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The Role of Clustering, Cooperation and Complementarities in the Visitor Attraction Sector

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Cooperation and complementarity are important but understudied components of tourism clusters in general and of the tourist attraction sector in particular. This paper addresses product similarities in general, and thematic similarity in particular, in the context of spatial proximity and clustering amongst tourist attractions. These relationships are examined by exploring cooperation between tourist attractions in two tourism clusters in Cornwall, (UK). Interviews with attraction managers and other key informants, and case studies, reveal that tourist attractions have established cooperative-complementary relationships of production based on external economies of scale at both the local and the regional scales. Differences between the two clusters in terms of interviewees' perceptions of the relationships between factors indicate the importance of understanding the specific features of individual clusters.

Key words: tourist attractions, tourism clusters, complementarities, collaboration

Introduction

This study examines the mechanisms of clustering in tourism spaces, including collaboration and complementarities between firms. Spatial clusters are constituted at different scales, ranging from the local neighbourhood through the sub-regional and regional, to the national and international levels (Malmberg and Maskell 2002). This is important because much of the research on clustering has been criticised for being applied to macro-regional environments rather than to local or micro environments, where clustering of micro, small or medium sized firms creates synergies and complementarities between them (Michael 2003,2007, Leibovitz, 2004; Novelli,

2003;Novelli *et al.* 2006). A complementary product is defined as “a product whose joint value is higher than its individual value” (Bannock *et al.* 2002:68). Therefore, product complementarities are defined in this paper as the elements or relationships which increase the value of joint production or consumption of tourism services and products.

Within the local tourism production systems firms tend to specialise in one or a few stages of the production chain and to exchange inputs and outputs with other firms producing complementary goods through common technologies, inputs, customers, infrastructure and distribution channels (Erkus-Ozturk, 2009). Firms which produce complementary products or services are not competitors, because they each make a contribution to the added value of the product (Bernini, 2009). For example, a typical tourism experience product consists of products, such as attractions, accommodation and transportation, which are often purchased by consumers as a single item (Michael, 2007). Complementarities between similar types of products in general have been notably neglected in tourism research in general and in the visitor attraction sector in particular (Fyall, 2001; Swarbrooke, 2001; Weidenfeld *et al.* 2010). The need to explore aspects associated with product similarity and complementarity of proximal attractions (Weidenfeld *et al.* 2010) is addressed in this paper.

Networks provide the economic engine and the social glue of cluster members (Hall *et al.* 2007), and networking contributes to the development of the tourism and the convention industry, as well as related industries and local economies (Bernini, 2009) and constitutes an important dimension of product complementarity in tourism destinations (Nordin, 2003 Bernini, 2009; Erkus-Ozturk, 2009). When external economies of scale are recognised as being mutually beneficial for firms, including tourist attractions, there is a potential for forming collaboration mechanisms (Cohen *et al.* 2005) These concepts underlie the theoretical framework for studying the relationships between the levels of agglomeration, product similarity, and intensity of cooperation amongst attractions. This study reveals how spatial proximity, product (thematic) similarity and other aspects affect how firms perceive these externalities (positive and negative), and employ appropriate strategies and tactics accordingly. The role of the nature of the tourist attraction product in facilitating collaboration is also examined.

The primary aim of this study was to explore factors associated with product similarity, complementarity, spatial proximity, and density in relation to cooperation amongst visitor attractions at the local and regional scales. To achieve this aim, four sub-objectives were set. First, to explore the nature of cooperation amongst visitor attractions. Second, to examine the relationships between spatial proximity and density in relation to product similarities and cooperation between visitor attractions. Third, to identify different forms of product complementarities and fourthly to contribute to the knowledge on tourism clusters and cluster mechanisms. The paper begins by exploring existing knowledge on cooperation amongst visitor attractions, revisiting the relationships between cooperation, product similarities and spatial proximity in general and those in relation to external economies and product complementarities in particular in the context of tourism clusters. We first outline some key theoretical issues, followed by a discussion of the methodology, before exploring our empirical findings based on a case study of two clusters in Cornwall, UK, and conclude by reflecting on both theoretical and policy implications.

Tourism clusters

This study adopts Jackson and Murphy's (2002) approach to tourism clusters which views them as a form of industrial cluster based on Porter's (1998) cluster theory. Competitiveness in tourism clusters is determined by factor and demand conditions, the context for firms' strategies and rivalries, and related and supporting industries (Porter's 'diamond model' 1998, as cited in Jackson and Murphy, 2002). A 'tourism cluster' is an array of linked industries and other entities, such as accommodations, attractions, retail outlets, associations, and public agencies, which are in competition and which provide complementary products and services as a holistic tourism experience, (Wang and Fesenmaier, 2007). Clustered tourism businesses are engaged in cooperative competition (Buhalis, 2006; Wang and Krakover, 2008), which is spatially scaled, notably having intra- and inter-regional dimensions (Huybers and Bennett, 2004; Jackson and Murphy, 2006). The co-location of firms does not guarantee clustering effects or relationships, understood as the process of optimising gains from economies of-scale and of-scope as a result of reductions in the average costs of constituent firms (Michael, 2007).

There are different forms of clusters. Horizontal clusters consist of complementary firms that produce similar goods and compete with one another but are inter-linked through a network of suppliers, service and customer relations, selling similar products and using similar processes (Bathelt *et al.* 2004). These production processes “...are likened to a series in a value chain, where each link adds value in a sequence of steps to produce the final product to customer use” (Michael, 2007: 24). Vertical clustering refers to the co-location of firms operating at different stages in the value chain, which minimises logistical and distributional costs and enhances specialisation (Michael 2003). Clustering of attractions, for example, creates spin-off benefits in terms of generating increased aggregate visitor numbers, and provides a critical mass of activities to attract visitors for a trip of one or more days, while suggesting opportunities for future visits (Gibson and Hardman, 1998).

Tourism clusters may not necessarily be related to Porter’s (1998) industrial cluster and geopolitical boundaries, but to functional clusters, based on thematic segmentation such as heritage, adventure or sport tourism, with members collaborating by forming value chain ‘packages’ and working in synergy to provide an inclusive experience to specific targeted markets, and thus tend to emerge in a rather limited geographical area (Nordin, 2003). However, as this study will show, thematic clusters can collaborate in areas other than marketing or ‘packaging’ and include members regardless of their geographic location. This study draws on these theoretical insights to explore the nature of spatial and thematic clustering amongst tourist attractions, thereby contributing to the refocusing of the debate about clusters from the industrial and manufacturing sectors to services, especially tourism (Asheim, 2000). It follows Shaw and Williams (2004:102) in questioning “... the extent to which location or proximity is a precondition for developing inter-firm relationships...”, and the effect of spatial clustering or dispersal on these relationships. It also challenges the extent to which proximity affects traded and untraded interdependencies (Storper, 2000). The central focus of this paper is on cooperation amongst SMTEs within different clusters, in relation to spatial proximity/agglomeration and product similarities, particularly thematic ones.

External economies of scale in tourism

This study examines the relationships between the spatial proximity of attractions and external economies of scale, in terms of both intensity and whether these are positive or negative. External economies of scale potentially (but not necessarily) generate economic benefits for firms from cooperating with other firms, depending on these being recognized and the firm being able to realize them. If there is mutual recognition between firms of potential positive externalities, this will increase the likelihood of co-operation to a certain extent (Fyall *et al.* 2001; Newlands, 2003). Each of the following externalities: interdependence of firms (Fyall *et al.* 2001; Newlands 2003), trust in sustained collaboration (Hjalager, 2000; Newlands, 2003; Williams 2005;2006) and cooperative competition (Buhalis, 2006) will be examined with respect to firms located in two contrasting spatial clusters with lower and higher levels of agglomeration of tourist attractions.

Interdependencies

Traded interdependencies, like market transactions between local economic actors, are inextricably linked to untraded interdependencies i.e. to the networks within which knowledge is created and exchanged (Newlands, 2003). Networks and networking facilitated by local agents are the core features of clusters (Erkus-Ozturk, 2009) and their most common form is strategic alliances. Fyall *et al.* (2001) imply spatial proximity between attractions is positively related to the level of interdependencies and collaboration between attractions. Traded interdependencies between proximal attractions can include 'buying groups', 'retail collectives', joint marketing initiatives, where marketing is the most common form of collaboration (Fyall *et al.* 2001), and untraded interdependencies can be characterised by lobbying regional and local government, exchange information and forming shared agendas and common objectives (Newman, 2003).

Untraded interdependencies, consisting of a set of practices, rules, routines, agreements and networks, are closely linked to information flows, the operation of labour markets, regional conventions and norms (Morgan, 1997; Storper, 1997; Raco, 1999; Newlands, 2003; Storper, 2000; Shaw and Williams, 2004). Traded interdependencies, such as market transactions between local economic actors, are inextricably linked to untraded interdependencies, i.e. to the webs through which information is developed and exchanged (Newlands 2003). Traded interdependencies

involve a series of transactions, including purchasing inputs, contracting and dismissing staff, selling products, and financing investment, all of which imply transaction costs to the organisations concerned (Storper, 2000; Fyall and Garrod, 2005). Frequent contact favours repeated transactions, and facilitates the circulation of information which can effectively reduce transaction costs. It also makes it easier for firms to identify potential suppliers, to verify the quality of goods and services, and to draw up contracts (Santagata, 2002) which generate market transactions to the mutual benefits of both partners and underpin traded interdependencies. Furthermore, technology is a strong motor of change for these transactions at the local and international scales (Storper, 2000). Alliances offer cooperative frameworks for both traded and untraded interdependencies. Strategic alliances are institutionalised arrangements that firms develop among themselves to access complementary resources and skills that reside in other companies. They provide "...the means for a firm to share any of its information, production or distribution resources with one or more other firms on a cost-effective basis, as long as it does not lead to collusion in the market behaviour of the allied firms" (Michael, 2007:24). Previous studies (Hjalager, 2000; Jackson and Murphy, 2002; Mackun, 1998) have shown how tourism providers collaborate in "...pooling financial resources, share questions and concerns, lobby local and regional government agencies, and coordinate marketing and advertising efforts" (Mackun, 1998: 269), engaging in both traded and untraded interdependencies.

