence, it can be suggested that proposition three is partially confirmed: compared to formal relationships, informal networks are positively correlated with the development of inter-firm cooperation in marketing activities.

10.2.3 Multinational companies

The fourth research objective was concerned with exploring whether there is any influence played by multinational companies in the development of inter-firm co-operation in marketing activities, when firm are located in regional clusters. A review of previous literature found little empirical evidence and no latent constructs related to the contribution of multinational subsidiaries in the creation of active externalities. Consequently, proposition four sought to establish the role of MNEs in marketing activities:

P4: Multinational Enterprises positively influence the development of inter-firm co-operation in marketing activities within regional clusters.

The qualitative and quantitative evidence showed that multinational appeared to not play any active role in the development of inter-firm cooperation in marketing. However, further analysis and development is required to explore issues related to subsidiaries of multinational companies and their influence in the creation of marketing externalities among geographically co-located embedded local companies. The lack of robust and reliable scales for measuring the influence of MNEs in collaborative marketing processes made this an especially

problematic theme. Future research in international business and marketing should consider the strategic role of individual subsidiaries in marketing activities within the cluster and the role of trust and other social networking elements on it. A good starting point may be considering Li's (2005) research on the effects of trust and share vision in intra and inter organisational relationships among subsidiaries.

Overall, the qualitative and quantitative evidence tends to suggest that multinational enterprises do not influence the development of inter-firm cooperation in marketing activities. Thus, proposition four is rejected. However, more work is needed to confirm this exploratory finding.

10.2.4 Country specificity and cultural influences

The fifth objective of this thesis was to explore whether there is any country or region specificity in the use of different types of inter-firm co-operation in marketing among clustered companies. This was achieved by comparing one specific industry sector in two countries with different levels of economic development and culture. The study of particular regions within the country was also another important issue for the achievement of this objective.

Related to the research objective, proposition five came from the literature review: *P5: Countries and regions in which there is a high level of social collectivism will demonstrate higher levels of inter-firm cooperation in marketing activities.*

The qualitative and quantitative results provided some insight into the role of country specificity and cultural influences in the development of collaborative marketing strategies. Respondents in both Scotland and Chile expressed the view that competition was stronger than co-operation and that this was influenced by a cultural tendency towards 'individualistic' business behaviour. The threat of opportunistic 'free riders' within competitive environments (Bucklin and Sengupta, 1993; Gulati, 1999; Ahuja, 2000) is a key factor that undermines the development of collaborative marketing arrangements. The exploratory evidence

showed that inter-firm marketing cooperation is easier in the early stages of an industry, where a more cohesive generic strategy is needed. Moreover, according to the qualitative results, company size affects the need for this type of co-operation. For example, in Scotland, small innovative companies appear to be leading the process of marketing collaboration at horizontal and vertical levels. In later stages of industry development, when the industry has matured, companies have increased in size and there is stronger competition for similar markets and customers, the creation of individualistic competitive strategies becomes the norm.

Inter-firm marketing cooperation is not only influenced by firm size and a country's general business culture, the special characteristics of specific regions within countries also affects a firm's strategic behaviour. In this study, according to the qualitative analysis, firms located in the Shetland Isles appeared to manifest a more cohesive – collectivistic type of behaviour, which may reflect the 'local industrial atmosphere' (Marshall, 1919). In turn, this may create a special environment within a country where there is a 'complex mix of co-operation and competition' (Becattini, 1989; Brusco, 1990; Porter, 1998; Feldman, 1999; Dahl and Padersen, 2003). The generic marketing strategies at industry levels with the cooperation of the local Trade Association may be a function of this type of environment.

The qualitative results also suggested that, although the network developed by each entrepreneur was unique to a particular individual (Birley *et al.*, 1991), the cultural differences at both country and regional levels may affect networking style with regard to the necessity, intensity and levels of collaborative marketing. Similarly, the concept of embeddedness is of particular importance, emphasising the extra-firm dimension of networks (Granovetter, 1985; Morgan, 1997) including, as this research shows, contacts with external institutions such as trade associations, developmental agencies and local authorities.

The quantitative evidence showed some significant differences between countries in the types of marketing collaboration. For example, Chilean companies

generally found more benefits from their geographical co-location for selling intermediate goods to other firms, access to new technology and new product development, as well as joint distribution strategies coordinated by the trade association. Scottish companies tended to collaborate and invest more on co-branding and building reputation of brands, taking the advantage of being located in specific regions and areas of the country, which is related to the literature on country of origin effects in food products (Tootelian and Segale, 2004; Felzensztein *et al.*, 2004; Felzensztein and Dinnie, 2005).

Collectively, the qualitative and quantitative results demonstrated that there are some differences among countries and regions. However, there is still little support for proposition five that countries and regions in which there is a high level of social collectivism will demonstrate higher levels of inter-firm co-operation in marketing activities. According to the results of this thesis, it is fair to say that differences of marketing collaboration between countries may vary according to the specific marketing activities and levels of competition in different nations and regions, for more reasons than solely cultural ones. Nevertheless, the previous results imply that the study of particular regions, cities and urban/rural communities within countries, are crucial factors in the study of localised clusters (Acs, 2002; Steyaer and Katz, 2004). Particular rural and remote areas of countries may have a diverse, more collectivistic business culture, which differs from the generalisations gathered from national level analyses. While there is insufficient empirical data to present a definitive conclusion about the influence of culture and industry structure in developing inter-firm cooperation in marketing, further qualitative and quantitative research in this topic may aim to confirm these exploratory findings.

