Strathprints Institutional Repository

Felzensztein, C. and Gimmon, E. and Carter, S.L. (2010) *Geographical co-location, social networks and inter-firm marketing co-operation : the case of the salmon industry.* Long Range Planning, 43 (5-6). 675–690. ISSN 0024-6301

ELSEVIER
LRP long range planning
Long Range Planning ■■ (2010) ■■■–■■■
http://www.elsevier.com/locate/lrp

Geographical Co-Location, Social Networks and Inter-firm Marketing Co-operation: the Case of the Salmon Industry

Christian Felzensztein, Eli Gimmon and Sara Carter

This study looks at the factors that influence the development of marketing co-operation among cluster-based firms. It examines data from SMEs operating within the salmon farming industry in two different regions: Scotland and Chile. Analyses indicate that informal social networks help explain the observed relationship between geographical proximity and inter-firm marketing co-operation, especially for firms located in peripheral rural communities. A theoretical model is proposed for further research in the field that, until recently, has been traditionally analysed only by economists. Practical implications are suggested for practitioners and policymakers.

Introduction

The role of regional clusters in the development and growth of entrepreneurial firms has been a key research theme in entrepreneurship and management literature over the past two decades. This research has focused on issues relating to economic externalities: economies of scale or scope and the effects of knowledge diffusion or, as Krugman defined them, knowledge spillovers.[1] This paper investigates industry-based networking and co-operation activities within regional clusters, with a specific focus on marketing.

Although the idea of firm-level marketing co-operation has been mooted as a potential benefit arising from geographic agglomeration, little research has been undertaken to support this claim,

0024-6301/$ - see front matter
doi:10.1016/j.lrp.2010.02.006

and the impact of clustering on marketing activities in a domestic and international context remains unclear.

Prior research provides conflicting views regarding the importance of geographical proximity on inter-firm co-operation and how this may be influenced by developments in communications technologies. In a study of the effect of geographical proximity on new product development, it has been suggested that "to date, the cluster literature is largely silent on the relationship between geographic proximity and alternative modes of communication such as fax, e-mail, and electronic discussion groups. Intuitively, there is no reason to expect that physical closeness should enhance these other forms of communication, because most of them have been developed to overcome physical distance."[2] However, other authors have observed that in less developed economies, such as Latin American countries, face-to-face communication still holds great importance in developing marketing practices.[3]

It is possible that different types of networking activity favour different geographical scales.[4] Global networking appears to be important for intangible factors such as knowledge and learning, but local interaction is required for the provision of tangible resources, such as labour and suppliers. The extent to which technological advances diminish the advantage of geographic clustering remains unclear, and there is a need to explore whether spatial proximity remains important and for which activities.

This study explores the potentially beneficial effects accruing from regional industry clusters by focusing on the role of geographic co-location and the influence of social networks in the development of firm-level marketing co-operation. We compare a single industry, salmon farming, in two very different countries, Chile and Scotland. We define inter-firm marketing co-operation as the positive externalities that create specific marketing benefits, as a result of active participation between co-located firms. Inter-firm marketing co-operation is a specific type of externality, compared with the economic externalities traditionally explained by economists.[5] Inter-firm co-operation in marketing captures many types of co-operative arrangements, including joint ventures, market research and joint marketing activities, joint distribution strategies, joint product development and co-branding. Such inter-firm co-operation can be either vertical with buyers or suppliers or horizontal across value chain activities.

The contribution of this study lies in the analysis and the development of a novel theoretical model presenting the role of geographical proximity and social networking in the creation of inter-firm co-operation in marketing. It brings a strong marketing and managerial focus to a topic traditionally reserved for economists. Such an approach may prove useful for practitioners, such as managers, entrepreneurs and trade associations, by improving their understanding of how small co-located firms can work together using informal social networks.

The next section of this paper highlights the literature on geographic co-location and social networks, and develops a theoretical model for further research. Then, the research methodology, data collection and industry selection are presented and the main results are discussed. Finally, implications for practitioners and policymakers are outlined, and a research agenda for inter-firm co-operation in marketing is proposed.

Theoretical development

The influence of geographical proximity on social networks and on inter-firm co-operation

Research on economic geography has traditionally focused only on the direct effect of geographical proximity on inter-firm co-operation. In more recent years, more nuanced perspectives on inter-firm relationships have emerged, bringing increasing policy and research interest in localised networks and regional innovation systems that derive support and competitive advantage through highly localised inter-firm interaction. Brown and McNaughton argue that the establishment of firms at a particular location is as much a matter of historical accident as anything else.[6] The subsequent attraction of more firms depends on the economies of scale and positive externalities.[7] However, the importance of these issues may differ across industries: for example, in natural resources industries, it is the location

Please cite this article in press as: C. Felzensztein et al., Geographical Co-Location, Social Networks and Inter-firm Marketing Co-operation: the Case of the Salmon Industry, Long Range Planning (2010), doi:10.1016/j.lrp.2010.02.006

of resources in specific areas that leads companies to co-locate. The firm's location in the overall specific network is what Gulati[8] calls "positional embeddedness". Nevertheless, it is well known in economic geography that this kind of regional network might be limited by location-bound resources and that regional lock-in may occur, leading to the decline of an entire network.

