Identifying Cultural and Cognitive Proximity between Managers and Customers in Tornio and Haparanda Cross Border Region

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Abstract

Daily intercultural interactions in cross-border regions such as those between customers and managers can be a source of knowledge and ideas. However, such interactions can pose distinctive constraints and opportunities for learning and exchange of ideas. This study adopts a relatively fine–grained quantitative approach to study elements of cognitive and cultural proximity which have a major impact on these interactions. It is based on a survey of 91 managers of small service firms and 312 customers in the twin city of Tornio and Haparanda on the border between Finland and Sweden. Seven elements of proximity were identified and measured. Six elements of perceived cognitive and cultural proximity including values, conservative values towards new ideas, knowledge and use of technology, use of a foreign language, sufficiently focusing or providing specific details and ways of solving problems were found significant in terms of shaping perceptions of Swedish and Finnish managers and customers, which shape these interactions. The results enhance our understanding of how daily cross-border intercultural can be examined in the context of cross-border regional knowledge transfer.

Keywords: knowledge transfer, cross-border regions, cultural proximity, cognitive proximity

Introduction

Similar to most regions, the long-term competitive advantages of Cross-border Regions (CBRs) rest on their capacity to create an integrated innovation space, characterized by substantial cross-border flows of knowledge, expertise and skills, brought about by a high intensity of human mobility (Lundquist and Trippl 2013). Shopping is a type of cross-border mobility, which involves inter-personal interactions between customers and managers of small and micro service businesses. Cross-border shopping is important in countries with high levels of cross-border mobility (Spierings and Van Der Velde 2008). Businesses in border regions, which are able to develop economic activities on the other side of border, are likely to gain more knowledge than those embedded in their own country (Cayla and Eckhardt, 2007).

Adjacent territories in different national states, i.e. CBRs, vary in terms of governance, technological trajectories, institutional set-ups and positions in the regional system of their respective national states (Lundquist and Trippl 2013; Lundquist and Winther 2006; Trippl and Maier 2010; Coenen, Moodysson, and Asheim 2003). These, and other similarities and dissimilarities, are a key source of innovation by offering potential for new combinations and unexploited synergies, but also major barriers to interaction and to innovation-relevant knowledge transfers (Hoekman, Frenken, and Oort 2009; Koschatzky 2000). CBRs tend to remain institutionally embedded in their respective national innovation systems, which differ with respect to economic structures, cultural factors, administrative borders, R&D bases, socio-institutional set-ups, national institutions, regulatory frameworks, and, consequently, their innovation performances and capacity to form integrated innovation spaces (Trippl 2010). This study focuses on the aspects, which shape knowledge transfer rather than on innovation, which is uncommon in SMEs in general and even less in rural areas (Battisti, Deakins, and Roxas 2010; McAdam, Reid, and Shevlin 2014).

Most academic work on regional knowledge economies focuses within national boundaries (e.g. regional innovation systems and learning regions) rather than within CBRs (Singh and Marx 2013). In the latter, regional innovation systems are challenged by cultural, institutional and social barriers due to the international differences between the two sides of the border. Cross-border knowledge transfer through various channels, including labour mobility, student exchanges, co-patenting and co-publications, networking and trade relations remains uncommon even when adjoining regions share relatively similar economic and technological knowledge base. This can be explained by specific socio-institutional conditions, including cultural, social and institutional proximities, characterised by formal (laws, regulations) and informal institutions (routines, conventions, habits), which influence the behaviour of actors and relations between them (Hussler 2004; Koschatzky 2000; Trippl 2010; Singh and Marx 2013). Understanding the obstacles and enablers of knowledge transfer in CBRs should provide a means to improve the potential for learning innovative practices in cross-border regional economies.

Several non-tangible proximities: cognitive, organizational, social, institutional, cultural and technological proximity constitute Relational Proximity (RP) (Lundquist and Trippl 2013), which is an umbrella term for Boschma's (2005) non-tangible dimensions of proximity: cognitive, organizational, social and institutional or cultural (Moodysson and Jonsson 2007). Their meanings are overlapping and confusing rather than mutually exclusive and coherent (Coenen, Moodysson, and Asheim 2003; Mattes