Based on the above results proposition five is partially accepted: Countries and regions in which there is a high level of social collectivism may demonstrate higher levels of inter-firm cooperation in marketing activities.

10.3 Research Contribution

10.3.1 Theoretical contribution

This research was concerned with the factors that influence the development of marketing externalities among cluster-based firms. The qualitative and quantitative evidence suggests that the social elements of networking are a key issue in the development of inter-firm cooperation in marketing. However, a question that it is important to ask at the end of this thesis is what does this add to the literature of regional clusters, social networking and marketing?

It is clear that until now theorists have consistently demonstrated the role and importance of economic externalities, such as knowledge spillovers, within industrial clusters. Less research attention has been paid to the investigation of marketing based externalities, though it has been suggested that these may also accrue from geographical agglomeration. This study explored the development of joint marketing activities between firms operating in a single industry sector and located in close proximity.

This study contributes to the literature and to theoretical understanding by integrating the two concepts of geographical proximity and social networking, as facilitators for inter-firm co-operation in marketing activities. The study also explored in depth whether levels of inter-firm co-operation differed between countries with distinctly different levels of social collectivism, issues that were not explicitly included in previous studies (see for example Brown and Bell, 2001; Mingunzzi and Passaro, 2001; Varamaki and Vesalainen, 2003).

A specific conceptual contribution to agglomeration economic theories, discussed in Chapter 2, is that this thesis confirms the importance of an industry in sharing a 'common knowledge' of marketing (Saxenian, 1990; Brown and McNaughton, 2002). This is a specific active externality that can be taken further away in 'localisation economies' (Malmberg *et al.*, 1996), having stronger links between firms, institutions and specialised infrastructure within specific industries. This

thesis also contributes to the concept of 'milieu' (Malmber *et al.*, 1996; Stoper, 1997; Asheim and Cooke, 1999), corroborating that trustful relationships among partners tend to reinforce cooperation, mutual commitment and accelerate the process of 'tacit knowledge' (Nanaka, 1996; Schiavulli and Baker, 2001) being only possible through socialisation.

It can also be suggested that the salmon industry, which was used to test the research propositions, is characterised by the main aspects surrounding the concept of milieu. This is due to the majority of firms being in close geographical proximity operating in one dominating industry, together with auxiliary industries that form the 'regional cluster' (Porter, 1998), building horizontal and vertical relations. This form of industrial arrangement corresponds to the 'traditional industry district' (Oinas and van Gils, 2001) described in Chapter 2. Furthermore, this research also established that economic actors tend to be well established within the region's social relations, which is also a characteristic of these traditional industry districts.

The traditional transactional cost approach has largely ignored issues of social inter-dependencies. Special attention was taken in this thesis to examine the social networking aspects on marketing collaboration. Consequently, the concept of social capital (Maskell and Malmberg, 1999; Adler and Kwon, 2002) has been seen as much more than social contracts, but more about deep inter-personal relationship, based on 'trust' (Hoang and Antoncic, 2003) and including open discussion of strategic topics among managers as well as considering the importance of their informal contact for achieving greater cooperation among companies.

The evidence discussed in this thesis supports much recent research on the relative strategic importance of social capital among firm's relationships (Nahapiet and Goshal, 1998; Kale *et al.*, 2000 and Adler and Known, 2002). The contemporary concepts of 'relational mix' (Lechner and Dowling, 2003) and 'social topography' (Van Dijk and Sverrisson, 2003) are seen to be key issues of consideration when

investigating queries related to inter-firm relationships and geographical co-location effects, where social networking is a key factor among them.

The previous issues related to social capital also impact on other aspects of social processes in local companies embedded in regional communities (as the case of Shetland), where the sharing of a 'common knowledge base and culture' (Cooke, 1998; McKelvey *et al.*, 2002; Wolfe, 2003) may facilitate a more collaborative behaviour. The theoretical contribution related to social capital suggests that the specific industry under analysis is embedded in a 'European context of learning regions' (Wolfe, 2003), where there is strong contribution of the social elements: 'social capital' and 'trust' in supporting the network of inter-firms relationships and the process of interactive learning, as discussed in Chapter 3.

This research also attempted to incorporate a fuller understanding of the roles of trade associations, part of Porter's (1998) diamond. However, despite the extensive literature on the role of business associations, there has been little research into their potential contribution to the competitiveness of small firms, and none related to their competitiveness in marketing cooperation. The results of this thesis support Bennett's (1998) research concluding that it is important to differentiate associations by type of members because of their dissimilar objectives, which also occurred in marketing when comparing smaller and larger firms. This may also be related to the public policy sector, which is part of a wider concept of local synergy, consisting of several forms of cooperation (Staber, 1997). This includes, as the qualitative results showed, the relevance of social organisations, municipalities and educational institutions, supporting the 'local atmosphere' (Marshal, 1920) for cooperation among smaller firms. In addition, these support previous related research (Minguizzi and Passaro, 2001; Requier-Desjardins *et al.*, 2003), explained in Chapter 3.