To be precise about the terminology relating to clusters, this study defines the concept of co-location as geographical agglomeration, or close physical proximity among firms in specific regions within a country. It also uses Porter's definition of regional clusters, being "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".[9]

Inter-firm interaction in localised clusters is best viewed within the local social and cultural context. Research has focused on concepts acknowledged by Porter as being "social glue". Some authors suggest that the social process of learning and innovation in inter-firm co-operation works best when partners are physically close enough to allow frequent interaction and effective exchange of information.[10] 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.[11] Close proximity at regional level facilitates frequent face-to-face interaction in both formal and informal settings.[12] This process creates a common language or code of communication, sometimes called tacit knowledge, through repeated interaction over time. This, in turn, leads to the creation of regional institutions that help reinforce the right environments for inter-firm interaction.[13]

Close proximity at regional level facilitates frequent face-to-face interaction in both formal and informal settings

Recent work stresses the importance of clusters and industrial districts as "social network topography".[14] The literature on strategic management and co-location highlights the importance of geographical proximity in providing repeated interactions, promoting the development of informal social and professional networks that serve as conduits for information exchange about important technological developments and emerging market opportunities.[15] Repeat interaction enables exchange partners to observe and monitor each other's behaviour, providing a means to develop norms of exchange and trust based on the expectation of future interaction. Co-location provides interaction opportunities and the sharing of experience necessary for inter-organisational collaboration, especially when there is a high degree of tacit knowledge.

This suggests that repeated interactions combined with overlapping social and professional connections provide concentrations of firms engaged in similar activities in a particular location with an environment that facilitates trust, rapid and effective diffusion of ideas and opportunities for collaboration. Thus, we propose:

P1 *Geographic proximity influences inter-firm co-operation in marketing, mainly through social networks.*

The influence of networks on inter-firm co-operation

Networks can be the basis of a rich information exchange that enables firms to learn about new alliance and market opportunities with reliable partners.[16] The development and gradual building of relationship networks influences a firm's conduct and its collaborative activities. Literature identifies three broad types of networks: *exchange networks*, involving commercial relationships with customers and suppliers; *communication networks,* involving individuals who provide a firm with contacts and knowledge to inform business activities (for example, with industry bodies); and *social networks*, including formal and informal relations among friends and other connections that provide support to owner-managers.[17]

Social networks have a broader scope for development, and are a key element in personal and organisational relationships in locally-embedded firms. The building of social networks implies a degree of mutual trust among partners, limiting the cost of co-ordination between partners and minimising the risk of hazardous behaviour by alliance partners. Thus, the development of social networks can be seen to shape firm behaviour and performance. The positive effects of network resources have been shown to be applicable even to newly-formed entrepreneurial firms.[18]

Social networks depend on interaction. At the firm level, this raises issues of trust and commitment. Coutler and Coutler assert that *trust* may be seen as a complex construct that includes integrity, honesty and confidence that one party places in another.[19] Trust also involves issues of credibility among parties and implies an active participation in the "soft social elements" of inter-firm co-operation. Consequently, trust is an important influence on interpersonal and inter-group behaviour as well as a critical element of competitive success in firms. 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. Coote *et al* defined *relationship commitment* as a long-term exchange partner's desire to maintain a valued relationship.[20] Furthermore, it predicts willingness to co-operate.

Informal contacts play an important role in building social networks, helping the internationalisation of entrepreneurial SMEs especially those located in small export-dependent countries.[21] 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.[22]

According to the "new economic sociology" of Granovetter, in the analysis of social networks the notion of strength deals with the combination of volume of time, emotional intensity, intimacy and reciprocity that characterises ties between firms or individuals.[23] Stronger ties involve larger time commitments, stronger sentiments of friendship, stronger feeling of similarity, and therefore, a better sense of community. Previous research suggests that informal networks are more likely to share small ideas rather than strategic knowledge, and that inter-personal communication is relatively more important for sharing knowledge with customers than with competitors.[24] As for formal social networks, being a member of business networks such as trade associations provides opportunities for the development and maintenance of weak ties.

Designing social networks with the aim of building inter-firm co-operation is no easy task. One of the fundamental problems is the inherent tension between co-operation and competition between firms. This tension creates a "social dilemma" among partners, which have to decide between competitive and co-operative approaches.[25] Firms are motivated to co-operate if a potential partner has complementary goals and objectives, as well as similarity in corporate cultures and values. Industry-level factors that may affect inter-firm co-operation include the stage of development of the market, as well as competitive uncertainty of firms.[26] Therefore, we propose:

P2 *Social networks, at both formal and informal levels, influence inter-firm co-operation in marketing*

Firms are motivated to co-operate if a potential partner has complementary goals and objectives

Theoretical model

The main purpose of this study is to develop our understanding of the relationship between geographic co-location and inter-firm co-operation in marketing by introducing the mediating role of social networking. Thus, the focus is on the direct and indirect influences of geographical

Please cite this article in press as: C. Felzensztein et al., Geographical Co-Location, Social Networks and Inter-firm Marketing Co-operation: the Case of the Salmon Industry, Long Range Planning (2010), doi:10.1016/j.lrp.2010.02.006

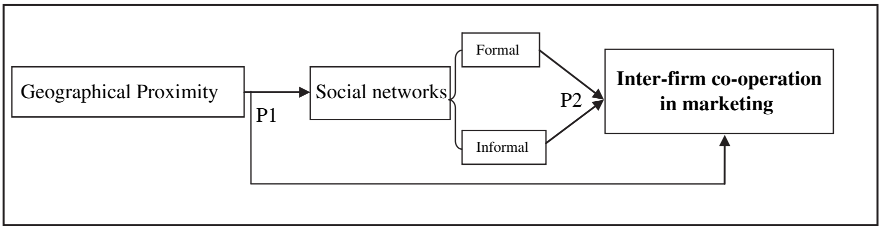

Figure 1. Theoretical model based on previous research

co-location and social networking in inter-firm co-operation in marketing. The theoretical model and propositions are derived from the literature presented above.