In tourism strategic alliances can emerge between individual competitors or between groups of these and may be based on various objectives including improving market access, market development, reducing 'unhealthy' competition, and sharing costs of research and development, as well as sharing the costs of production, distribution and marketing. Groups of tourist attractions organise joint activities and events where the time, risk and finance involved are often beyond the scope of individual attractions Fyall et al's (2001). These are a form of traded interdependencies as are 'retail collectives' and 'buying groups', whereby attractions purchase together media, print companies and form collective leaflet distribution networks. In their study, Fyall *et al.* (2001) found that groups of attractions enhance their bargaining power with local, regional and national tourist boards, tour operators and group bookings as well as undertaking research and training staff together. The

most common form of collaboration was marketing communications e.g. collective advertising, joint promotion, and the dissemination of shared promotional leaflets. This study questions whether attractions at low levels of agglomeration in terms of density are likely to establish fewer interdependencies with other attractions compared to attractions at higher levels of agglomeration. This aspect will be further discussed in relation to each of the abovementioned interdependencies.

Trust in sustained collaboration

Trust can be seen as the glue underpinning social relationships, networking, knowledge transfer and business collaboration between organisations and people (Hjalager, 2000; Hudson, 2005; Jackson and Murphy, 2002). It is enhanced by spatial proximity, as that increases face-to-face contacts, both social and business-related, between the key personnel in firms, which are generally assessed by the enterprises as less risky than trade with outsiders (Hjalager, 2000; Newlands, 2003). The strength of trust-based relationships is described as the level of 'embeddedness' of the social network (Gordon and McCann, 2000:520). It is particularly germane to tourism given that, compared to other industries, networking, social embeddedness, interest group representation and institutionalisation are generally weak in the tourist industry (Williams and Shaw, 1998). Gordon and McCann (2000) identify the following three key trust-based behavioural features, which enhance cooperation between attractions:

1. Firms within the social network are willing to undertake risky co-operative and joint-ventures without fear of opportunism.
2. Firms are willing to re-organise their relationships without fear of reprisals.
3. Firms are willing to act as a group in support of common mutually beneficial goals.

Trust in sustained collaboration between tourist attractions at higher levels of agglomeration can be beneficial in facilitating a chain of tourism production, joint-ventures, innovation spillovers, innovative products, joint political input to local authorities and activities to improve regional destination competitive advantages (Hjalager, 2000; Newlands, 2003; Williams 2005; 2006), while it can be disadvantageous in terms of not encouraging openness to new players and ideas, and encouraging lock-in effects to existing forms of collaborative practices (Boschma, 2005).

Cooperative Competition (Co-opetition)

In tourism destinations 'co-petition' is argued to be increasingly important for the competitiveness and survival of firms sharing the same destiny, ('co-destiny') (Buhalis, 2006). Cooperative competitors collaborate in some activities such as lobbying, marketing, participation in trade fairs, infrastructure, specialised training, and obtaining market intelligence, while competing in others such as company-specific marketing, production, sales, new product and process development (Enright cited by Huybers and Bennett, 2005). Cooperation ensures the continuity of 'healthy' competition, characterised by constant market discipline and innovation (Newlands 2003). This study contends that these conditions are more likely to develop in spatial clusters at high levels of agglomeration compared with firms in dispersed industrial spaces (Keeble and Nachum, referred in Newlands, 2003). Consistent with Swarbrooke (2001), tourist attractions are characterised by cooperative relationships at the regional (cluster) scale, but competitive intra-cluster relationships amongst attractions at the local cluster scale. Co-opetition between co-located attractions is particularly germane for small tourist attractions, since their chances to compete with major players increase by being part of a consortium. The balance between cooperation and competition within an industrial cluster is a matter of strategic trade-off between firms (Wang and Krakover, 2008). These externalities, and their advantages and disadvantages at low and high levels of agglomeration, are explored below.

Product similarity and complementarities

Product similarity and complementarities constitute a major dimension of the marketing mix and collaboration strategies employed by attractions (Fyall *et al.* 200; Nordin, 2003). While each of the attractions in Fyall et al's (2001) study retained their own identity and branding, they recognized their mutual complementarities and cooperated to create a collective competitive advantage as a destination. Product complementarity amongst attractions is linked to Sternberg's (1997) two phases describing the composition of the tourist attraction experience product; staging, which consists of setting up, arranging, and contextualising the attraction, and thematizing, which situates attractions through developing particular themes and endows them with dramatic content. The selection of compatible, complementary, or contrasting themes

to neighbouring attractions builds a narrative structure that will lead visitors through thematically inter-related sub-attractions and create business opportunities and extend length of stay (Sternberg, 1997) at the destination region. This research focuses on the narratives, thematic linkages and interrelations between attractions and the influence of spatial proximity and density amongst attractions, which engender different types of product complementarities between attractions.

Summary

This paper argues that the advantages and disadvantages of inter-firm collaboration amongst tourism establishments are most acute amongst attractions in destinations characterised by higher levels of agglomeration while attractions at lower levels of agglomeration are likely to have fewer interdependencies with other attractions because their costs of joint purchases and activities are likely to be too high. Low levels of agglomeration and spatial proximity between individual attractions enhance their collective compatibility (i.e. the degree to which they interchange customers) at the regional scale, and compatibility between individual attractions at the local scale (Weidenfeld *et al.* 2010). Therefore, joint marketing activities are likely to be less efficient as the levels of agglomeration decrease. Furthermore, since thematic complementarity is related to the level of compatibility between intra-cluster individual attractions, this might lead to attractions forming fewer complementary products resulting in less integration with the overall regional tourism experience product as well as higher production costs as a result of not sharing costs and services with other businesses and attractions. Given that positive externalities such as interdependencies can be achieved through cooperation, it is argued that there is likely to be a positive relationship between spatial proximity and interdependencies between tourist attractions.

The attraction sector was selected for this study because it is relatively under-researched and yet is a key component of the tourism experience product (Middleton and Clarke, 2001; Swarbrooke, 2001; Watson and McCracken, 2002; Fyall, Leask and Garrod, 2002). Cornwall was selected as the regional focus for the study as a popular tourism region with several concentrations of visitor attractions, which were relatively proximate and accessible to the researchers. Within Cornwall two areas with low and high levels of agglomeration of tourist attractions respectively, whose ‘business

environments' corresponded to tourism clusters, were identified for study. Similarities in aspects including types of tourists, type of tourism products, climate, seasonality, transport, accessibility and environmental settings were considered desirable in order to facilitate comparison of co-operation and complementarities in the two tourism cluster regions. However, it is of course only possible to control for some features of the two areas in this way and as expected they have some significant differences other than in the level of agglomeration.

Newquay and the Lizard, in the South West of England (Figure 1), were selected as representing clusters with different levels of spatial proximity amongst constituent firms, while also having shared institutional features (such as the public policy framework). Newquay has the higher level of agglomeration of tourist attractions. The minimum average travel distance and time by road between each pair of attractions is shorter in Newquay (20 minutes, 7.1 miles) than on the Lizard (37 minutes, 9.33 miles) (based on Automobile Association data 2008). The Newquay area contains more tourism attractions at a higher density, and is better served by private and public transport than the Lizard Peninsula. The differences in the level of agglomeration in the two clusters were initially determined through the necessarily simplified computation of numbers of attractions per sq km, while recognizing the importance of transport systems and accessibility in shaping spatial proximity. Thematic similarity amongst attractions was initially assessed from their websites and, in some cases, contacting their offices to gather more details about their tourism product. Following a similar approach to that used in previous studies (Novelli *et al.* 2006; Jackson 2006; Jackson and Murphy 2006; Dončić-Hajdaš, Horvat and Šmid 2007), evidence from primary and secondary data, including tourism association websites, tourism leaflets, advertisements, guidebooks and 9 interviews with key informants provided the information for selecting the clusters, and for delineating their boundaries.

Figure 1

A tourism cluster is defined in this study as an array of linked industries and other entities (such as accommodation facilities, attractions and retail outlets) in competition, which provide complementary products and services as a holistic tourism experience, (Wang and Fesenmaier, 2007). The study of clusters in general and tourism clusters in particular tend to address the interrelations of various aspects and key players, such as public agencies, regulations, incentives, various type of businesses and service providers. Given the complexity of clusters as a geographic phenomenon it was decided to focus on one tourism sector, visitor attractions.

Newquay brands itself as a capital of watersports and surfing and its main attractors include beaches, and rural and maritime landscapes (Restormel Borough Council, 2005). While most of the Lizard's appeal lies in leisure and wildlife attractions, tailored for families and water-based recreation, its main attraction is a relatively undeveloped coast, along with a mix of attractions (heritage and garden attractions and a theme/fun park). In this study, a business was considered to be a tourist attraction if it was a permanently established facility, that charged admission for the purpose of sightseeing or allowed access for entertainment, interest, or education, rather than being *primarily* a retail outlet or a venue for theatrical, film or sporting performances; it had to be open to the public, and attract mostly tourists rather than local residents. Public, private and voluntary sector attractions were included as long as they charged entrance fees and were Small or Medium Size Enterprises (SMEs), understood as having between 10 to 499 employees. All attractions in Newquay and the Lizard matched this definition of SMEs and were included in the study. The only exclusions being made on the grounds of the precise nature of the business (e.g. a tourist shop presenting itself as an attraction). All attraction managers in the Lizard cluster (10) agreed to be interviewed and therefore constitute the entire 'population' of this area. In the Newquay cluster, three managers of attractions did not agree to be interviewed, resulting in a sample of 13 out of 16 attractions (81.25% of the entire 'population'). Table 1 presents the product type of the selected attractions in each cluster, and the differences in the tourism and density of the latter.