A specific contribution has been made to the development, specification and deeper understanding of the concepts of 'marketing factors' (Marshall, 1920), 'marketing externalities' as social benefits of agglomeration economies (Weber, 1929) and 'active marketing externalities' (Brown and Bell, 2001), confirming

that particular motivations and actions from companies in a regional cluster are needed for the development of inter-firm cooperation in marketing. However, the empirical results of this thesis have also suggested that cooperation is not an element *per se* in every organisation and that the effect of the country as well as the local culture of regions may play a crucial role in the trust and cooperative process. These results support Vahaverbeke (2001), but more work needs to be done to confirm the effect of geographical co-location in inter-firm cooperation in marketing activities.

This thesis explicitly recognized the lack of literature concerning the role of multinational company's subsidiaries' in creating positive marketing externalities in industrial districts. The single most important question arising in this matter is whether foreign ownership among companies really contributes to the development of these externalities and how they interact with local embedded small companies for achieving better collaborative activities in an industry where competition is strong. The evidence discussed in proposition four demonstrated that it is possible to say that 'it does not matter' because there are dissimilar objective or strategic approaches among subsidiaries and small firms. Therefore, a continuing line of research may be necessary in this area, integrating theoretical perspectives from economic geography, sociology, strategy, entrepreneurship and marketing.

10.3.2 Methodological contribution

There have been very few cross cultural studies taking into account and integrating both the economic geography and social networking perspectives. This study has attempted to make a methodological contribution by undertaking a cross-national comparison in an under-researched industry in the context of marketing collaboration activities. In addition, the findings may be seen as an exploratory contribution for further enquiry into the role of entrepreneurial influences in the creation of active marketing externalities in industrial districts among different industries.

The empirical work included the analysis of twenty-two in-depths interviews. Although this data collection technique was expensive, the flexibility of this method helped to gain a deeper understanding of the greater influence of the social networking elements and the importance of trust among managing directors for the development of cooperation in marketing activities. The preliminary use of this methodological approach also enabled a clearer picture of the strong competition in this industry, especially among companies working in the same segment of value chain activities (e.g. processors). Furthermore, the insight into the factors contributing for and against marketing collaboration could not be achieved using only a questionnaire survey.

The questionnaire survey among participating companies in the main value chain activities of the industry helped to obtain specific information on the perceived main benefits, including general and marketing externalities, that specific geographic co-location brings to companies, the expected marketing areas of cooperation and more detailed information about the importance of social networking for marketing collaboration.

Arguably, the combined data collection method, where an *exploratory-qualitative* phase was mixed with a more *descriptive-conclusive* quantitative phase, presents a more nuanced and insightful understanding of regional clusters and social networking. The literature review demonstrated that there were few previous studies which included these two methods (Das, 1998; Weikl and Grotz, 1999; Chell and Baines, 2000; Huggins, 2000; Varamaki and Vesalainen, 2003). This multi-method approach also provided stronger internal as well as external validity for this study, as well as triangulation of the results (Creswell, 2003).

The use of a specific study area and specific industry approach in Scotland and Chile also contributed to the small firm's literature, which stresses that dissimilar local environments may demonstrate different levels of resource richness and that this has an effect on firm behaviour (Cooper, 1993; Westhead, 1995).

10.3.3 Managerial contribution

This type of study may result in benefits both for individual firms and also for public bodies, including the different roles that trade associations need to play to satisfy the dissimilar needs of large and small companies in collaborative marketing activities.

The practical and managerial contribution has already been partially achieved as this thesis has been largely commented upon and widely disseminated among industry managers and trade associations in both Scotland and Chile. As a result, the main outcomes of this research have served as a topic of managerial debate in industry related magazines, including researcher interviews and special reports in *Aquanoticias, Salmonicultura* and *Mundo Acuicola.* The research has also been debated as a central topic of discussion in the 2004 industry conference *Encuentro del cluster del salmon.*

Future meetings with individual managers in Scotland, for discussion of the results and implications of this study have been planned for the dissemination of the results. It is hoped that these may lead to a better understanding of the issues surrounding cooperation and competition in this specific industry cluster. At the trade association and public policy levels, the discussion concentrated more on the strategic policies that may boost marketing cooperation among small firms in rural-remote areas, such as the Shetland Isles.

The above demonstrates the 'useful learning' and contribution of this study to an emerging industry where there are only few early studies in the management, entrepreneurship and marketing related areas, and even less incorporating a cross-country analysis.