Figure 1 represents the following relationships: the direct influence of geographic co-location on inter-firm co-operation derived from traditional research in economic geography, and the indirect influence of geographical co-location on inter-firm co-operation through social networking. As a mediator of the relationship between geography and inter-firm co-operation, social networking is directly related to both geographic co-location (P1) and inter-firm co-operation (P2). These proposed links between geographic co-location and social networking, and between social networking and inter-firm co-operation are derived from recent research in economic sociology and management. According to the literature, both geography and social networking are expected to exert an influence on inter-firm co-operation; however, this may be in different intensities due to the directness or indirectness of the relationship. Moreover, in this model we have represented two aspects of our proposed mediator, namely formal and informal social networks.

While previous studies focus on general co-operation including strategic partnerships, this study specifically concentrates on marketing co-operation. Therefore, it refers to inter-firm co-operation in marketing activities, which is understood as a group of firms using combined resources to co-operate in marketing and/or sales activities at local and/or international levels. This intrinsically involves the elements of the marketing mix: price, product, distribution and promotion, especially when they are used at strategic levels. These relationships may be between actor firms at the same level in the value chain, representing a form of "symbiotic marketing".[27]

In the next section the methodology is presented and justified with the aim of exploring the concepts and relationships presented in the theoretical model. The study was designed to develop a better understanding of the concepts and to build stronger foundations for future research, rather than providing a definitive confirmation of our theoretical model.

Methodology and fieldwork

In order to explore the theoretical model, field research using a multiple case study approach was conducted and then expanded using inductive reasoning.[28] We selected two countries to enhance the validity of the results: Scotland and Chile, leading producers and exporters of farm salmon.

Although the use of case studies raises issues of external validity and generalisability of results, this approach has many advantages, particularly for exploratory research, and was conceived to best fit this research. The study was based on a sample of 13 entrepreneurial SMEs in two regions in Scotland (northwest Scotland and the Shetland Isles) and two regions in southern Chile (IX and X regions). All these firms were founded by entrepreneurs who are now also the firms' managing directors. Data for the study was collected using semi-structured personal interviews. A summary of the sample characteristics is presented in Table 1.

The interview process

Each interview was conducted *in situ* in the main offices or processing plants where managing directors (MD) of the selected firms were located. In Scotland this was in Perth, northwest Scotland

Please cite this article in press as: C. Felzensztein et al., Geographical Co-Location, Social Networks and Inter-firm Marketing Co-operation: the Case of the Salmon Industry, Long Range Planning (2010), doi:10.1016/j.lrp.2010.02.006

Table 1. Sample characteristics

Country	Type of organisation	Geographical location	Size of firms	Vertical integration of firms	Internationalisation of firms
Chile	Firms = 4	Rural = 2	Small = 2	No integration = 2	Export = 2
	T.A. = 1	Urban = 3	Micro = 2	Full integration = 2	Local market = 2
Scotland	Firms = 6	Rural = 4	Small = 4	No integration = 2	Export = 4
	T.A. = 2	Urban = 4	Micro = 2	Full integration = 4	Local market = 2
Total (n)	13	13	10	10	10

T.A. = Trade Association. Micro firm = less that 10 full-time employees. Small firm = between 10 and 50 full-time employees.

and the Shetland Isles. In Chile, the interviews took place in the cities of Villarrica, Puerto Montt and Puerto Varas. Managing directors were found to be the most appropriate contact for the interviews as they would have a "total picture" of the importance of their firms' co-operation, or non co-operation, in the marketing activities within the industrial district or regional cluster. The use of managing directors/owner-managers as key informants in this kind of study is a convention of small firms' research.[29] Interviews were conducted in the local language, transcribed and translated by the lead researcher.

The aim of the interviews was to collect pertinent data that would assist in the understanding of the concepts being investigated and the sectoral context in which they took place. Content analysis of the interviews was performed to understand how and in which ways firms co-operate in marketing activities in their regional cluster.

Industry selection

The selected companies were drawn from firms participating in the value chain activities of salmon farming, a primary industry that makes a substantial contribution to the regional economies of both Scotland and Chile. This particular industry was chosen for diverse reasons. First, it possesses similar characteristics in two countries with different levels of economic development and distinctive cultures. Second, it is located in specific geographical regions, contributing directly to the local economic development of rural and remote areas of each country. Third, obvious inter-connections in value chain activities, combined with geographical specificity, suggest that this industry constitutes an industrial district or cluster in both countries. Finally, Chile and Scotland are the second and third largest producers and exporters of farmed salmon (after Norway) and are thus important players in the global farmed salmon products market. Collectively, these characteristics suggest that this industry sector can be usefully investigated for comparative purposes. In addition, the annual production of farmed salmon has increased by a factor of 40 in the past two decades, making it one of the world's fastest-growing food industries.[30]

From a marketing and sales point of view, the salmon industry in Chile and Scotland is quite different. The Chilean industry concentrates more than 95 per cent of its sales in foreign markets, mainly the US and Japan, and has lower production costs and higher production capabilities than Scotland. In contrast, the Scottish industry concentrates its marketing activities and sales in the local UK market and European countries. Within the EU, France remains its key target, using the "Label Rouge" mark as a strong promotional tool. The "cluster strategy" is also different in Chile and Scotland. The former has had until recently a "bottom-up" approach, led by the local companies with minimum government intervention. The latter uses a clear "top-down" approach, the industry being an integral part of the Scottish Food and Drink Cluster, which is led by the developmental agency for Scotland, Scottish Enterprise. As the industry has become increasingly internationalised and competitive, new co-operative strategies among "similar" producing countries,

Please cite this article in press as: C. Felzensztein et al., Geographical Co-Location, Social Networks and Inter-firm Marketing Co-operation: the Case of the Salmon Industry, Long Range Planning (2010), doi:10.1016/j.lrp.2010.02.006

as well as joint marketing activities by producers from a particular country, are expected to be the future trends.