Table 1

In line with Waitt (2003), a form of ‘framework analysis’ was performed on the interviews with the nine key informants (tourism officers, councillors and policy makers) and the 23 attraction managers. This included the procedures of familiarization, classification, and indexation that allowed the identification of different themes and their coding, using Non-numerical Unstructured Data Indexing Searching and Theory-building. All 32 interviews were undertaken face to face between February and October 2006. Attractions were classified thematically as product similar or product different in terms of other attractions with which they cooperated. For example, a pair of gardens was classified as product similar, and a pair of attractions offering products such as a garden and wildlife was considered different. For the purpose of assessing the level of cooperation between attractions within tourism clusters, and in view of the different forms of cooperation between attractions, high and low levels of cooperation are identified to describe the extent of cooperation between pairs of individual attractions. This general assessment coincided in most cases with interviewees’ identifying their most important co-operators, namely those with whom they are engaged in a high degree of cooperation, and other co-operators with whom they cooperate but to a lesser extent. Attraction managers and key informants were also asked their opinions of the impact of spatial proximity and product similarity on cooperation with other attractions. Each attraction was classified as a specific type (garden, theme park, etc.) as well as in terms of its thematic-product similarity (i.e. thematic similar, dissimilar) and location (i.e. intra or extra cluster) in relation to other individual attractions. Levels of cooperation between intra-cluster attractions, along with their product theme and spatial relationships with other attractions in the two clusters were mapped (Figures 3-4). If two attractions considered themselves 'main co-operators', they were marked by thick arrows in the diagram, and by thin arrows if ‘other co-operators’. The thickness of the arrows indicates the level of cooperation according to the research findings.

Findings: External economies of scale

The aspects of external economies of scale are summarised in Table 2. Two of the three aspects of external economies of scale in tourism are examined here: trust in sustained collaboration and cooperative competition. Traded and untraded interdependencies will be explored in the following section in the context of the relationships between collaboration between tourist attractions and spatial proximity and product similarity. Trust is seen to be a crucial factor especially in terms of the higher levels of cooperation, e.g. joint ticketing. However, the study found very little evidence of the three above mentioned behavioural features together in cases of collaboration (Gordon and McCann, 2000). The researchers attempted to identify Gordon and McCann's (2000) three trust-based behavioural features as a drive for cooperation and relationships between attractions on the basis of the interviewees' opinions regarding collaborative projects and general attitudes towards their colleagues. These features included cases of cooperation where:

- a. price signals or monitoring were not sufficient to ensure implementation of activity or a project;
- b. when attractions were undertaking risky co-operative and joint-ventures without fear of opportunism; and
- c. when there was willingness to re-organise their relationships without fear of reprisals, and in cases of willingness to act as a group in support of common mutually beneficial goals.

A senior South-West tourism officer (key informant) argues that

"...there are very few [attractions] that do the joint ticketing arrangements, where two attractions have one ticket... they [attraction managers] feel they could probably lose business, they might lose the customers and I think that the trust just isn't there. I think when you do a joint promotion you can see that you're working together. When somebody is selling a product, that's quite a private thing and I think the level of trust is just not strong enough. To trust somebody else to actually do the physical sale and pass on the money rather than sell their own product".

Only one case of cooperation between attractions provides evidence of the three features together; two gardens on the Lizard financed a joint development by taking a risk in terms of meeting objectives such as increasing demand, and returns from the investment. This project was in conjunction with cross referral of visitors which will

be explored further later in this paper. The evidence shows that these two firms undertook risky joint-ventures thus overcoming fear of opportunism.

There is also evidence amongst some attractions of a willingness to act as a group in support of common, mutually beneficial goals by building strong personal relationships. Trust and personal relationships among attraction members in both clusters were noted, by a few interviewees, who alluded to working closely with ‘friends’ in other attractions. For example, a garden manager in the Lizard claimed that “...one [attraction] I would be more likely to talk to is the one I have personal relationships with... It doesn’t matter what kind of attractions they are, personal relationships is most important in Cornwall”. No systematic evidence was found that perceptions of trust (described in Table 2) differed between firms in areas of higher versus lower levels of agglomeration. Some attractions in highly agglomerated Newquay showed more distrust than those on the Lizard at the regional cluster scale. This suggests an assumed disadvantage of cooperative competition among attractions at high- agglomeration levels and an assumed advantage of attractions at low levels of agglomeration.

These findings show that in both clusters the relationships between neighbouring attractions can be described as cooperative competition. The more agglomerated attractions in Newquay had more competitors, who were also co-operators than the Lizard. Again, it is difficult to identify whether this emanates from levels of agglomeration or from thematic similarity and it is likely to be a combination of both. Some of the assumed advantages in cooperative competition among attractions at high levels of agglomeration were identified by interviewees when asked whether they had other competitors in their vicinity (Table 2). Most were in favour of having neighbouring competitive attractions in their local area, acknowledging the challenge of competing but also working jointly to enhance regional competitive advantage. A key informant alluded to the advantage of competition: “*I think the threat of somebody next door to you stealing your business is more of a driver. They innovate to stay competitive with the person next door...*”. No evidence of cooperative competition was found in attractions at a low-agglomeration level. Many of the identified mechanisms of collaboration are traded and untraded interdependencies. These and the interrelationships between product similarity and spatial proximity will

be explored, but first, the impacts of spatial proximity and product similarity on cooperation are separately examined below.

Relationship between spatial proximity/agglomeration and cooperation

The majority of attraction managers in Newquay indicated that spatial proximity and product similarity are inextricably linked in their effect on cooperation between attractions. Less than half of the key informants thought that spatial proximity is more important than product similarity in attractions' decisions. These findings and other comments made by interviewees suggest that spatial proximity alone cannot explain cooperation amongst attractions, implying a need to examine other features such as product themes, visit duration, and market segment type/size. The difference between the local and the regional scale, seen in context of the debate about spatial scale in analyses of spatial clustering (Malmberg and Maskell, 2002), needs to be clarified. In this analysis, local scale refers to cooperation between individual neighbouring intra-cluster attractions and regional scale refers to collaboration amongst several attractions at a larger geographic scale, characterised by forming groups or associations of attractions aimed at achieving external economies of scale at the regional scale.

Cooperation at the regional cluster scale

During data collection, it was acknowledged that finding supportive evidence of the direct impact of low and high levels of agglomeration of tourist attractions on regional cooperation was extremely difficult, because rather than being a direct factor, level of agglomeration was found to be one intervening factor among many, whose impacts are often interrelated or intertwined, such as agglomeration of accommodation facilities, product and market similarities, and transport accessibility. This is in addition to the fact that this study examined only two tourism clusters in one region in the United Kingdom, and its results are necessarily contingent.

In both regions there was little evidence of traded interdependencies apart from marketing. Membership in marketing alliances and tourism associations, as well as the nature of their marketing activities, indicates the interrelationships between agglomeration, similarities and externalities.

There are two main tourism associations incorporating a variety of tourism businesses in Newquay of which attractions are members:

- a. The Newquay attractions trail (NAT); and the
- b. Newquay Chamber of Commerce and Tourism (NCCT)

There are also two on the Lizard:

- a. The Lizard Peninsula Association (LPTA): and `
- b. The Passport Scheme (a marketing alliance);

There is one tourist attraction association at the regional or county scale, Cornwall Association of Tourist attractions (CATA).

Given that traded and untraded interdependencies between economic actors at the regional scale are inextricably linked (Raco, 1999; Storper, 2000; Newlands, 2003; Shaw and Williams 2004), it is not surprising that regional alliances in Cornwall including those in Newquay and the Lizard are characterised by both forms. Traded interdependencies were found mainly in marketing including advertising, signage, distributing vouchers and, in some cases, attractions also had joint-suppliers, made joint purchases and negotiated reduced prices. Striking deals with ice cream suppliers was an example, mentioned by several interviewees as another example of cooperation derived from traded interdependencies amongst attractions: “...*suppliers of ice cream, food, fruits, cleaning products, quite often the Company will approach a group of attractions and say we will provide you with products if all of you buy from us*” (Key informant). This evidence also supports Cohen *et al.* (2005) and Shaw and Williams (2004), who argue that direct strategic interdependencies leading to collaboration and shared costs of services are further engendered by spatial clustering.

The Newquay Attractions Trail (NAT), the members of which are tourist attractions, operates mainly as a combined marketing and interest group. The manager of a small heritage attraction described NAT as “...marketing consortiums...where we participate in a privately-produced guide to Newquay, which is the thing that puts us in the information centre...” Further, according to a wildlife attraction manager in Newquay, their political strength and input to local authorities stems from being key employers in the area. NAT is also a mechanism for traded interdependencies between attractions, as noted by a farm attraction manager in Newquay:

“We can control the market in the purchasing sides of things, whether it be the print purchasing and the adverts that you’re printing, we’re all doing these things so instead of going in as one half, if you go in as ten you’re gonna get your discount and then you’re saving yourself money and that’s what partnerships are all about”.