10.4 Limitations of the Research

Clearly, this exploratory study has a number of limitations. Firstly, given its exploratory nature and the use of small number of respondents, no definitive conclusions can be drawn regarding the causality of relationships and factors affecting inter-firm cooperation in marketing. Secondly, the use of a single industry to explore the issue under investigation obviously restricts the generalizability of the results However, as Dyer and Wilkins (1991) state, this study method offers a deep understanding of the features and intricacies of the investigating phenomena, and to the particular industry context that this phenomenon occurs. Although the results are only applicable to one industry, and cannot be generalised beyond this, the study presents some efforts towards comparison of networks activities across regional and national borders. To achieve a better external validity, this study should be replicated under a variety of conditions and with a more extensive variety of samples. Thirdly, the study uses a non probability sample. This implies problems estimating the non-sampling error and statistical generalisations (de Vaus, 2002; Blaikie, 2003). This is often the case in cross-culture comparative research (Sin *et al.*, 1999; Lohr, 1999). In addition, a drop and collect technique would have been preferable to a postal mail-out survey in achieving a better response rate in the questionnaire survey; however, it was not possible given the expense. Moreover, it would have been interesting to explore in more depth the respondents in the sample by type of activity (e.g. food suppliers, hatcheries, harvest process, processing plants and re-processors). Again, this was not possible as the questionnaire survey lacked identification by these types of activities. Finally, future empirical studies may include multivariate analyses to test the relative influence of a set of independent variables (e.g. company structure, social networking and geographical co-location) to the dependent variable (marketing cooperation) and degrees of influences among them. The achievement of larger samples would also help to gain a more reliable quantitative analysis and validity of these results.

10.5 Directions for further research

This study has attempted an in-depth analysis of the role of geographical co-location and social networking in the creation of active marketing externalities in industrial districts using a cross-country analysis in a specific primary industry. However, its results should be only considered as an exploratory investigation. This thesis has to be seen as the initial stage and a detailed problem formulation for further detailed analysis of this topic. A number of different research directions could be considered, however, the ones below offer a broad overview of future research.

Firstly, future research needs to consider in depth and across a wide spectrum, *inter alia* issues of supply chain and horizontal collaboration. This naturally implies a more detailed analysis and definitions of marketing activities at both generic-industry and firm levels. More work also needs to be done in exploring in-depth the respondents in the sample by type of activity (e.g. food suppliers, hatcheries, harvest process, processing plants and re-processors) and how they interact in marketing activities through the value chain.

Secondly, more work is required on the differences between and the relative influence of other actors such as the local public sector and regional councils among collaborative firms; more detailed analysis of sub-national and sub-regional disparities influencing inter-firm cooperation; as well as the strategic importance of inter-firm communication and governance within inter-firm alliances, including several types of institutional mechanisms or facilitators, such as diverse social ties and information technologies.

Thirdly, other related areas of future research may also include the relationship between different primary producers located in specific regions within countries, or geographically co-located. Interesting cases may be related to the expected benefits, influence of social networking and trade associations in the cooperation activities in marketing primary producers, such as beef, sheep, mussels and

salmon. This analysis should also investigate the depth of these collaborative arrangements.

Fourthly, it is also important to continue cross-country analysis, as it allows exploration and explanation of the differences and similarities in marketing cooperation in the different countries and regions. At the same time, the need for longitudinal studies may help to obtain a better picture of the processes involved in marketing collaboration formation and development.

Fifthly, the role of multinational companies and how they relate, or why they do not relate to small firms in collaborative agreements is a key area of research which needs further exploration.

Finally, further quantitative and deeper qualitative research, including differences between small, larger and subsidiaries of multinational firms, is required to supplement these findings. The issue of achieving a larger and representative sample of companies also presents a further goal for future comparative research in this theme.

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Appendix 1:
Sample letter to the Managing Directors

From: Christian Felzensztein
To: Mr Bill Johnson
Sent: 03 June 2003 14:06
Subject: meeting

Dear Mr. Johnson,

I conduct a research project related to 'clusters and their impact on joint marketing activities', where I would take the Scottish Farm Salmon Industry as an example of inter-firm co-operation.

During June/July I will be collecting information related to the Salmon Farming Industry in Scotland. After that, during July, I will conduct some interviews with CEO /Managers in this industry (6-7 interviews of 1 hour and 30 minutes each). The main aim of this explorative interview is to build an understanding of the inter-firm co-operation in the marketing activities that firm / associations in the industry perform.

For the above reason, I will appreciate if you can give me some time (1 hour and 30 minutes, maximum 2 hrs) for a personal interview during the third week of July.

I really appreciate your help and collaboration in the development of this research project.

Look forward to hearing from you soon,

Christian Felzensztein
Doctoral Researcher
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Appendix 2: Interview Guide

I. General Data
Company name:
Location:
Number of employees:
Local or foreign capitals:
Main Export Markets:

II. Joint Marketing activities:
i) To what extent your firm/institution have substantial relations with other firms/institutions in the marketing and international marketing activities? What are the main characteristics of these relationships? How and why did they start? How did they evolve over time? How do they change?

ii) Can you detect concrete examples of joint marketing activities between your firm and others within the industry? Within the geographical area... and outside the geographical area...
E.g.:
Joint marketing activities within vertical linkages (suppliers / buyers)

Joint marketing activities within horizontal linkages (*two or more local producers:* joint purchasing of inputs, selling under collective label, etc.)
....or horizontal linkages among a *large number of local producers:* e.g. co-operation in trade associations, joint participation in trade fairs, joint entry to foreign markets, collective provision of business development services, etc.

iii) When was your last joint marketing project? What kind of activities did you do? Why? How?

iv) What have been the main reasons/incentives for these joint actions in marketing activities? Has the geographical location (been closer to each other) played any role? How? Why?

v) Are these joint marketing activities results of a purposeful explicit strategy? Please, explain?

vi) If joint marketing activities can influence internationalisation, how this is likely to happen in you firm and industry?

vii) Has private/public collaboration emerged? How? Why? What has been the vision of the local/regional government / institutions in this respect? Do they promote these joint actions?