Results

Scotland

Four interviews were conducted in northwest Scotland, labelled (S), including one with the Trade Association (T.A.-S1) located in central Scotland, and four interviews were conducted in the Shetland Isles (Sh), including the local trade association (T.A.-Sh1). Table 2 presents the summary of the interviews that were conducted in northwest Scotland and the Shetland Isles.

These summary results show that all the key informants interviewed consider geographical proximity as not particularly important for the development of inter-firm marketing co-operation. One respondent (S3) stated: "*Geography is not important for marketing relationships, but it is for building social networks and collaboration in the production process… the internet has changed the rules of geography. Now we can collaborate with companies in London or in Japan, we communicate and sell over the internet.*"

Another company (S2) specified the benefits of distance between firms engaging in collaborative marketing: "*Distance is quite healthy for the development of long-term inter-firm co-operation in marketing especially if we co-operate with suppliers' firms…*"

According to the Scotland-based interviews, it appears that close proximity is not the main element that facilitates the development of inter-firm co-operation in marketing, although we know from other research that it does play a role. The widespread adoption of the internet and other electronic communication has not only made communication easier but it has changed the rules of geography.

The widespread adoption of the internet and other electronic communication has changed the rules of geography

---

In spite of these comments, we should be aware that the role of distant partners in making successful marketing co-operation is different if those firms are substitutes (e.g. competitors) or complementary (e.g. buyer-seller relationships), as is the case for the respondents quoted above.

Although geographical proximity was seen as less important for marketing collaboration, respondents specified the importance of social networks in the development of inter-firm co-operation. As T.A.-Sh1 explained:

> "*Collaboration is more about personal relations; most of the time we collaborate because we trust, we know or we are friends to each other.*" *Another respondent (S1) expanded on this:* "*Scotland is a small country. Everyone knows everyone and informal social relations are important.*"

Apart from informal relationships, other social elements are seen as important factors that help with the development of inter-firm marketing co-operation: "*Understanding of each other with professionalism is an important issue for long-term inter-firm co-operation in marketing*" (S2). Another respondent expanded on this point: "*…trust and knowing each other are important in informal contacts … being responsible to each other and having mutual support are the key issues for successful co-operation.*" (Sh2)

It appears that while there are plenty of informal relationships within the industry that are considered important by the protagonists, little communication focuses on marketing, largely because a competitive ethos prevails. A majority (65 per cent) of the companies interviewed believed that competition is stronger than co-operation in this particular industry. A reluctance to share specific

Please cite this article in press as: C. Felzensztein et al., Geographical Co-Location, Social Networks and Inter-firm Marketing Co-operation: the Case of the Salmon Industry, Long Range Planning (2010), doi:10.1016/j.lrp.2010.02.006

Table 2. Summary of exploratory interviews in Scotland and Shetland isles

Company/ Organisation	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
S1	√	√		√		√	√
T.A.-S1	√	√			N/A	√	N/A
S2	√	√	√	√	√	√	
S3	√	√		√		√	√
T.A.-Sh1	√	√		√	N/A	√	N/A
Sh3	√	√	√		√	√	
Sh5	√	√		√		√	
Sh6	√	√		√		√	√

T.A. = Trade Association. S = Company in Scotland. Sh = Company in Shetland.

marketing strategies or work together in collaborative arrangements can be attributed to the threat of opportunistic action by "free riders". "*There is some general collaboration, but each company has their own interest, strategies and markets.*" (T.A.-Sh1) Other companies are seen as competitors, as S1 explained: "*...we work independently...and this is much a part of the general Scottish culture*". Not only does it appear that competition is a stronger force than co-operation, some respondents attributed this to a specific national cultural norm towards individualistic behaviour.

In spite of operating within an "individualistic" business environment and in a highly competitive sector, the companies located in rural areas of the Shetland Isles were perceived as more cohesive and more willing to co-operate with competitors in marketing activities. Marketing collaboration had been encouraged by the local trade association (T.A.-Sh1), with the creation of co-operative associations among the smaller firms. Moreover, T.A.-Sh1 has also developed alliances with other primary-related producers in the area (e.g. Seafood and Shellfish Shetland's Producers Association). While all the participating companies stated they had some kind of co-operation with competitor firms – horizontal co-operation often geared around production processes – only two firms had specific joint marketing activities with other companies. One firm (S2) co-operates closely with another primary producer in the UK, and in doing so, has attempted to achieve competitive advantage in a niche market. As the managing director explained:

> "*Having mutual understanding of our business and a unique niche strategy make us more competitive. For example, we work in partnership with another seafood company developing premium products for Marks and Spencer. Our business and this partnership are very profitable for us.*"

Another firm (Sh3) has also developed a collaborative marketing arrangement, which has entailed co-branding on a product range, joint sales efforts to foreign markets and joint exhibitions in trade fairs. However, these joint marketing activities are viewed as short-term mechanism to gain market entry:

> "*...At the beginning it is better to go as a group, there is more strength. Later, it becomes a one-to-one relationship with customers. To be more precise, from being located in Shetland and due to our co-operation with other local companies, we can sell our products to the Japanese market. We can do it thanks to the internet as we have a collaborative arrangement with local companies to have a common brand for this market. We are very profitable doing that and selling our Shetland smoked premium salmon.*"

Results in Chile

Five interviews were conducted in Chile. Besides the trade association (T.A.-Ch), located in Santiago (central region), two companies (Ch2, Ch7) from southern Chile (X region) and two companies (ChN8, ChN9) from southern Chile IX region (outside the main regional cluster area) were interviewed. Table 3 presents the summary of these interviews.