The Newquay association of Tourism and Commerce (NATC) is an example of traded interdependencies as it has “...*what they call a buying group, so if you are a member of it, you get a card and you can buy produce at a cheaper rate*” (a key informant). The Lizard Peninsula Tourism Association (LPTA), the main alliance representing local tourism businesses, is run on a voluntary basis by elected members with an elected executive board and a committee, and operates as a company limited by guarantee (LPTA website). It is mainly engaged in advertising, facilitates a regional social network group, and as a political interest group, it has “... *a very strong voice in the County and it carries a lot of weight at various levels*” (a key informant). The joint marketing activity also generated the exchange of information between attractions, such as the number of visitors, the common issuing of vouchers, and staff professional training. Other activities mentioned by the same key informant include exchanging information at the County level about, for example, “...*crime, stolen credit cards, people who are generally undesirable...*”. The other marketing alliance of 5 attractions is the Passport Scheme, that operates in a way that “*if someone arrives with our leaflet, it’s stamped, and it puts people onto the trail and then they go onto the next place and they get a discount on that*” (a marketing manager of an amusement park on the Lizard).

The largest association of tourist attractions is the Cornwall Association of Tourist Attractions (CATA), which is county-based and its 40 members share similarity in product quality, in that each member takes part in a quality inspection scheme to maintain a high standard of service (CATA website). CATA focuses a lot of its activity on marketing such as “... *joint guides, for example this CATA guide covers the whole of the UK*” (A marketing manager of an amusement park in Newquay). Each attraction member is obliged to market all the others in a way that “...*we are restricted to not do marketing with non-members of CATA. It is part of the rule of CATA*” (a Key Informant and an attraction manager), and “...*we’re not allowed to promote other non-CATA members*” (a heritage attraction manager on the Lizard). As the marketing manager of an amusement attraction in the Lizard argued, CATA is not only an “...*effectively a marketing cartel, it is also a mouthpiece for Cornwall attractions*” providing the collaborative framework for political input to local and regional governments, although there was less evidence of political input related-activities in CATA compared to that in local alliances. The fact that

cooperation in general, and in knowledge transfer in particular, was within CATA rather than local frameworks such as NAT and the LPTA, and with similar-quality attractions rather than local intra-cluster actors, indicates a preference for a wider regional county cooperative framework.

Differences in regional cooperation between the clusters

A comparison of the collaborative marketing activities of the alliances reveals some important differences between the clusters. The Passport Scheme on the Lizard facilitated a more aggressive marketing approach to the use of vouchers. For example, each visitor to a Passport Scheme member attraction was given, or offered an opportunity to buy, a voucher for another member attraction, whereas the NAT members distribute vouchers by advertising together regardless of ticket purchasing (less interdependency). In addition, although both alliances include the most well established attractions in their areas, two of the major central wildlife attractions in Newquay (in terms of visitor numbers and employees) are not NAT members. This indicates that the Lizard attractions have formed a stronger marketing alliance than NAT members. This is also consistent with indications of lack of trust among Newquay attractions, as noted by one of the NAT members, an amusement park manager:

"... some people cooperate and some people don't, and we are those who would go there and be honest but not every attraction around Cornwall is... to a certain extent ..., people don't share information, ...but a lot of people will either make their information up...you go to the NAT and you sit around that great big table and you say how well you have done, and you know deep down and, well, that some people will sit there and attempt to set up, and a lot of people aren't honest ...".

Similarly, a senior officer of a regional association alluded to the differences between the two clusters:

"... Cooperation... my feeling is, or my perception is that there is more collaboration on the Lizard than there is in Newquay...It just appears that the Lizard is a smaller, growing-ish area that has less out and out looking for profit businesses and more lifestyle businesses who value cooperation over whoever will take the most in profit...in Newquay, they've gone through some sticky periods where business has turned down which makes people more cut-throat in business and less likely to

collaborate. I think it's a lot easier for everybody to collaborate in a growing market..."

Interestingly, this evidence implies more cooperative relationships at the regional (cluster) scale on the Lizard than in Newquay. Differences in the interviewees' perspective and perception of intra- versus extra-cluster competition between attractions indicate that unlike Newquay's attraction managers, those on the Lizard did not see other intra-cluster attractions as competitors, and perceived competition as being extra-cluster and/or as interregional. Collective cooperation between attractions as a regional group varies between the two clusters, Newquay and the Lizard in terms of types of cooperative relationships and the level of cooperation. Cooperation included exchanging information, knowledge transfer, advising about facilities, helping with technical problems, co-ordination of special evening events to prevent direct competition for visitors, applying for grants, and political input to local authority policy discussions. The Lizard demonstrates higher levels of regional cooperation, more untraded interdependencies and more marketing relationships amongst attractions than Newquay. In line with Wang and Krakover (2008), indications of managerial attitudes towards competition, higher preference for membership in regional marketing alliance and more trust between attraction managers on the Lizard imply more regional cooperation in clusters with lower levels of agglomeration. Furthermore, unlike Newquay, on the Lizard there is no evidence of traded interdependencies in areas other than marketing, which suggests the positive influence of greater agglomeration in Newquay in this respect.

Cooperation at the local scale and spatial proximity between attractions

Almost half of the interviewees on the Lizard claimed that spatial proximity influenced cooperation, while the remaining interviewees' views were a mixture of positive, negative, no influence at all, or inability to provide a clear answer. In Newquay, about a third saw positive relationships between proximity and cooperation. These relationships were often linked to location, spatial proximity and driving time between attractions by interviewees. For example, a wildlife attraction manager in Newquay explained that he did not work with a certain attraction: "... purely because they are an hour and half's drive away". Similarly, on the Lizard, the

closest 3 attractions cooperate more closely with each other than with other attractions. Proximity amongst attractions increases the likelihood of sharing the same visitors and therefore also cooperation in marketing.

Figures 3 and 4 illustrate the cooperation amongst intra-cluster attractions, excluding attractions from outside the cluster. In these figures, the attractions are represented in relative proximity to each other in a manner which is broadly similar but not identical to their real location, in order to maintain the anonymity of the interviewees. Strong cooperative relationships (marked by thicker arrows, Figures 3-4) describe cooperation with firms' closest (or 'biggest) co-operators, who may be 'doing business' together in activities such as joint financial investments in development and tourism production, and/or cross-selling, including vouchers and joint ticketing regardless of, or in addition to, activities managed by existing marketing associations. For example, two attractions in one of the clusters which are not members of a marketing alliance, sell each others' vouchers and/or advertise or promote each other. Some of the interviewees identified their most important co-operators as those with whom they cooperate in one or more of the above-mentioned areas. However, some did not regard other attractions as important co-operators despite being engaged in such activities. Neighbouring intra-cluster attractions, described by managers as those with whom 'I cooperate in general', were classified as attractions with low levels of cooperation. These attractions were marked by 'thin' arrows between attractions (Figures 3 and 4), and defined in this study as 'ordinary' or 'other co-operators'.

In Newquay (Figure 3), there are 3 pairs of wildlife attractions in the geographic core of the cluster which are cooperating very closely, while the rest are attractions characterised by a low level of cooperation with their close neighbours. A comparison between the two figures indicates that Newquay attractions are more engaged in high levels of local cooperation with intra-cluster individual attractions than are attractions on the Lizard. There are fewer arrows between attractions on the Lizard (Figure 4), and more, both in total and thick ones in Newquay (Figure 3). These findings are in line with almost all key informants claiming that spatial proximity generally increases cooperation between attractions especially in marketing. Spatial proximity and agglomeration can help explain the different levels of

collaboration between attractions. However, the study also found that product thematic similarity is a major factor in these relationships, and this is explored below.

Figure 3

Figure 4

Impact of product similarity on cooperation

The majority of attraction managers in Newquay indicated that spatial proximity and product similarity are inextricably linked in their effects in cooperation between attractions. Less than half of the key informants thought that spatial proximity was more important than product similarity in affecting decisions to cooperate with other attractions. These findings and other comments made by interviewees suggest that spatial proximity alone does not explain cooperation between attractions, that is without reference to other features such as product themes, visit duration or market segment type/size. Therefore, the differences between the clusters in terms of the impact of higher and lower levels of thematic similarity on cooperation amongst attractions were examined. In Newquay, only a third of interviewees thought that product similarity was negatively related to cooperation. The others in Newquay and those on the Lizard differed enormously in their opinions, which ranged between positive relations between similarity and cooperation, to no effect of product similarity on cooperation and general recognition of the importance of similarity and factors such as product quality, and market size. Others thought it was unsurprising that managers in Newquay were more concerned about product similarity than those in the Lizard, given there is greater product similarity between attractions in Newquay. For example, *"... If they were very similar, ..., we probably wouldn't put a joint package together. We might still work with them to market*

regionally or something but locally we wouldn't do a one-day package...in one day" (Amusement attraction manager, Newquay). Likewise, an amusement attraction manager in Newquay explained why his attraction prefers to cooperate with dissimilar intra-cluster attractions:

" ... I probably find it hard to cooperate with an attraction that is trying to be the same as us. So the fact that [a farm attraction in Newquay] is a bit different makes it easier for me to cooperate because I do not feel that we are competing directly against each other".

In terms of differences between Newquay and the Lizard, half of the main co-operators in Newquay are considered by the researchers to be dissimilar whereas the other half are similar-complementary. That is, two or more similar attractions which offer a similar but not identical product and therefore complement rather than compete for the same market, e.g. two wildlife attractions exhibiting different types of animals would be assumed to be compatible (Weidenfeld *et al.* 2010). By contrast, on the Lizard, the main co-operators are considered different and similar. Most of the remaining co-operators (at low levels of cooperation) in Newquay are dissimilar and/or similar-complementary or similar distant (extra-cluster). On the Lizard, most co-operators are similar and dissimilar (intra or extra-cluster) with less complementary relationships with their co-operators, compared to those in Newquay (Figures 3-4). These findings should be viewed cautiously, given that this generalisation regarding product-similarity between attractions is very subjective and determined by each attraction manager and the researchers. The strongest evidence of cooperative relationships in marketing between two individual distant similar attractions is between a museum on the Lizard and a distant (extra-cluster) museum elsewhere in Cornwall, which cooperate in production and marketing:

" We run Victorian classroom workshops with 'the other' museum, so we have working relationships"...The 'other' museum is talking about doing something together... We are developing a website for Cornwall museums with the other museum" (a heritage attraction manager on the Lizard).