III. The role of informal contacts in 'industrial districts and clusters':
i) To what extent do you have informal contact with at least one manager/CEO in another firm in the industry? Are these contacts within the geographical region/location? How do you contact them? Why? Are there any family linkages within the industry?

ii) Do you acquire specific *marketing knowledge/ information* through you informal contacts? How do you use this marketing information?

iii) Do you plan any *joint marketing actions* with your informal contacts in other firms within the geographical regional/location? What kind of specific activities are these? How are the results of these activities?

Appendix 3: Questionnaire

TEXT BOUND INTO

THE SPINE

SECTION1: General Information and Characteristics of Your Business

In which area is your business mainly based?

Central belt of Scotland	☐	*Western Isles*	☐	*Other (please specify)*	☐
South West	☐	*Shetland*	☐	.....	
North West	☐	*Orkney*	☐		

Approximately, what percentage of your annual sales comes from each of the following areas?

	None	*1-25%*	*26-50%*	*51-75%*	*75-100%*
Local market (UK)	☐	☐	☐	☐	☐
EU market	☐	☐	☐	☐	☐
Rest of Europe (non EU)	☐	☐	☐	☐	☐
Japan	☐	☐	☐	☐	☐
Rest of Asia	☐	☐	☐	☐	☐
USA	☐	☐	☐	☐	☐
Rest of the world	☐	☐	☐	☐	☐

What is the main source of capital in the company ownership?

Regional capital (Scotland)	☐	*Foreign capital (from other countries)*	☐
National capital (UK)	☐	*Mix (Scottish or UK and foreign capitals)*	☐

Is your company a subsidiary of a multinational company?

Yes ☐ *No* ☐

How long is your company being established?

Less than 5 years	☐	*11-30 years*	☐
6-10 years	☐	*More than 30 years*	☐

How many full-time employees does your company have?

Fewer than 10 employees	☐	*51-100 employees*	☐	*More than 250 employees*	☐
11-50 employees	☐	*101-250 employees*	☐		

In your organisation, marketing activities are carried out by:
(Please, Indicate the extend to which you agree with the following statements)

	Strongly disagree 1	2	*Neutral* 3	4	*Strongly agree* 5
Functional marketers (marketing managers, sales managers)	☐	☐	☐	☐	☐
Specialist marketers (International mkt. managers, mkt. graduates)	☐	☐	☐	☐	☐
Non-marketers, who have responsibility for marketing and other aspects of the business	☐	☐	☐	☐	☐
Many different people in the firm	☐	☐	☐	☐	☐
The Managing Director / CEO	☐	☐	☐	☐	☐
Trade Association	☐	☐	☐	☐	☐
External people	☐	☐	☐	☐	☐
We do not conduct any marketing activity	☐	☐	☐	☐	☐

Where are your firm's major/direct competitors mostly located?

In the same local area / District (close proximity) to your firm ☐ *In other locations of Scotland* ☐ *World-wide (in other countries)* ☐

Are your major/direct competitors:

Mainly larger than your firm, but national companies (UK)	☐	*Mainly small firms*	☐
Mainly subsidiaries of multinational companies	☐	*A mix of them*	☐

SECTION 2: Benefits Based on Location

How useful is being located in a specific region of your country (regional cluster) for providing the following opportunities to your firm/organisation:

	Not at all useful 1	2	*Neutral* 3	4	*Extremely useful* 5
Access to a skilled labour pool	☐	☐	☐	☐	☐
Selling intermediate goods to other firms	☐	☐	☐	☐	☐
Buying intermediate goods from other firms	☐	☐	☐	☐	☐
Providing access to new technology	☐	☐	☐	☐	☐
Providing access to better specialised suppliers	☐	☐	☐	☐	☐
Greater local market demand	☐	☐	☐	☐	☐
Greater international market demand	☐	☐	☐	☐	☐
New customers find your firm	☐	☐	☐	☐	☐
Enhanced reputation or credibility of your firm and products	☐	☐	☐	☐	☐
Finding new customers in new markets	☐	☐	☐	☐	☐
Greater market and marketing information / knowledge	☐	☐	☐	☐	☐
Greater innovation and new product development	☐	☐	☐	☐	☐
Inter-cluster referrals to your firm	☐	☐	☐	☐	☐
Inter-cluster referrals from you to other firms	☐	☐	☐	☐	☐

How useful is being located in a specific region of your country (regional cluster) for facilitating the following opportunities for CO-OPERATION IN MARKETING:

	WITH OTHER FIRMS					WITH TRADE ASSOCIATION				
	Not at all useful 1	2	*Neutral* 3	4	*Extremely useful* 5	*Not at al useful* 1	2	*Neutral* 3	4	*Extremely useful* 5
Joint trade fairs participation	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Joint marketing delegations	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Joint trade missions to new markets	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Joint market information research	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Joint branding (co-branding)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Joint sales to local markets	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Joint sales to foreign markets	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Joint distribution strategies	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Joint new product development	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Overall, how would you rank the usefulness of being located in a specific region of your country for providing opportunities of inter-firm co-operation in marketing?