The results show that the majority of companies considered close proximity as relatively unimportant for the development of joint marketing activities. Ch2, for example, stated that co-location was not the key issue for inter-firm co-operation in marketing: "*Geographical proximity does not influence inter-firm co-operation in marketing, which can be done with companies located everywhere. For example, as we do with companies in Norway for technical co-operation or with our Japanese buyers.*"

Co-location was considered an important factor for the development of social networks. A further antecedent factor was the existence of synergies among different industries and companies which were seen as precursors to the creation of joint efforts: "*Geography helps to create the right environment for informal social relationships in embedded local communities and regions.*"

From the Chilean interviews, it seems that close proximity is not the main element but facilitates, in certain ways, the development of inter-firm marketing co-operation. Informal social relationships were also seen as important for the development of inter-firm co-operation in marketing.

Table 3. Summary of exploratory interviews in Chile

Company/ Organisation	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
T.A.-Ch	√	√	√	√	√	√	N/A
Ch2	√	√	√	√		√	
Ch7	√	√	√			√	
ChN8		√	√				
ChN9	√	√	√			√	

T.A. = Trade Association. N = Company located outside the main cluster area (outside the Xth. Region).

Although there is strong competitive rivalry within this industry as well as a highly individualistic business culture in Chile, which is in line with and supported by previous findings, only two of the five companies stated that competition is stronger than co-operation in their industry.[31] For these firms, competitive pressures (same customers, similar export markets, etc) overrode the incentive to share marketing strategies or work collaboratively with competitors in joint marketing. Therefore, we can suggest that local competition is not perceived as stronger than co-operation in the Chilean industry.

Collaborative marketing efforts were more appealing when developed with firms in non-competing complementary industries or with downstream or upstream firms, regardless of their geographical location. However, the case of a micro-enterprise, with resource constraints having fewer than five full-time employees (ChN8), enabled a rather different insight; as this owner-manager explained: "*Close geographical proximity with other companies is useful for making more informal social contacts with people from other companies and then, for co-operation.*" For this company, the usefulness of co-location in creating marketing co-operation may be explained by its size, structure and resource capability. A general dissatisfaction with their focus and a failure of trust meant that the Chilean small and micro companies did not rely on their trade association for the development of marketing activities. As ChN8 explained: "*The trade association does not understand the problems and different perspectives of small firms. We are not part of the association because of our financial constraints, but also because the trade association concentrates its efforts working with large firms and subsidiaries of multinational companies.*"

One company (Ch2) expressed a preference to co-ordinate its own marketing activities without interference from a third party. These examples demonstrate some of the characteristics present in individualistic business societies, which differ to some extent from those ideas expressed by the firms located in smaller communities, such as the Shetland Isles.

Results of this study show that neither of the micro and small Chilean companies had relied on the trade association to assist in the development of their collaborative marketing arrangements. The managerial focus for these companies was one of active entrepreneurial-collaborative behaviour, rather than taking a passive and traditional SME approach to marketing activities. The owner-managers had a direct influence on the development of co-operative marketing strategies and a positive stance towards co-operation. Both were more important factors than close proximity in the development of joint marketing activities.

Results also show social networks were important for inter-firm co-operation in marketing. There, the "relational mix" and issues of "social topography" were crucial antecedents for collaboration in marketing, including more perceived intensity in rural communities. Results of cultural differences show that trust is more important in Chile than in Scotland – although managers stated that there is a mistrust culture in Chile – and that trade associations are more important in Scotland than in Chile in facilitating inter-firm co-operation for smaller entrepreneurial firms. This last issue may be explained by the fact that there is more than one trade association for the industry in Scotland. Therefore, all the participant companies, including SMEs, feel part or represented on it.

Discussion and conclusions

Some tentative conclusions can be drawn from these results. The data suggest the importance of social networks, and in particular informal social networks, in explaining the relationship between geographic proximity and inter-firm marketing that has been demonstrated in previous research. We consider geographical proximity to be beneficial for the development of social networks, building "social glue" and trust between individuals within this specific industry. Close proximity also enhances face-to-face communication, helping the development of relational ties, which are special for inter-firm interactions. Furthermore, it seems that co-location is perceived to be useful in sharing general ideas with other individuals within the industry. However, all of these can be only achieved through the development of informal social networks.

Managers and academics need to be aware that the relationship between co-location and social networking is complex to analyse separately. Geographical proximity can assist the social elements of networking which, in turn, help build strategic collaborative arrangements in marketing, which contribute to enhanced performance. The results also suggest that the use of electronic means for communication facilitates inter-firm collaboration with partners located anywhere, especially when this collaboration is achieved vertically.

Clearly, elements of social networking are important for inter-firm co-operation and their effect seems to exceed the influence of geographical proximity on inter-firm co-operation in marketing activities. Moreover, communication and social networks are relevant in providing information to firms in regional clusters. Respondents viewed the concept of networks as being closely related to the concept of a personal community composed of informal ties, which are socially close but may be physically distant. Consequently, 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 concept of proximity needs to be considered as being not only spatial but also social

The results also provide insight into the development and use of entrepreneurial networks, which may be developed through formal organisations, such as trade associations, or through upstream or downstream industry linkages. This study revealed that small companies in the Chilean salmon farming industry did not believe they were valued participants of the trade association and therefore did not develop a formal network. In contrast, small companies located in Scotland were supported and encouraged to be active participants in their trade associations and consequently developed formal networks. Overall, there were more opportunities for marketing collaboration in the smaller communities of Scotland, such as the Shetland Isles, than in small firms in Chile.

In summary, these results support our model and propositions. More specifically, social networks, particularly informal social networks, were found to strongly influence inter-firm co-operation in marketing.