It is possible that the isolation of the Lizard museum from other similar attractions on the Lizard encourages it to cooperate with a distant similar attraction.

A few thematic clusters of attractions, such as wildlife, heritage, fun/amusement parks and gardens, collaborate mainly in marketing a similar tourism experience product (Nordin, 2003), regardless of their geographic proximity. One group used the same specialised services of a professional vet as other attractions, which is an example of external economies of scale. Very few attractions are members of national or international similar thematic groups “...such as IAZA which is the British and Irish Association for Zoos and EAZA (European Association of Zoos and Aquaria). So there are forums within that which look at marketing” (wildlife attraction manager in Newquay). Some other attractions, as noted by one manager “... are involved with various initiatives within tourism with the European Organisation, with the European network money. ...That includes joint purchasing between different countries, you know, souvenirs and minor things really”. Another Newquay amusement park manager noted that “...we are members of the British Association of Leisure Parks, Piers and Attractions and we participate in benchmarking, best practice sharing, lobbying...”. A heritage attraction manager on the Lizard noted that “we’re involved with the Cornish Royal Mining Heritage Partnership and we’ll be involved with the Cornish Royal Heritage Marketing Group, which is aimed at marketing all the sites within the proposed World Heritage Site”. Cooperation is focused on lobbying, political representation, marketing and knowledge transfer. Larger attractions (in terms of visitor numbers and employees) were most likely to be members of such associations, which constitute thematic clusters where spatial proximity is less important. In the following section, spatial proximity between attractions will be examined in relation to their product similarity.

Impact of spatial proximity and product similarity

This section explores the relationships between spatial proximity and product similarity. Apart from the impact on cooperation of each factor separately, all the combinations of these factors were examined, including cooperation between: a) Product similar/different intra-cluster attractions; and b) Product similar/ different extra-cluster attractions. In general there were many attraction managers, who agreed that “...if you have a very distinct quality attraction in close proximity.... I think there’s more opportunity to cooperate as long as it is very distinct from what you’re doing and is seen as an addition to coming to you rather than straight

competition....Moreover, if two attractions are dissimilar they are likely to cooperate in spite of spatial proximity ...” .

The interrelationships between these factors are further exemplified by a wildlife attraction manager on the Lizard, who distinguished between being simultaneously a member of both a thematic and a spatial cluster:

" ... one group is the Wild in Cornwall Group, which is the other animal-based attractions, and the other part of the group is the other attractions within the Lizard Passport Scheme. So there are two. We have the wildlife one and then we've got the geographical neighbours".

Apart from marketing, other areas of cooperation are affected differently by product similarity. Whereas for marketing, spatial proximity is a primary consideration, for other activities “...if you're going to collaborate with someone you need to make sure they're not going to interfere with your operation or your commercial viability” (a marketing manager of an amusement park on the Lizard). Similar intra-cluster attractions are less likely to cooperate in areas other than marketing “...because if they are in direct competition and are perceived to be a viable alternative for other guests then one is less likely to cooperate on anything other than on customer facing...” (a manager of an amusement park in Newquay).

Many managers distinguished between the importance of spatial proximity in joint marketing and product similarity for other professional areas of cooperation such as knowledge transfer and problem solving. The difficulty in questioning the impact of product similarity and its dependency on spatial proximity and other factors was implied by a wildlife attraction manager on the Lizard, when asked about how product similarity affects cooperation;

"That's a tricky question because we're quite lucky. None of the similar attractions are in our footprint. All of the other wildlife ones are outside of our normal catchment area. If you think about where the locals live... Would I still cooperate with them if they were in my footprint...I probably would, but because as I say it's two distinct categories [product similar attractions and neighbouring attractions groups], and both work for me. So the geographical one, obviously they're close anyway, so that's absolutely fine, and if they weren't close to me, then they wouldn't fit the geographical requirements of the Lizard Passport... And I also think that because there are only

four, within CATA, other wildlife attractions on Cornwall, it's very important we work together to make a stronger offering for the punters".

Thus the relationships between product similarity and cooperation between attractions in the research area depends on spatial proximity or distance between them. Spatial and thematic clustering encourages different types of collaboration. Thematic-product similarity is negatively related to the level of cooperation in marketing between intra-cluster attractions. However, in general, thematic-product similarity is positively related to the level of cooperation in areas other than marketing, regardless of spatial proximity.

Cooperation is mainly in the areas of exchanging information and knowledge transfer: *"We discuss pretty much mostly things...doing rides and using devices"*. Furthermore they coordinate their activities to avoid direct competition; *"... we are actually looking in the future to work closely to see if we can do some evening, entertainment those sorts of things. So they can open Wednesday and Thursday, and we can do the Tuesdays and Fridays, so we could offer people around Cornwall different things in different evenings during the week. (amusement park manager)*. When this interviewee was asked to confirm whether the relative locations were indeed the main reason for working together, the answer was:

"... people staying in Newquay decide on which side to go, Padstow or you go the Truro way, consequently that works for us, depends on which side you decide to go...if Amusement park 4 was in Newquay, (which gladly isn't), we would probably be doing an awful of a lot less straight, so obviously if they were that close, you would be fighting about with them, rather than actually joining forces trying to bring more people to the County. But then being where they are, obviously we can work together with them and we can bring people to Newquay, which consequently, like I say if you can bring that 28% and 32%, and you can generate an extra 2% either way, that's good for us".

Interestingly, this interviewee highlighted the relationship between spatial proximity and product similarity and demonstrated that spatial proximity and high product similarity between attractions can negatively affect cooperation and vice versa. This example also demonstrates how spatial organisation of tourism clusters, tourism movements, and road systems have implications for destination spatial planning.

Other similarities were found in both clusters that affect cooperation between attractions, including market segment, product quality, and thematic product similarity. As one key informant stated, regardless of spatial proximity "*... there are occasional similarities that cause cooperation*" (key Informant), which are explored in the following sections. Collaboration aimed at achieving externalities at the local and regional scales depends on other similarities amongst attractions, such as product theme, product quality and market segment.

Market segment similarity

Similarity in terms of visitor type and market size constitutes this category. A few product dissimilar attractions in Cornwall cooperated with other attractions on the basis of a similar market segment. Thematic similarity usually indicated a similar visitor profile type but not necessarily vice versa, and some thematic dissimilar attractions, such as gardens and heritage attractions, shared the same types of visitors: "*...if obviously there is, for instance, the gardens, we would target the older people or retired, but if we do something specifically for family groups, so we market it as predominantly mass, a lot more of us look at niches, such as family groups, people interested in gardens and heritage, people who are interested in good walks, that is the target*" (an attraction manager on the Lizard).

The manager cited above identified that garden visitors' profiles are older people or retired and therefore gardens are likely to cooperate in marketing with heritage attractions. The National Trust, for instance, is an association with both heritage and garden attractions. Similarly, a wildlife attraction manager in Newquay acknowledged that "*... people that like animals and gardens would come here. So we wouldn't necessarily feel competition from the companies we co-operate with as our visitor profile are just as likely to visit there as they are to visit here*". "*I think we can withstand competition from other attractions that are dissimilar but that are looking for the same visitor profile, but competition from another [any similar wildlife attraction] would be a disadvantage of course*". Similarity in market type also increased cooperation in sharing knowledge and information;

"the advantage of similar [market] attractions is that when you exchange information you're talking about the same market...if we were to co-operate with a

restaurant or a pub they have a very different market – so they may do well and we may do badly or vice versa” (A wildlife attraction manager in Newquay).

A summary of the interrelationship between product similarity and visitor profile similarity and their influence on cooperation is given by a garden attraction manager.

“...it comes back to the people that visit those types of places because if you look at the spread of CATA, there’s attractions that are family funfair type things, that some of the people that we get would not even go near! Not in a month of Sundays! And there are others that are what we call tacky and that are the other end of it and then you get the gardens and heritage. Gardens and heritage will sort of sit quite comfortably together because of the visitor profiles. We get most of the seniors because of the nature of what we do and the perception of the National Trust...so by linking similar things together, you encourage a certain audience”.

This quote reflects the market segmentation in Cornwall between dissimilar-thematic attractions like CATA attractions, which share the same “family funfair type” of market, and garden and heritage attractions, which target a different market segment, such as “seniors”. Cooperation between attractions, such as amusement parks and wildlife attractions, sharing the same visitor markets was often more important than horizontal cooperation between attractions. Cooperation between attractions and other businesses on the basis of similar market type is common. For example, *“retail and catering, restaurants, large shopping centres and anything that has a large volume of traffic through the door. That’s what we aim to do. Because we’re a mass-market attraction, you look for the other places that mass-market audiences go...”* (a heritage attraction manager in Newquay).

Market size was also among the considerations of a business attraction, such as a garden manager from the Lizard, who was concerned by cooperating with dissimilar gardens with smaller market size;

“You’ve actually got two private gardens that only have small visitor numbers and us with bigger visitor numbers... could they deal with the volume of people? How are they going to do it? with such small visitor numbers of visitors between the two ”.

Market size is a significant driver of increased cooperation amongst attractions, regardless of thematic similarity, as well as between attractions and other businesses such as restaurants and pubs. Both thematically similar and dissimilar attractions

sharing the same markets tend to derive common interests from this, which drive them to collaborate in marketing and in exchanging information on visitors.