Not at all useful 1	2	*Neutral* 3	4	*Extremely useful* 5
☐	☐	☐	☐	☐

SECTION 3: Inter-Firm Co-operation in Marketing

Which of the following statements best summarises your company today (tick only ONE):

Our firm has already developed some inter-firm collaboration in marketing activities ☐

Our firm expects to engage in some inter-firm collaboration in marketing activities in the near future ☐

Our firm has collaborated in the past, but currently does not participate inter-firm co-operation in marketing ☐

Our firm does not collaborate and have no intention to develop inter-firm co-operation in marketing activities ☐

Our firm does not collaborate in marketing activities and have never thought about it ☐

If your firm has developed inter-firm co-operation in marketing, please select the relevant items below:

New product development ☐

Joint distribution channels ☐

Co-branding ☐

Joint website strategy ☐

Joint sales to customers ☐

Other (please, specify)..... ☐

Your firm has not developed inter-firm collaboration in marketing, could you please specify the main reason? (Tick only ONE)

Want it, but I have not found a good partner	☐	*I have not tried it, but I want it*	☐	*Other (please specify).....*	☐
Tried it, but it did not work out	☐	*I do not want it, because competition is stronger than co-operation in this industry*	☐		

Based on your experience or expectations, to what extent do you agree with the following statements?:

	Strongly disagree 1	2	*Neutral* 3	4	*Strongly agree* 5
Our firm wish to co-operate more actively with other firms in joint marketing activities	☐	☐	☐	☐	☐
Co-location (close proximity in the same region) is important for inter-firm co-operation in marketing	☐	☐	☐	☐	☐
Inter-firm co-operation in marketing is important for the development of our business	☐	☐	☐	☐	☐
Inter-firm co-operation in marketing is important for the development of our industry sector	☐	☐	☐	☐	☐
Inter-firm co-operation in marketing is not at all important for our business nor for the industry	☐	☐	☐	☐	☐
Close proximity among companies is not important for co-operation in marketing because of the use of Information and communication technologies	☐	☐	☐	☐	☐

*If your firm does not develop or if it does not expect to engage in inter-firm collaboration in marketing, please go to SECTION 4****

If your firm develops any inter-firm co-operation in marketing activities, these are done:

	Strongly disagree 1	2	*Neutral* 3	4	*Strongly agree* 5
With firms located in the same district/local area within Scotland	☐	☐	☐	☐	☐
With firms located outside the district/local area, but in Scotland	☐	☐	☐	☐	☐
With firms located outside Scotland, but in the UK	☐	☐	☐	☐	☐
With firms located outside UK	☐	☐	☐	☐	☐

If your firm develops any inter-firm co-operation in marketing activities, these are done:

	Strongly disagree 1	2	*Neutral* 3	4	*Strongly agree* 5
mainly with suppliers	☐	☐	☐	☐	☐
mainly with buyers	☐	☐	☐	☐	☐
mainly with one or more local producers	☐	☐	☐	☐	☐
mainly with one or more non-local producer	☐	☐	☐	☐	☐
mainly with one or more direct competitors	☐	☐	☐	☐	☐
with the trade association	☐	☐	☐	☐	☐
Other (please, specify).....	☐	☐	☐	☐	☐

If your firm develops any inter-firm co-operation in marketing, overall how would you rate this co-operation in terms of each of the following activities?

	No co-operation 1	2	*Neutral* 3	4	*Strongly cooperative* 5
Local / regional advertising	☐	☐	☐	☐	☐
International advertising and promotion	☐	☐	☐	☐	☐
New product development	☐	☐	☐	☐	☐
Pricing strategy	☐	☐	☐	☐	☐
Sharing of distribution channels	☐	☐	☐	☐	☐
Promotional discounts	☐	☐	☐	☐	☐
Customer services	☐	☐	☐	☐	☐
Inventory holding	☐	☐	☐	☐	☐
Sales training	☐	☐	☐	☐	☐
Market research / intelligence	☐	☐	☐	☐	☐
Internet strategy	☐	☐	☐	☐	☐
Other (specify).....	☐	☐	☐	☐	☐

If your firm develops or expects to engage in inter-firm collaboration in marketing, the resources (people, time, money, etc.) for the development of these joint marketing activities are invested (or would expected to be invested) in:

	Strongly disagree 1	2	*Neutral* 3	4	*Strongly agree* 5
Joint product development	☐	☐	☐	☐	☐
Joint price strategy and planning	☐	☐	☐	☐	☐
Joint distribution activities	☐	☐	☐	☐	☐
Joint promotion strategy	☐	☐	☐	☐	☐
Co-branding	☐	☐	☐	☐	☐
Joint database technology and Internet to improve communication with our customers	☐	☐	☐	☐	☐
Establishing and building joint personal relationships with individuals customers	☐	☐	☐	☐	☐
Developing our firm's network relationships with our markets(s) or wider marketing systems (e.g. suppliers and other organisations)	☐	☐	☐	☐	☐
A combination of all the above	☐	☐	☐	☐	☐