While this study did not explicitly analyse the cultural influences related to inter-firm marketing co-operation, the results provide insights into the role and influence of regional and country specificity. At the general country level, respondents in Scotland expressed the view that competition was stronger than co-operation and that this was influenced by a cultural tendency towards "individualistic" business behaviour. However, cultural differences were found to be different at the regional level where in rural communities such as in the Shetland Isles, the effect of social networking on inter-firm co-operation was stronger than in urban areas. It is clear that inter-firm marketing co-operation is influenced by the special characteristics of specific regions within countries. Firms located in the Shetland Isles manifested a more cohesive and collectivistic type of behaviour. The cultural context of particular regions and rural communities within countries may be influential in the study of localised clusters.

The findings of this study are illustrated in Figure 2, where relationships are somewhat different in comparison with Figure 1, which includes findings of prior research. The contributions of our study are the following:

(1) Social networks mediate the relationship between geographical proximity and inter-firm co-operation;
(2) The effect of social networks is related mainly to informal rather than formal social ties. Thus, firms need to adopt this more sociological understanding that the development of informal social networks is a key element for enhancing better levels of co-operation among them;

Please cite this article in press as: C. Felzensztein et al., Geographical Co-Location, Social Networks and Inter-firm Marketing Co-operation: the Case of the Salmon Industry, Long Range Planning (2010), doi:10.1016/j.lrp.2010.02.006

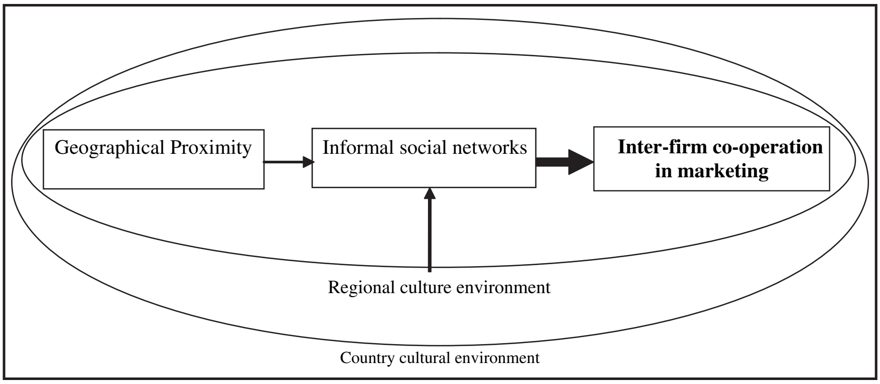

Figure 2. Lessons to academics: Theoretical model based on this study

(3) Cultural context, which is proposed to moderate these relationships, may matter when regional specificity influences inter-firm co-operation, as we found in the case of the rural communities of the Shetland Isles in Scotland. Although our study deals with only two countries, we suspect that cultural environment in many countries may also have a moderating influence, as shown in Figure 2.

Managerial implications

The results of this study support the argument that information and communication technologies are leading to the death of distance. It has been mooted that the effects of distance have been eroded by the widespread diffusion of new communications technologies, such as e-mail, Skype and Facebook. Practitioners may take advantage of these new communication modes in order to operate more effectively, whether co-operatively or competitively, within globalised value chains.

Within this study, firms that utilised social networks for inter-firm co-operation in marketing perceived benefits and positive externalities. We suggest practitioners should not be wary of co-operation at both vertical and horizontal levels, since this should not diminish their firms' competitive advantage. On the contrary, co-operation through social networks may make firms stronger and more competitive by developing economies of scale to withstand pressures caused by global economic recession or the search for cheaper prices.

An additional managerial lesson for emerging countries, such as Chile, is the urgent necessity to create new trade associations that represent SMEs. This will allow more social and informal interaction between firms, enhancing the possibility of further inter-firm co-operation. This suggestion is also applicable for public policies aiming for more local and international competitiveness of SMEs in emerging economies in the Latin-American context.

In regard to the cultural context where firms are located, Figure 3 highlights some of the implications for practitioners in order to enhance marketing co-operation within regional clusters. Social networks should be exercised in order to yield inter-firm co-operation in marketing. Geographical co-location may facilitate and enhance informal networking as it is perceived to be useful in sharing general ideas with other individuals within the industry, but not in sharing strategic information. When cultural environment or geographical distance inhibits social networks, managers should pursue inter-firm co-operation in order to benefit from marketing externalities.

Limitations and directions for future research

Findings and conclusions based on this study need validation due to its limitations. The rather small number of cases in two countries cannot be said to be representative in a statistical sense. The multiple case study approach inherently entails cases of different characteristics which limits

Please cite this article in press as: C. Felzensztein et al., Geographical Co-Location, Social Networks and Inter-firm Marketing Co-operation: the Case of the Salmon Industry, Long Range Planning (2010), doi:10.1016/j.lrp.2010.02.006