Product quality similarity

Product quality was found to be an important driver for attraction managers. Although they were not asked specifically about this aspect, a third of the interviewees on the Lizard and more than half in Newquay mentioned quality as an important determinant of which attractions to cooperate with. CATA, as a regional organisation of tourist attractions, places particular emphasis on product quality as a basis of cooperation, and only if the attraction can *“pass the quality standard and maintain that standard against rigorous inspection...”* (Key Informant), can it be accepted as a member. However, quality standards are not only the concern of associations, but are also a key drive in cooperation between individual attractions; *“I think one of the reasons why I collaborate is to drive up the quality of experiences because I would rather have other good quality attractions...”* (An amusement park manager in Newquay). The same manager explained that *“if you have a very distinct quality attraction in close proximity.... I think there’s more opportunity to cooperate as long as it is very distinct from what you’re doing and is seen as an addition to coming to you rather than straight competition....for example this Animal Attraction on the Lizard, it’s a very different experience...it’s a very worthwhile....I’m talking with that attraction in Cornwall and we’re going to be cross promoting each other”*.

Cooperation with similar-high quality neighbouring attractions is seen in the context of enhancing synergies between attractions and increasing their collective appeal to visitors. It is aimed at making *“... sure they [other attractions] are promoting quality, that’s the reason why we are cooperating together, cause we developed a quality standard, we are all inspected, we all do self inspection, to make sure we offer quality standard”* (A garden attraction manager). Quality was also considered an important factor by other managers in terms of cross-selling or referring/recommending tourists to visit other attractions. For example, a manager in Newquay argued that when recommending “his” tourists to visit another attraction: *“...you can’t just send someone somewhere and hope that they have a good time because it’s not a good recommendation is it? You have to know that they’re gonna have a good day out”* (amusement park manager in Newquay).

Complementarities between attractions

The study findings show that at the local scale, positive relations between spatial proximity and interdependencies require not only spatial proximity but also other complementarities. Examples of high and low levels of cooperation between attractions in both research areas show that the more numerous the complementary relationships between intra-cluster individual attractions, the higher the level of cooperation and interdependencies.

In Newquay a spatial 'chain' of intra-cluster thematic-complementary attractions was identified. Similar to findings of Fyall *et al.* (2002), and Weidenfeld *et al.* (2010), the relationships between spatial proximity and product similarity between attractions did influence cooperative-complementary relationships aimed at achieving traded and untraded interdependencies. The following examples are summarised in Table 3 and illustrated in Figure 5 on a conceptual curve depicting relationships between thematic-product similarity and cooperation between attractions, engendered by spatial proximity. The cases are classified according to their cluster (i.e. N for Newquay, L for the Lizard) and each attraction was numbered to maintain the anonymity of interviewees.

Cases (Newquay 1-Newquay 3): Aquarium 2 and Adventure Centre 1,

Case Newquay 1 indicates the 'beginning' of the above mentioned production 'chain', which indicates the collaboration of a few neighbouring attractions (mainly in marketing) for increasing compatibility between them and illustrates 3 types of complementarities between a wildlife attraction (aquarium 2) and an adventure centre in Newquay (Figure 3), including 'indoor/outdoor', 'passive/ active' tourism experience and thematic complementarity. Their spatial proximity and the complementary nature of the tourism product stimulate close cooperation. Their underlying thematic similarity is 'the sea'; whereas one offers above-water and beach (outdoor) activities, the other is an indoor attraction theming the under-water world. Whereas one allows visitors to be active players, the other makes visitors passive-observers. The fact that they are proximate and thematically similar encourages them to share space and customers:

"we do favours as well because we let them train their lifeguards on our beach but we in return, say they've got a group in that they're teaching about rock pools, we might

ring them up and arrange going to exhibit some of our rock pool creatures to show these people" (Aquarium 2's manager).

In this arrangement, one attraction that owns the access to the beach permits use by visitors to the other attraction. In return, visitors to the other attraction are exposed to marketing information about sea life displayed by the first attraction. There is an assumption that most visitors are interested in such complementary products as described by one of the Aquarium managers:

"We are in the process of setting up some exchange deal packages, whereby people visiting us can get discounts to them and vice versa and this is something quite new for us because we've known the people there for many years and they do a lot of groups of stag and hens who wanna do a kind of action thing there, so what we're now saying is that we'll also provide for those groups as a kind of calm-down for what they've been doing. We're going to provide a sort-of close shark encounter thing and also a meal as well. What'll happen is that [the adventure centre] will work to attract the people down and therefore they'll take the lion's share of the deal, but then we will charge a percentage for our part in it".

It is a reciprocal informal agreement, by which each attraction gains something. One attraction's visitors gain free access to the beach, and the other attraction secures an opportunity for free and direct marketing to a potentially important visitor market. This indicates another combination and elaboration of the tourist product, where both indoor and outdoor tourist activities are offered as complementary and/or alternative products as the manager continues to explain:

"It happens vice versa as well. When it's a wet day and we've got loads in but they haven't got anyone, they'll be coming down to us and speaking to our visitors about what goes on out there and they'll also be speaking to groups of kids about stuff".

Sunny and rainy days are advantageous and disadvantageous for indoor and outdoor attractions respectively. In this case, on a rainy day the adventure centre tries to compensate its disappointed visitors by sending them to the indoor wildlife attraction. Reciprocally, the latter recommends its visitors to visit the neighbouring adventure centre when the weather is good.

Aquarium 2 extends its cooperative relationships by cooperating with its wildlife attraction neighbour to the south (Case Newquay 2) forming thematic, visit duration and indoor-outdoor complementarities. It also has complementary product

similarity with that attraction, *"...because of course we are both animal attractions, but there is a clear definition that one is an aquatic animal attractions and therefore, what experience you'll get at one is different to the other"* (Wildlife attraction 2 manager). The other wildlife attraction is *"... the obvious one we work closely with. Um, we do joint marketing together and we promote each other's business and we also work together on educational programmes as well. We each have A-Boards etc, inside our own attractions promoting the other attraction but also when a visitor purchases a ticket to come to the aquarium, they receive a discount voucher incentivising them to visit the other attraction and vice versa ..."* (Aquarium 2's manager), since *"the people that are going to visit us are also likely to go to the Aquarium...."* (Wildlife attraction 2's manager). Also, *"If we can get any joint press stories as well, then, we'll work together on joint press stories as well"* (Aquarium 2's manager). The complementary relationships between the two also derive from the similar visit duration of each attraction, *"because we're quite similar attractions in the fact that we're both half day visits where people can come here in the morning and go there in the afternoon and vice versa, so it makes sense"*. Thus, similar visit duration reduces competition for visitors' time and encourages joint marketing. Visitors can combine both neighbouring attractions in a day trip rather than choose one of the two.

The general strategic approach of Aquarium 2 is one of cooperation with thematic similar-complementary attractions. Its manager suggested that if Attraction X [a certain wildlife attraction in Cornwall] wanted to bring a bird show down onto the promenade, then *"yes, I'd be keen on it because it'd be making the beach as a whole more attractive and not just the Aquarium"*. This finding suggests why the Aquarium is not only keen on cooperating in general, but with wildlife attractions in particular. Most of the cooperation is in the marketing domain *"...what we do is keep a very close relationship with the marketing directors of those other attractions...and other places that we think our visitors who come here might also like to visit"* (Aquarium 2 manager). Interestingly, the wildlife attraction manager mentioned a *"... land train amongst us [the Aquarium and the Wildlife Attraction 2], that goes around the area and whilst it's not ours, it parks here at night and it stays here over the winter. It's a completely separate attraction. It's very small but very popular in the summer and we do that as a favour because it is mutually beneficial. The train obviously brings people here, and we've got space to house the train over the winter."*

So that's a mutually beneficial thing". This train connects Newquay town centre, where Aquarium 2 is located, and its final stop at Wildlife attraction's 2 compound. The train is a mini-attraction business that transports visitors between the two attractions with a few stops between, thus encouraging visits to both (although there is no evidence of any joint-ticketing or formal marketing arrangements between the train operator, and the other two attractions).

The Aquarium extends its collaboration further to another wildlife attraction, situated south of Wildlife Attraction 2, in an out-of-town location (Figure 2). These two attractions in Newquay are situated 3 miles apart (case Newquay 3). Their spatial relationships affect their collaboration as one of them is closer to the core and the other is more peripheral within the cluster. The rationale behind selling each other's discounted vouchers lies in a set of 3 complementarities, explained by both the Farm attraction manager and a Key Informant. The Farm attraction manager explained that *"because it is an indoor attraction in Newquay. If you look at the visitor profiles of both attractions, it is 2.3 attractions per day per visitor to Newquay, therefore, we are both indoor-outdoor so we get the best of both worlds. We mostly get the periphery market in Newquay, because more of our visitors are from the periphery, from the outskirts. Therefore, we get our leaflets distributed in Newquay town"*. This evidence implies indoor-outdoor complementary relationships between the two wildlife-attractions, which are essentially similar and draw a similar market of families with children interested in animals. However, given that one attraction exhibits farm animals and in the other *"...animals are wet..."* (a key Informant), they are also different and construct thematic complementary, which underpins their cooperative relationship.

Case Study (Newquay 4): Aquarium 2 and Heritage Attraction 3

The Aquarium does not neglect its other adjacent attraction, and has acknowledged visit duration complementary relationships. Further, although the two attractions do not cooperate closely, they are spatially proximate and share an adjacent parking space:

"... because the visitor tends to see the destination and for us, the practical issue is that the closest public car park for us is also the closest public car park to the Aquarium. People coming in from outside of Newquay centre can make us and [the

Aquarium] a day visit and it's more logical. It's more likely they're gonna come in for two facilities rather than one" (heritage attraction 3 manager).