2012; Lundquist and Trippl 2013). In the literature on CBRs, Relational Proximity (RP) refers to shared norms, institutions, regulations, mutual understanding, trust, codes of conduct and shared organizational and technological cultures for collaboration and knowledge exchange. Since RP between key actors is conditional for fruitful inter-personal knowledge transfers, levels of relatedness and the impacts of different proximities are crucial for overcoming barriers and facilitating cross-border innovation (Lundquist and Trippl 2013). However, the nature of RP between members of staff, managers and customers in the service industries remains understudied, particularly in retail, catering and leisure, remains, where such interactions are pivotal for improving products and services. This is quite surprising given that in the service industries engagement with customers or end users is an inextricable part of service product enhancement (Carbonell, Rodríguez-Escudero & Pujari, 2009). Furthermore, in an era of increasing globalisation, international travel and immigration, there is an increasing need to understand intercultural service encounters, which are interactions between customers and employees from different cultures, that have gained increasing importance and prevalence in recent years. In particular, there is little research on such interactions at the individual-level and on the influence of cultural factors on the attribution of customers in such interactions (Jackie, Piyush, and Namwoon 2016; Michaelidou et al. 2015).

Spatial proximity between actors allow other non-spatial proximities to influence knowledge transfer and ultimately the success of innovation process (Mattes 2012). European cross-border actors are often spatially proximate, share considerable cultural similarities and therefore, have relatively optimal conditions to evolve. This paper focuses on cultural and cognitive proximities (including technological proximity as a sub category of cognitive proximity), which are considered most relevant for daily cross-border face-to-face interactions. They are assumed to shape the level of perceived relatedness between Swedish and Finnish managers and customers in the twin city of Tornio and Haparanda on the border between Sweden and Finland. Other dimensions of proximity were not examined including institutional, social and organisational. Organizational and institutional dimensions of proximity are considered less relevant because they mostly refer to intra-firm and/or inter-organisational relationships (Mattes 2012; Boschma 2005). Social proximity, while important in inter-personal communication, is generally not specific to differences between cross-border regional actors, which focus on cultural and cognitive differences related to national cultures. Therefore, social proximity is not central to our analysis.

The paper aims to contribute to understanding these proximities in small and micro service business, where innovation and knowledge transfer are rare by adopting a relatively fine–grained quantitative approach to study the specific elements of cultural and cognitive aspects. The next section outlines a theoretical framework for the study of inter-personal knowledge transfer between actors in cross-border regions.

The knowledge embedded in social interactions between managers and customers can be defined by Davenport and Prusak (1998) as 'a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information' (p.5). It emerges in interactive learning, i.e. in 'the process, deeds, and interactions where a service provider collaborates with current (or potential) customers to anticipate and learn customers' latent needs and develop new services accordingly' (Sandén et al. 2006, 112). Therefore, research hypotheses regarding perceived Cultural and Cognitive Proximity (CCP) between groups of customers and managers are suggested, followed by an outline of the research methods. This paper is structured as follows: the first section gives some insight into the different types of proximity dimensions while focusing on cultural and cognitive proximity between Finns and Swedes and their hypothesized levels. The second section explores the methodology and provides some details on the cross-border research area including Tornio in Finland and Haparanda in Sweden. The third section examines the results including the levels of each studied perceived element of cognitive and cultural proximity. The fourth section concludes the study, identifies its limitations and provides some implications for practitioners and directions for future studies.

Proximity Types

The types and degree of RP in general and those of Cognitive and Cultural Proximity (CCP) between actors remain empirically understudied in the cross-border regional context (Huber 2012). At the inter-regional scale, proximity is defined as the similarities of two regions in terms of shared behavioural codes, culture, trust, sense of belonging and cooperation capabilities, which influence regional capacity to absorb knowledge transfers and spillovers (Basile, Capello, and Caragliu 2011). These are underpinned by the different types of proximities identified by Boschma (2005).

Cognitive proximity is considered relevant for disentangling the proximity paradox: that is, the positive impacts of different types of proximity between actors on knowledge transfer (Broekel and Boschma 2012). Not least because cognitive proximity is considered a pre-requisite for interactive learning (Boschma 2005), underlying inter-cultural communication between actors (Huber 2012) and is inherently

interwoven with other forms of proximity. Given the focus here on service firm-customer relationships, we contend that the cognitive and cultural dimensions of RP are particularly important in cross-border knowledge transfers via shopping trips. The following discussion identifies the key elements (in italics) of the cognitive and cultural proximities between managers and customers, although recognizing that, in practice, they may overlap.