If your firm develops or expects to engage in inter-firm collaboration in marketing, the joint marketing activities with other firms/ organisations are principally intended to (or would be expected to) be:

	Strongly disagree 1	2	*Neutral* 3	4	*Strongly agree* 5
Attract new customers	☐	☐	☐	☐	☐
Increase sales in the short term (during the year)	☐	☐	☐	☐	☐
Increase sales in the long term	☐	☐	☐	☐	☐
Retain existing customers	☐	☐	☐	☐	☐
Develop cooperative relationships with our customers, suppliers and buyers	☐	☐	☐	☐	☐
Coordinate activities between ourselves, customers, and other parties in our wider marketing system (e.g. suppliers and other organisations)	☐	☐	☐	☐	☐

SECTION 4: Social Elements of Networking/Co-operation

Do people from your organisation (e.g. Managing Directors, Marketing Managers) discuss with people from other firms/organisations about marketing activities?

Yes, we discuss about marketing ☐

No, we do not discuss, but we expect to discuss about it in the near future ☐

No, and there is no intention to discuss about marketing ☐

We have discussed before, but currently we don't do it (withdraw) ☐

We have not discussed and have never thought about ☐

****If you discuss about marketing with other companies, or if you expect to discuss, continue here in Q2. If not, go to Q3 on this section****

Q2 **When people from your organisation (e.g. Managing Directors, Marketing Managers) meet (or if they expect to meet) with other people to discuss about inter-firm co-operation in marketing, it is (or they will expect it to be):**

	WITH OTHER FIRMS					WITH TRADE ASSOCIATION				
	Strongly disagree		*Neutral*		*Strongly agree*	*Strongly disagree*				*Strongly agree*
	1	*2*	*3*	*4*	*5*	*1*	*2*	*3*	*4*	*5*
Mainly at a formal, business level (e.g. formal meetings)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Mainly at a formal level, yet personalised via the use of technologies (e.g. fax, e-mail)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Mainly at an informal, social level (e.g. informal meetings)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Mainly at a formal and informal levels on a one to one basis	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
At both a formal, business and informal, social level (but not in a one-to-one basis)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Q3 **<u>If you do not discuss</u> about marketing collaboration with other people from other firms/organisations, What is the main reason?**

I intend to, but there is no time or opportunity for this ☐

I do not intend to do so, because the competition in this industry is stronger than co-operation ☐

I have not tried it, but I will do it ☐

Other (please, specify)..... ☐

Q4 **Do you have INFORMAL contact with at least one other Managing Director/CEO from another firm in this industry cluster?**

Yes ☐ *No* ☐ *(Continue in Q6)*

Q5 **If YES, how often do you meet? (<u>Tick one option</u>)**

Often (at least twice a week) ☐ *Occasionally (more than one a year, but less than twice a week)* ☐ *Rarely (one a year or less)* ☐

Q6 **If NO, why not? please specify <u>one option</u>**

I intend to have informal contact with other MDs/CEOs, but there is not time for this ☐

I do not intend to do so, because in this industry competition is stronger than co-operation ☐

I have not tried it ☐

Other (please specify)..... ☐

Q7 **How important would you consider the following <u>sources of marketing advice</u> if you want to develop inter-firm collaboration in marketing?**

	No Importance	*Slightly Important*	*Moderately Important*	*Important*	*Crucial*
	1	*2*	*3*	*4*	*5*
Friends	☐	☐	☐	☐	☐
Family members	☐	☐	☐	☐	☐
Local Chamber of Commerce	☐	☐	☐	☐	☐
Trade Associations	☐	☐	☐	☐	☐
Local Enterprises	☐	☐	☐	☐	☐
Social groups (e.g. Rotary Club)	☐	☐	☐	☐	☐
Other Managing Directors from other companies (e.g. possible Partners)	☐	☐	☐	☐	☐
People or employees from your company	☐	☐	☐	☐	☐
Other (please, specify).....	☐	☐	☐	☐	☐

Q8 For the one that you consider <u>the most crucial source of advice</u> for inter-firm collaboration in marketing, how important are the following features of the relationship?

	No Importance 1	*Slightly important* 2	*Moderately Important* 3	*Important* 4	*Crucial* 5
Trust	☐	☐	☐	☐	☐
Respect Reciprocity (i.e. Give and Take)	☐	☐	☐	☐	☐
General Business Knowledge	☐	☐	☐	☐	☐
Marketing Knowledge	☐	☐	☐	☐	☐
Local Knowledge	☐	☐	☐	☐	☐
International Knowledge (e.g. about foreign markets)	☐	☐	☐	☐	☐
Commercial Acumen (Business Acumen)	☐	☐	☐	☐	☐
Length of relationship	☐	☐	☐	☐	☐
Personal or emotional support	☐	☐	☐	☐	☐
Friendship	☐	☐	☐	☐	☐
Collocation (close proximity in the geographical district/area)	☐	☐	☐	☐	☐
Other (please specify).....	☐	☐	☐	☐	☐

Q9 When people from your organisation (e.g. Managing Directors, Marketing Directors, Managers) meet with other people from other firms, from the same industry cluster, you believe they expect...