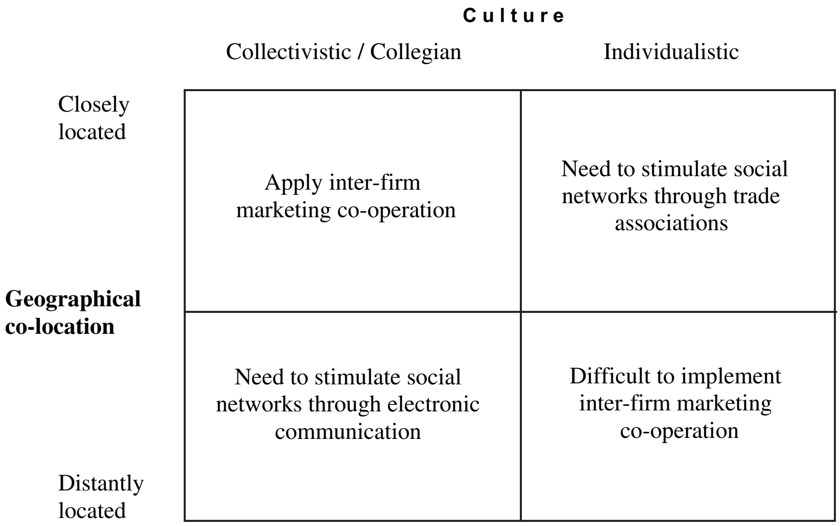

Figure 3. Lessons to managers: Opportunities for inter-firm marketing co-operation

the analytical assessment of the relationships under the scope of the research design. It is suggested that a quantitative research of different clusters in other regions is needed to confirm the conclusions of this study and the proposed theoretical model. At the same time, while this study did not specifically focus on types of marketing activities that firms conduct, this is one important element that should be considered in future research. Specific issues of supply chain and horizontal collaboration as well as the role of regional councils for enhancing co-operation, including several types of institutional mechanisms or facilitators, such as diverse social ties and information technologies, as well as including deeper analysis of specific regional cultural contexts along with country specificity should be considered in the next stage of research.

As this study has shown, future cluster theorising also needs to place greater emphasis on the role of electronic communications in transmitting technical content and in ways in which this affects the inter-firm co-operation process.

Acknowledgements

This study was funded by Conicyt Research Council of Chile (PBCT SOC-30) and the Carnegie Trust for the Universities of Scotland. The authors are grateful to the participants of the EMAC 2005 and IMP 2006 conferences at the University of Bocconi, Milan for their feedback in an earlier version of this paper, as well as the extensive and constructive comments provided during several rounds of revisions by two anonymous reviewers and the Editors of *LRP*.

References

1. P. Krugman, *Geography and Trade*, MIT Press, Cambridge, Mass (1991).
2. S. Ganesan, A. Rindfleisch and A. Malter, Does distance still matter? The role of geographic proximity in new products development, *Journal of Marketing* **69**(4), 44—60 (2005).
3. J. Pels, R. J. Brodie and W. J. Johnston, Benchmarking business-to-business marketing practices in emerging and developed economies: Argentina compared to the USA and New Zealand, *Journal of Business and Industrial Marketing* **19**(6), 386—396 (2004).
4. L. Nachum and D. Keeble, Neo-Marshallian Clusters and Global Networks: the Linkages of Media Firms in Central London, *Long Range Planning* **36**, 459—480 (2003).
5. P. Brownand and J. Bell, Industrial clusters and small firms internationalisation, in J. Taggart, M. Berry and M. McDermontt (eds.), *Multinational in a New Era*, 10—26 (2001).

Please cite this article in press as: C. Felzensztein et al., Geographical Co-Location, Social Networks and Inter-firm Marketing Co-operation: the Case of the Salmon Industry, Long Range Planning (2010), doi:10.1016/j.lrp.2010.02.006

6. P. Brown and R. McNaughton, Cluster development programmes: panacea or placebo for promoting SME growth and internationalisation?, in H. Etemad and R.Wright (eds.), *Globalization and Entrepreneurship*, Edward Elgar, Cheltenham (2001).
7. B. Perry and T. May, Governance, science policy and regions: an introduction, *Regional Studies* **4**(8), 1039—1050 (2007).
8. R. Gulati, *Managing networks resources: alliances, affiliations and other relational assets*, Oxford University Press, Oxford (2007).
9. M. Porter, *Clusters and the New Economics of Competition*, Harvard Business School Press, November-December, pp. 77—90 (1998).
10. P. Maskell, Towards a knowledge-based theory of the geographic cluster, *Industrial and Corporate Change* **10**(4), 921—943 (2001).
11. M. McKelvey, H. Alm and M. Riccaboni, Does co-location matter for formal knowledge collaboration in the Swedish biotechnology-pharmaceutical sector?, *Research Policy* **13**(4), 1—19 (2002).
12. M. Salazar and A. Holbrook, Canadian Science, Technology and Innovation Policy: the Product of Regional Networking, *Regional Studies* **4**(8), 1129—1141 (2007).
13. D. Wolfe, *Knowledge, Clusters and Learning Regions*, in Holbrook and D. Wolfe (eds.), School of Policy Studies, Queen's University, Kingston (2003); B. Cassiman, M. C. Di Guardo and G. Valentini, Organizing R&D Projects to Profit from Innovation: Insights from Co-opetition, *Long Range Planning* **42**(2), 216—233 (2003).
14. M. P. Van Dijk and A. Sverrisson, Enterprise clusters in developing countries: mechanisms of transition and stagnation, *Entrepreneurship and Regional Development* **15**(3), 183—206 (2003).
15. J. P. Liebeskind, A. L. Oliver, Lynne Zucker and M. Brewer, Social networks, learning, and flexibility: sourcing scientific knowledge in new biotechnology firms, *Organization Science* **7**(4), 428—443 (1996); Jason Owen-Smith and Walter W. Powell, Knowledge networks as channels and conduits: the effects of spillovers in the Boston biotechnology community, *Organization Science* **15**(1), 5—21 (2004); T. E. Stuart and O. Sorenson, Liquidity events and the geographic distribution of entrepreneurial activity, *Administrative Science Quarterly* **48**(2), 175—201 (2003); B. Kogut, The network as knowledge: generative rules and the emergence of structure, *Strategic Management Journal* **21**(3), 405—425 (2003).
16. C. Lechner and M. Dowling, Firm networks: external relationships as sources for the growth and competitiveness of entrepreneurial firms, *Entrepreneurship and Regional Development* **15**(1), 1—26 (2003).
17. R. Gulati and J. Nickerson, Interorganizational trust, governance choice, and exchange performance, *Organization Science* **19**(2), 1—21 (2008); R. Gulati, N. Nohria and A. Zaheer, Strategic networks, *Strategic Management Journal* **21**(3), 203—215 (2000); R. Gulati, Network location and learning: the influences of network resources and firm capabilities on alliance formation, *Strategic Management Journal* **20**(5), 397—420 (1999).
18. H. Hoang and B. Antoncic, Network-based research in entrepreneurship: a critical review, *Journal of Business Venturing* **18**, 165—187 (2003).
19. K. Coutler and R. Coutler, The effects of industry knowledge on the development of trust in service relationships, *International Journal of Research in Marketing* **20**(1), 31—43 (2003).
20. L. Coote, E. Forrest and T. Tam, An investigation into commitment in non-western industrial marketing relationships, *Industrial Marketing Journal* **32**(7), 595—604 (2003).
21. H. Agndal, S. Chetty and H. Wilson, Social capital dynamics and foreign market entry, *International Business Review* **17**, 663—675 (2008).
22. E. Varamaki and J. Vesalainen, Modeling different types of multilateral co-operation between SMEs, *Entrepreneurship and Regional Development* **15**(1), 27—47 (2003).
23. M. Granovetter, The strength of weak ties, *American Journal of Sociology* **78**(6), 1360—1380 (1973).
24. S. Breschi and F. Lissoni, Localised knowledge spillovers vs. innovative milieux: knowledge 'tacitness' reconsidered, *Papers in Regional Science* **90**, 255—273 (2001).
25. M. Zeng and X. Chen, Achievement co-operation in multiparty alliances: a social dilemma approach to partnership management, *Academy of Management Review* **28**(4), 587—603 (2003).
26. K. Eisenhardt and C. Schoonhoven, Resource-based view of strategic alliance formation: strategic and social effects in entrepreneurial firms, *Organisation Science* **7**, 136—150 (1996).
27. L. Adler, Symbiotic marketing, *Harvard Business Review* **44**(November-December), 59—71 (1966); Rajan Varadarajan and Daniel Rajaratnam, Symbiotic marketing revisited, *Journal of Marketing* **50**(1), 7—17 (1986).
28. R. Yin, *Case Study Research Design and Methods* (2nd ed.), Sage Publications, Newbury Park (1994).