Cognitive proximity and technological proximity

Cognitive proximity is a precondition for mutual understanding and communication (Huber 2012) and therefore it is relevant for studying inter-cultural communication between actors. "The cognitive dimension'' refers to those resources providing shared representations, interpretations, and understanding according to mental categories that people developed in interaction with their physical and social environments (Wuyts et al. 2005; Thomas 2008), which are so acute in analysing influence of positive and/or negative perceptions of peoples from different cultures on knowledge transfer. For example, categorical thinking in an automatic and unreflective fashion leading to predictable outcomes in contrast to reflective processing, whereby individuals creatively combine/extend internalized cultural and private models to improve their sense making. This is typical of *cognitive conservatism* towards new ideas, and is considered a barrier to knowledge transfer (Ringberg and Reihlen 2008).

Diversity in knowledge, opinion and experience engenders meaningful communication but requires *shared language*. Shared vocabularies, codes and collective narratives enable efficient exchanges of views, ideas and practices as well as similarity in ways of thinking about products or technology. Moreover, 'shared narratives' - including myths, stories and metaphors - provide powerful means for creating, exchanging, and preserving rich sets of meanings and combinations of tacit knowledge (Holt and Macpherson 2006; Nahapiet and Ghoshal 1998). However, too much cognitive proximity can lead to lock-in effects and competition, in contrast to cognitive distance which engenders complementarities and interactive learning (Boschma 2005).

Another important element of cognitive proximity is *mentality,* a theory-driven psychological stance in terms of individuals' attitudes and behaviour in response to new ideas and knowledge. Shared mentality reflects proximity in ways of reacting to new information and ideas emanating, for example, from individuals from the same national culture (Peng and Akutsu 2001). In this paper, it indicates inter-cultural proximity between managers and customers in terms of thinking and behaviour (e.g. marketing and product preferences). Knowledge transfer relies on the receiver's ability to apply relevant mental (cultural and private) models facilitating reflective thinking, resulting in new ideas (Ringberg and Reihlen 2008).

Technological proximity is defined as the understanding of shared technological knowledge amongst actors (Menzel 2005) and a similar knowledge base, which engender the absorption and mastering of technological know-how (Guan and Yan 2016). It enables learning, particularly in terms of actors utilising similar technical language (Huber 2012). It is considered a sub-dimension of cognitive proximity by some researchers (Cantner and Meder 2007; Gilsing et al. 2008; Boschma 2005; Nooteboom et al. 2007; Broekel and Boschma 2012; Wuyts et al. 2005) and is positively related to functional disciplines such as marketing, production and engineering (Gilsing et al. 2008). At the regional level it is defined as "…proximity of regions whose technological profiles are similar to its own" (Greunz, 2003, 657). Knowledge spill overs are expected to be higher between regions with similar technological profiles (Greunz 2003). Unlike the above studies, this paper examined technological proximity at the individual level in the context of inter-cultural communication between daily interactions between cross-border actors, who are managers and customers. More specifically, it is examined in terms of the extent to which cross-border actors (i.e. customers and managers) use *similar technologies and tools*.

Cultural proximity

Culture is a set of interrelated common rules, norms, conventions, interpretation schemes, values, perception, thoughts and feelings which guide behaviour within a group. Cultural proximity or similarity refers to sharing tacit background and similar ways of thinking, behaving, and deciding; these facilitate intra-cultural exchanges. It is often assumed but rarely empirically measured (Ibert 2010; Kaasa and Vadi 2010). The way knowledge is understood, by the provider and receiver, may diverge in conditions of low levels of cultural proximity (Kaasa and Vadi 2010). Cross cultural friction, which can incur costs and risks, increases with greater cultural dissimilarity between individuals, groups or organisations (Shenkar 2001; Bjorkman, Stahl, and Vaara 2007). In cross cultural interactions the conscious or unconscious differentiation by people between the self and the other receives spatial sense of 'here' and the 'there'. These encounters result in subjective understandings, which are based on past experiences and acquired knowledge and stereotypes (Szytniewski, Spierings, and van der Velde 2017) and "us versus them" confrontations (Vaara et al. 2012). More positively, cultural dissimilarity can stimulate mutual learning via constructive controversy which

requires negotiation of differences and direct social interaction (Auer-Rizzi and Berry 2000; Ibert 2010; Javidan et al. 2005). Customers' *ways of solving problems* may also differ between national cultures depending on their cultural similarity.