In the context of visit duration-complementarity and spatial proximity between attractions, a key informant, who is also running a wildlife animal attraction in Cornwall explained that competition is all about *"how much time you can keep your visitor at your attraction, isn't it? If you can keep them there for 2 hours, then if there is an attraction closer, then obviously that will work. We try to keep people here for the whole day. So it all depends on the time of visit, isn't it? If your time of visit is only 2 hours, so yeah ok, you have got an attraction that close by, you might try to push them around to those one there"*. Other evidence of cooperation between these proximal attractions: Heritage Attraction 3, a nearby water park (not interviewed) and Aquarium 2 is based on indoor/outdoor facilities:

"On wet days there is no competition because the facilities available [in Newquay] are insufficient to meet the demands of the tourists. Plus, there is a degree of cooperation between ourselves, Aquarium 2 and [another nearby fun park] and we would recommend any of those other two as an undercover facility ...".

It appears that where there are very few indoor facilities, half-a-day indoor attractions become complementary and would recommend each other as the number of potential competitors decreases. They form a temporary 'rainy day cluster' of secondary or tertiary attractions, and become the key primary attractions of the destination cluster.

Case Study (Newquay 5): Farm attraction 2 and Amusement Park 4

Another type of complementary between two neighbouring similar product attractions is market segment. Although they offer similar tourism experience products such as rides and physical interaction and contacts with animals, the two attractions sell themselves as different attractions; one markets itself by emphasising its farming elements and living animals (a wildlife attraction), while the other as an adventure park in its character. Although cooperation is relatively low, they abstain from fierce competition because of market segment complementarity:

"...[Amusement Park] is just up the road to us but because it's a different part of the market that's quite useful...because people go to Amusement Attraction 4...they pass our sign...they think also 'Farm attraction 2' is just there...we know where it is". (Farm 2 manager).

The market segment 'other part' refers to the fact that "...[the Amusement attraction] serves a market that is...from say...twelve [years old] upwards really" (Wildlife attraction 2's manager). Both similar attractions divide their market into different age segments. They are not complementary in the sense of sharing the same customers, but rather in attracting more customer segments and avoiding direct competition.

Case Study Lizard 1: Technological Attraction 1 and Technological Attraction 2

Two neighbouring dissimilar product attractions, which are 4 miles apart on the Lizard, each offer a half-a-day-visit including a guided tour. One of the attraction's managers identified visit time/visit duration complementary relationships between them as Technological attraction 1's manager describes:

"... most people who are visiting us visit 'Technological attraction 2' first, and then come for us, so they do half a day there and half a day with us. The majority of people in high season, they visit us after Technological attraction 2, and because our tour is at two o'clock".

In other words, when a guided tour ends at Technological attraction 2, another begins at the neighbouring Technological attraction 1. They both cooperate *"... in marketing, more than anything else... 'Technological attraction 2' wants to put a big sign on the side of the road here and there,... they are gonna pay for that, and are going to give us a frame that we keep here and we will give them one"*. Therefore, it is reasonable to suggest that *"we want people who go to Technological attraction 2 to have their tour and come and have their lunch here. Everything is homemade"* (Technological attraction 1's manager).

Technological attraction 1's manager admitted that *"I personally would have cooperated with Amusement Park 3 [a neighbouring attraction], as they have got quite of aviation history, I thought it would probably be more appropriate to liaise with them rather than technological attraction....because they have you know ... about the first and second world war and all the airplanes etc, so personally they would be better, but they are very much more into helping themselves"*. The interviewee criticises the missing linkage between the two cooperating Technological attractions, which is product similarity: *"A lot of people come to Amusement Park 3 for the rides, but also to see those aircrafts, and in that way it is intertwined with our airplanes enthusiasts"*. Therefore, that interviewee would prefer cooperation with a neighbouring amusement park which is similar-complementary rather than with the

dissimilar Technological Attraction 1. Nevertheless close relationships have not been established between Technological Attraction 1 and Amusement Park 3, nor between Technological Attraction 1 and Technological Attraction 2. Although the interviewees did not provide a clear answer why, there are three possible explanations. First, unlike Amusement Attraction 3 and Technological Attraction 2, Technological Attraction 1 is not a CATA member and CATA members are not allowed to engage with non-members in joint-marketing. Second, Amusement Park 3 is a day or a two-day-visit attraction, whereas Technological Attraction 1 is a half-a-day attraction, thus these attractions are not complementary in terms of visit duration and compete for visitors' time. Third, *"we [Technological attraction 1's staff] used to have regular meetings with [Amusement attraction 3's manager], but because our commercial manager changed, sometimes every year, sometimes every 6 months, sometimes every 2 years, it's quite hard and we haven't had meetings with Amusement Park 3 for a year and a half now, but we usually talked with them about advertising ideas, whether or not they can stick it on the back of their ticket and whatever..."*. The high levels of staff turnover were indicated as a barrier for collaboration. In this case, there are similar complementary relationships between attractions juxtaposed with spatial proximity. It appears that visit time/duration is a very influential factor between attractions that overshadows thematic complementary relationships but not spatial proximity.

Case study Lizard 2: Garden Attraction 1 and Garden Attraction 2

Apart from thematic-complementarity, similar types of complementarities were identified between intra-cluster attractions on the Lizard. The only complementary on the Lizard that was not identified in Newquay was 'pricing', between two neighbouring garden attractions walking distance from each other. These are considered each other's biggest competitor as well as biggest co-operator. One of them is privately owned whereas the other is a National Trust (NT) property. It appears that the managers of both gardens identify economies of scale as a result of spatial proximity in spite of the considerable product similarity between the two attractions. For them, product similarity is advantageous and is actually the motivation for close cooperation. In addition, a pricing complementary relationship adds to the rationale, given *"...that something like 79 or 80 per cent of NT garden's visitors are National Trust members. So people don't pay. They pay a subscription but*

they don't pay to go in. Now, if they're gonna make a trip to NT garden, we want them to come here where they will pay. So there isn't so much of an immediate financial dividend for NT garden as there would be for us" (Garden's 2 manager) In this case pricing differences are advantageous and the overall spending at the two neighbours constructs complementarity.

Pricing complementary relationships and spatial proximity deserve more attention. Although there was no more specific evidence of this complementarity, there was general evidence of links between neighbouring attractions in terms of admission fees. Spatial proximity raises attractions' concern about their admission fees compared to those of their neighbouring attractions. In *"a case of price and costs, A family of four may only afford to go to Newquay Zoo, but certainly cannot then afford to go to Waterworld. So from that point of view proximity can be a disadvantage"* (Key Informant). *"In general terms you learn the public perception of your attraction and on a specific basis, I suppose, what you will learn is about price sensitivity specifically, and you learn about peoples' propensity to visit various attractions"*. Pricing juxtaposed with spatial proximity is seen as a complementary element and a basis for, or a means of, cooperation. Attractions in spatial proximity are more likely to cooperate if both offer their customers affordable admissions to those visiting both in the same holiday trip. This complementary relationship is more likely to be the outcome of other complementarities responsible for drawing similar market segments and is associated with economic forces and competition patterns (see Wanhill 2006). Vouchers are used as a means to coordinate admission fares and encourage visitors to visit both attractions by offering them discounted fares.

In addition to 'pricing', other complementary relationships were identified between the gardens. In spite of their similarity they have a visit-time complementary relationship:

"...[the NT garden] is closed two days a week and on those closed days, they put up a banner on the gate saying 'come to the other Garden'. Now that's valuable to us... In return, the deal that I struck years ago was that National Trust members can come in here in the winter months for free. So, we get the benefit of the business that they can't attend to on their closed days" (The privately owned garden's marketing manager).

In this case, the interview i stimulated the interviewees to contemplate ideas with respect to using the complementary relationships between the two for their own

benefit. The first idea, raised by the Garden's manager, refers to their spatial proximity and visit time differences, which underpins their close cooperation in marketing:

"What I am thinking about doing from that perspective is that I had thought about the idea of having a sign at the exit from NT Garden, and that jointly promotes both together so then there's a hype about which one they're gonna go to first and where they're gonna have lunch. But if they've made their choice and they've come to our Garden and they're just about to leave, then you could say 'why not compare and contrast NT garden, which is just 200 yards down the road'. And they'd reciprocate in the same way. So, if someone has been to NT garden, as they're leaving, rather than get back on the road and go off to find somewhere else..."

The marketing manager confirmed that *"It's a good point. And [my attraction] would benefit more because most people leaving NT Garden turn right, whereas people leaving here also turn right and drive past it. I think we could pull that one off... well its an obvious way of helping people enjoy a day out by grouping our garden and NT garden together. It just makes very good sense"*.

In the context of the two gardens on the Lizard, another complementary element was identified associated with *"...the dissimilarity between the two garden attractions. Of course that they [NT Garden, Garden 2] don't have such a sophisticated catering operation as us. So we [privately owned garden, Garden 1] would like people to go to NT garden, but then actually they can't get a decent lunch, but we can do a better job here so it makes sense to highlight our reception facilities which are bigger and better"*. The private garden's managers perceived their catering facility as better than that of the NT Garden, and therefore saw it as a competitive advantage, which complements the NT Garden.

Cooperation between the two gardens extended far beyond marketing into joint investment in the tourism production experience, which also contributed to increasing visitor numbers;

"We share information, we talk about business. We worked in a joint venture with them We actually both put the money into buying the boat, and we've actually worked with the operator to try market the ferry... That one's been running now for about a year and a bit and we'll still carry on with it" (Garden's 2 manager).

It is plausible that these attractions included all the elements, which made them inevitably the most important co-operators with each other. They had three sets of complementarities between them; product (thematic), visit time, and pricing, along with a high level of spatial proximity.