Please cite this article in press as: C. Felzensztein et al., Geographical Co-Location, Social Networks and Inter-firm Marketing Co-operation: the Case of the Salmon Industry, Long Range Planning (2010), doi:10.1016/j.lrp.2010.02.006

29. N. Tzokas, S. Carter and P. Kyriazopoulos, Marketing and entrepreneurial orientation in small firms, *Enterprise and Innovation management Studies* **2**(1), 19—33 (2001).
30. R. Hites, J. Foran, D. Carpenter, M. Hamilton, B. Knuth and J. Schwager, Global assessment of organic contaminants in farmed salmon, *Science* **303**, 226—229, (2004) 9 January.*Salmon Virus Indicts Chile's Fishing Methods, Editor's note*. Available at, New York Times. http://www.nytimes.com/2008/03/27/world/americas/27salmon.html (March 27 2008).
31. C. Felzensztein and E. Gimmon, The influence of culture and size upon inter-firm marketing co-operation: a case study of the salmon farming industry, *Marketing Intelligence and Planning* **25**(4), 377—393 (2007); L. Huemer, G. Boström and C. Felzensztein, Control - trust interplays and the influence paradox: a comparative study of MNC-subsidiary relationships, *Industrial Marketing Management* **38**(5), 520—528 (2009).

Biographies

Christian Felzensztein is an associate professor of marketing at the Business School, Universidad Adolfo Ibañez, Santiago, Chile. His main research interests are inter-organisational relations, social networks and inter-firm co-operation in regional clusters. He is currently leading a large research project and research network on industry clusters' competitiveness in Chile, http: www.clusterinnovation.com. His work has been published in *Industrial Marketing Management*, *Journal of Business and Industrial Marketing* and Marketing *Intelligence and Planning*, among others. *E-mail:* c.felzensztein@uai.cl

Eli Gimmon is a senior lecturer at Tel-Hai Academic College, Israel and was a visiting professor at Universidad Adolfo Ibanez, Santiago, Chile. His interest in researching entrepreneurship and business strategy emerged from an extensive field experience including serial co-founding of two US-Israeli IT companies. Before that he practised intrapreneurship at the electronic defence company, Elbit Computers. His fields of research are entrepreneurship, inter-firm co-operation, SME business strategy and international marketing strategy. His work has been published in *Journal of Economic Issues*, *Journal of Business and Industrial Marketing* and *Venture Capital - An International Journal of Entrepreneurial Finance*, among others. *E-mail:* egimmon@megiddo.co.il

Sara Carter is professor of entrepreneurship and head of department at the Hunter Centre for Entrepreneurship, University of Strathclyde Business School, UK, and visiting professor at Nordland Research Institute, Bodø, Norway. Her research focuses on entrepreneurship and the small companies sector, in particular issues relating to agriculture and rural development, gender and finance, and the economic well-being of entrepreneurs. Professor Carter is an editor of *Entrepreneurship Theory and Practice*. *E-mail:* *sara.carter@strath.ac.uk*

Please cite this article in press as: C. Felzensztein et al., Geographical Co-Location, Social Networks and Inter-firm Marketing Co-operation: the Case of the Salmon Industry, Long Range Planning (2010), doi:10.1016/j.lrp.2010.02.006