	Strongly disagree 1	2	*Neutral* 3	4	*Strongly agree* 5
No future personalised contact with us	☐	☐	☐	☐	☐
Some future personalised contact with us	☐	☐	☐	☐	☐
One-to-one personal contact with us	☐	☐	☐	☐	☐
Ongoing one-to-one personal contact with people in our organisation and the wider marketing system	☐	☐	☐	☐	☐

Q10 If your firm was to be involved in inter-firm collaboration in marketing, indicate how you expect your partner to behave:

	Strongly disagree 1	2	*Neutral* 3	4	*Strongly agree* 5
Keep us informed of new developments in their business, products and marketing plans	☐	☐	☐	☐	☐
Provide us with regular feedback on our business and marketing performance	☐	☐	☐	☐	☐
Communicate well their expectations for our firm's performance and contribution in the marketing activities	☐	☐	☐	☐	☐
No communication or co-operation in marketing activities	☐	☐	☐	☐	☐

Q11 If your firm was to be involved in inter-firm collaboration in marketing, indicate what would you expect from your partner...

	Strongly disagree 1	2	*Neutral* 3	4	*Strongly agree* 5
Reliance: Be able to depend on us as partner	☐	☐	☐	☐	☐
Competence: Be capable and competent in our joint marketing activities	☐	☐	☐	☐	☐
Frankness: Be frank and truthful in their dealings with us	☐	☐	☐	☐	☐
Knowledge: Be very knowledgeable about everything relevant to our marketing alliance	☐	☐	☐	☐	☐

Q12 If your firm was to be involved in inter-firm collaboration in marketing, indicate what would you expect from your partner...

	Strongly disagree 1	2	*Neutral* 3	4	*Strongly agree* 5
Keep our dealing, business and marketing plans confidential	☐	☐	☐	☐	☐
Be honest	☐	☐	☐	☐	☐
Have values and belief similar to ours	☐	☐	☐	☐	☐
Have similar social background to us	☐	☐	☐	☐	☐
Have similar economic background to us	☐	☐	☐	☐	☐
Have similar marketing background to us	☐	☐	☐	☐	☐
Be located in the same geographical area (close territory / collocation) than us	☐	☐	☐	☐	☐

SECTION 5: Multinational Companies and Relational Benefits

11 According to the experience of your own industry, to what extent do the following statements reflect your experience?:

	Strongly disagree 1	2	*Neutral* 3	4	*Strongly agree* 5
In this industry, foreign subsidiaries do not help the development of inter-firm co-operation in marketing activities, because they tend to be less embedded in the local economies, compared to the local companies	☐	☐	☐	☐	☐
In this industry, foreign subsidiaries want to build a strong presence. Thus, they contribute with leading-edge marketing ideas, helping the upgrading and inter-firm co-operation in marketing of the industry	☐	☐	☐	☐	☐
In this industry, foreign ownership per se is irrelevant for the development of inter-firm co-operation in marketing	☐	☐	☐	☐	☐

12 If your firm was to be involved in inter-firm collaboration in marketing, what benefits would you expect from these relationships?

	Much worse 1	2	*Neutral* 3	4	*Much better* 5
Actual gross profit provided	☐	☐	☐	☐	☐
Better gross profit in the future	☐	☐	☐	☐	☐
General economies of scale	☐	☐	☐	☐	☐
Increase sales	☐	☐	☐	☐	☐
Reduce distribution costs	☐	☐	☐	☐	☐
Better customer satisfaction provided by common marketing activities	☐	☐	☐	☐	☐
Reduce the threats of competition	☐	☐	☐	☐	☐
Building of competitive strengths	☐	☐	☐	☐	☐
Reaching more customers locally	☐	☐	☐	☐	☐
Reaching more customers in foreign markets	☐	☐	☐	☐	☐

Do not forget to return this questionnaire in the enclosed reply paid envelope as soon as possible!

THANK YOU VERY MUCH FOR YOUR CO-OPERATION

Yes, I would like to receive an executive summary of this survey ☐

✂ ----------

Should you wish to receive an executive summary of the main results, that may help to know more about the situation of your industry sector, please state below your contact details including fax number and full address:

Contact name: _____
Position: _____
Full address: _____
Telephone number: _____
E-mail: _____
Fax number: _____

Appendix 4: Cover Letter

THE UNIVERSITY OF STRATHCLYDE IN GLASGOW

Survey of Regional Clusters and Inter-firm Co-operation in Marketing

Dear Managing Director, this survey is part of academic research without any commercial purpose conducted by a Doctoral researcher from the Department of Marketing at the University of Strathclyde, Glasgow. The main aim is to explore the influences of regional clusters in developing inter-firm co-operation in marketing activities. We would be very grateful if you could complete this questionnaire and *return it in the enclosed reply paid envelope as soon as possible*. We will make sure that this research will help your industry sector to know more, and understand better, about the current situation in this topic.

Instructions

1. This questionnaire should be completed by the Managing Director/CEO or by a key decision maker within the company
2. Please answer all the appropriate questions. If a question is not applicable please move on to the next one

Confidentiality

The questionnaire is anonymous and all responses will be treated with the utmost confidence. Any research publication will be aggregated across the sample of firms and will make no mention of individuals or individual firms.

Thank you very much indeed for your co-operation

Yes, I would like to receive an executive summary of this survey ☐