Type of ownership was also influential in this case. One attraction was private, the other public, which made the former much more concerned with profit as opposed to the latter which was equally if not more concerned with sustaining the garden and protecting its environment. Furthermore, there is evidence that one of the garden's managers had previously worked in the neighbouring garden, which was probably important in building trust between the two. This case of very close cooperation illustrates the importance of co-location, thematic and horizontal clustering of two similar-complementary attractions, where positive external economies of scale such as trust and cooperative competition prevail, as well as positive agglomeration economies such as a pool of mobilised and specialised labour allowing knowledge transfer between the two attractions. Difference in ownerships reduced tension between the two attractions and increased trust, which led to joint investment in product-infrastructure.

Case study Lizard 3: Technological Attraction 2 and Wildlife Attraction 3

These are two very dissimilar attractions, which are located a few miles apart. In addition to cooperating in the regional Passport Scheme, Technological Attraction 2 *"...also gives 'Wildlife attraction 3' different discounts but the value of the discounts are the same [to the one given by the Passport Scheme]. So if you like I have got two bites of the cherry"* (Technological Attraction's 2 marketing manager). The rationale behind this additional attempt for collaboration remained unclear. Technological attraction 2's marketing manager was reluctant even to acknowledge this ancillary marketing effort let alone to explain why both attractions were engaged in additional forms of marketing cooperation. While business and organisational reasons may be the reason, the rationale behind could be a visit duration complementary, given that both attractions are half-day visit attractions, which could engender further cross-promotion.

Case Study 4 (Lizard 4): Potential cooperation between Technological Attraction 2 and another female oriented attraction

This example indicates potential cooperation between neighbouring attractions based on complementary relationships in terms of the tourism product and the appeal to visitor segments. This is the only case where the concept of complementarity of visitor segments between attractions was raised and suggested by the interviewer in response to the interviewee's comments about the obstacle to increasing footfall. The marketing manager of Technological attraction 2 argued that *"... what you have to ask yourself is, is it a male orientated interest, and I would say: "yes, it is", and therefore, do we appeal for the females in families and in couples. I would say it is probably limiting. And do we have enough on site to keep the kids interested and entertained?"*. Although prompted, by asking him whether nearby attractions could potentially offer anything in terms of complementing his attraction's product, the interviewee refused to refer to them as such. Nonetheless, visitor segments need to be considered within the context of complementarities between intra-cluster attractions. This interviewee refused to cooperate with other attractions on that matter and claimed that any improvement or elaboration of the products has *"... got to be related to the site itself, and ...improve and enhance what you have got on site"*. His refusal was associated with the dissimilarity to Technological Attraction 2 since what *"... we have to do is look at what we are, and come up with ideas, that still fit in to the remit"*. Nevertheless, he did point out possible closer cooperation with a similar but complementary attraction, if it were to be located closer. Therefore, for him, thematic similarity and spatial proximity were seen more important than visitor market complementary relationships.

Summary

The nine case studies (Table 3) illustrate how different types of complementary relationships are positively related to the level of collaboration and interdependencies between attractions. The most conspicuous complementary relationship is complementary-thematic product similarity. Most attractions saw intra-cluster dissimilar attractions as complementary to their own appeal and to the regional (collective) tourist appeal. Many engaged in close cooperation such as cross-selling and offering vouchers. Some managers identified these relationships explicitly, whereas others just reported close cooperation with their neighbours. In most cases, the greater the spatial proximity and the thematic product complementarity between

attractions, the higher the level of cooperation. Most of the cases illustrate high levels of cooperation, based on more than one complementarity. You will have to delete the highlighted section if you keep the deletions as they are below

In general I think it OK to take out the deleted sections, they are a little repetitious

Given the nature of the attractions in Newquay, half of the cases are characterised by thematic complementarity compared to none on the Lizard, and most use marketing, including cross-selling, as the main form of cooperation. In all cases market segment similarity underlies initial collaboration, as attractions try to keep visitors within the cluster, visiting as many attractions as possible. Figure 5 illustrates the level of cooperation between intra-cluster attractions. The horizontal axis depicts the level of product-thematic similarity, ranging from dissimilarity to high similarity between attractions. Attractions at different levels of product similarity have different levels of cooperation and interdependencies. The figure shows that different product-thematic attractions within the same cluster (case studies Newquay 4, Lizard1-4) cooperate to a lower extent than those that are similar-thematic, but not very similar (case study Lizard 2). Attractions cooperating most closely are similar-complementary in their tourism product (case studies Newquay 1-3). It is also noteworthy that neighbouring dissimilar attractions tend to cooperate in general and in marketing in particular at the regional scale. They are very likely to cooperate to some extent, unlike very similar neighbouring attractions, which have no complementary relationships between them.

Figure 5

Conclusions

This study has explored elements associated with product similarity complementarities, spatial proximity, and density of visitor attractions in relation to

cooperation amongst themselves at the local and regional scales. Collaboration between individual intra-cluster attractions and collaborative mechanisms between members of regional alliances at the Cornwall County scale were indicators of traded and untraded interdependencies in the two clusters studied and focused mainly on marketing (e.g. collective advertising, joint promotion, dissemination of shared promotional leaflets). Collaborative mechanisms, such as 'retail collectives' or 'buying groups' aimed at enhancing attractions' bargaining power with other players such as suppliers, tour operators and tourist boards (noted by Fyall *et al.* 2001) were also identified. Some attractions used the same suppliers, media, print companies and collective distribution networks and sometimes specialised services such as maintaining and operating joint Internet websites. Some attractions undertook research and trained staff together (see Mackun, 1998; Hjalager, 2000; Jackson and Murphy, 2002) and benefited from market transactions, such as joint-selling or cross-selling (e.g. joint-ticketing and vouchers), joint-advertising, financing investments, allowing institutionalised arrangements to access complementary arrangements, products and specialised services (see Fyall and Garrod, 2005, Michael, 2007). Traded and untraded interdependencies between attractions were found to be inextricably linked. Market transactions allowed a more productive and cost-efficient production and also encouraged information sharing, both between individual attractions and among the alliance members (in line with Fyall *et al.* 2001; Santagata, 2002; Newland, 2003; Michael, 2007).

The study reveals a generalised relationship amongst interdependencies, including cooperation and product similarity between attractions. The main differences between the clusters in terms of cooperation included the types of cooperative relationships and the levels of cooperation. Compared to Newquay, attractions at the lower agglomeration on the Lizard formed fewer intra-cluster complementary relationships with their neighbours and had less cost-efficient production. These relationships were generally weaker in nature and less influential than those identified in Newquay. Other factors apart from spatial proximity may be responsible for this difference, such as weaker thematic similarity on the Lizard than in Newquay. Spatial proximity and product thematic similarity between tourist attractions were found to be positively related to external economies of scale, including traded and untraded interdependencies (Fyall *et al.* 2001) and cooperative

competition (Huybers and Bennett, 2004; Buhalis, 2006; Jackson and Murphy, 2006). In the case of high thematic similarity, strong competition might deter attractions from cooperation aimed at achieving external economies. By contrast, high levels of thematic complementarity could encourage collaboration, especially in marketing (Fyall *et al.* 2001). The relationships between product similarity and spatial proximity encourage other types of complementarities, including visit time/duration, indoor/outdoor, marketing segments, passive/active tourism experience and pricing.

The extent of the interdependencies differ between different levels of product thematic similarity (very similar, similar-complementary, and dissimilar) as illustrated in Figure 6, which mostly reflects cooperation in marketing as an indicator of interdependencies. Product dissimilarity between clustered attractions is positively related to interdependencies, and dissimilar product attractions can be expected to show high levels of cooperation amongst themselves. Moreover, the more that attractions' products are similar-complementary, the higher the cooperation between them and the level of interdependency. Conversely, the more attractions are less thematic-complementary and more product similar, the lower the level of cooperation and interdependency. Thus, co-located similar product attractions are likely to be less cooperative, whereas thematic-complementary ones are likely to become the closest allies and achieve the highest levels of interdependency. Thematic similarity also encouraged thematic clustering amongst attractions regardless of geographical proximity, which encouraged a network with collaboration mostly in marketing.

Figure 6

The relationships between spatial proximity and interdependencies differed between the local cluster and the regional cluster scales. At the regional cluster scale the agglomeration of tourist attractions was positively related to untraded interdependencies in general, including marketing. However, in a more dispersed destination, cooperation in marketing was likely to be stronger and competition for markets within the cluster weaker. At the local scale, spatial proximity was positively

related to traded and untraded interdependencies. Most of the attractions studied here were interlinked in ‘coopetitive’ relationships (as noted by Buhalis, 2006; Wang and Krakover, 2008) and many of them developed complementary relationships with other intra-cluster attractions. As found by De Propris (2002), tourist attractions play a dual role in their contribution to the chain of production in their cluster. At the regional level, as a sub-sector they are vertically integrated with other products (e.g. accommodation) by virtue of specialising in one stage of the tourism production chain as well as being horizontally integrated in complementary relationships with other attractions at the same stage of production (Michael, 2003).

Other product similarities, including market segments, market size and product quality, were found to have a positive influence on cooperation and external economies of scale amongst tourist attractions. Other influential factors, including binding restrictions and regulations due to membership in tourism associations, different patterns of ownerships (public/private) and personal relationships have both positive and negative influences. However, very little evidence of trust in sustained collaboration between managers was identified, and this externality needs to be further studied. The factors affecting cooperation between tourist attractions, including product similarities, complementarities and spatial proximity and the relationships between them are summarised in Figure 7, which clearly shows their complexity. These factors and their interrelationships need to be considered by policy and decision makers in the creation of new development policies and by entrepreneurs and managers considering new development projects. Tourist attractions are, and will continue to be, staple elements of a tourism destination and play a major role in destination development. They provide a sequence of unique tourist elements that comprise the tourism destination product. If neighbouring attractions were linked by appropriate complementarities, these would increase synergies amongst them and potentially lead to success in terms of increasing tourist numbers and market segments by providing a more appealing destination experience.

Figure 7

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