Cultural *values* may have a direct influence on individual behaviour, attitudes and actions. Therefore, service managers' cultural orientation and values may determine the way they develop new services (Alam 2010). In summary, cultural proximity is determined by the convergence/divergence of publicly shared values, worldviews or interpretation schemes (Ibert 2010). Willingness to accept the need for, and be open-minded about, change and learning from foreign cultures, are important for a firm's learning orientation, encouraging managers to "open-up" or adopt to external knowledge (Akçomak and Ter Weel 2009; Steenkamp, Hofstede, and Wedel 1999; Tajeddini 2011). Fruitful collaborations in knowledge transfers that are essential to innovation processes require an acceptable level of RP, being neither too low nor too high (Lundquist and Trippl 2013). Based on the above literature perceived cultural and cognitive proximity between Swedish and Finnish customers and managers in CBRs are expected to be dependent on the groups' mutual perceptions of one another. Insight into the effects of CCP on knowledge transfer is sought by testing seven hypotheses explained in the next section.

Hypothesized levels of CCP between Finns and Swedes

Due to a common history, similar institutional structures and spatial proximity, high cultural and institutional proximity exists between Finnish and Swedish societies and institutions (Vaara 2000), so it is hypothesised that there are high levels of cultural and cognitive proximity. There are several studies on perceived cultural differences and stereotypes between Swedes and Finns and their influence on inter-cultural communications and collaboration (Auer-Rizzi and Berry 2000; Paasi and Prokkola 2008; Vaara 2000; Smallbone 2006). These studies have examined cultural aspects, such as Hofstede's 'power distance' and 'uncertainty avoidance' dimensions, and specific historical aspects, as influencing intercultural communication. Compared to Finns, Swedes have lower scores for "uncertainty avoidance" and similar scores for 'power distance' (Vaara 2000).

The above studies identified 7 elements of CCP (Table 1), which are assumed to be perceived differently by Swedes and Finns. They were studied among customers and service managers in a Finnish-Swedish cross-border region. The following hypotheses refer to the levels of perceived CCP between Swedish managers and Finnish customers and those between Finnish managers and Swedish customers.

Table 1

Values The degree of which publicly shared values between individuals and societies influences cultural proximity (Ibert 2010). Finns are perceived by other cultural groups, including Swedes, as being more authoritarian, straightforward, more democratic and placing less emphasis on consensus building, discussions and diversity of views. They are considered to have a more collective-vertical culture than Swedes. The latter are perceived by Finns as having a more individual and horizontal culture in general and as being softer, more democratic, less effective decision makers and giving more emphasis to consensus building, discussions, diversity of views, polite phrasing and avoiding controversial issue (Auer-Rizzi and Berry 2000; Paasi and Prokkola 2008; Vaara 2000; Smallbone 2006). Therefore, we hypothesize *that the Finnish customers and managers ('Finnish groups') are assumed to perceive the Swedish groups (managers and customers respectively) as different (or less proximate) in terms of values (H1) and vice versa.*

Conservatism Finns perceive Swedes as being more extrovert (Jukarainen 2005) and having lower 'uncertainty avoidance'. By contrast, Swedes perceive Finns as more conservative, less open-minded and more resistant to change (Vaara 2000). When customers are likely to contribute to ideas, we hypothesize that Finnish customers' ideas are perceived as more conservative by Swedish managers. Finnish managers, however, are not expected to perceive Swedish customers' ideas as conservative. Both Finnish and Swedish customers are unlikely to be concerned that their ideas would be perceived as such (given the very fact that they are the customers) and therefore are unlikely to perceive themselves as different from managers in this aspect. Therefore, we

hypothesize that *there is a difference between the perceived cognitive proximity between Swedish managers and Finnish customers in terms of 'conservatism' towards new ideas (H2).*

Mentality The differences mentioned above reflect behavioural differences between the two cultural groups. Compared to Swedes, Finns are perceived as being relatively straightforward, rapid decision makers, accepting authority, emphasising managers' responsibility in decision making and challenging controversial issues, but being less democratic (Auer-Rizzi and Berry 2000; Paasi and Prokkola 2008; Vaara 2000; Smallbone 2006). Therefore, we hypothesize that *all Finnish groups are likely to perceive Swedes as different from them in terms of mentality (H3).*

Technology A collectivist society can be expected to use its own technologies and be familiar with a narrower range of tools than more individualist and less conservative societies. Since Finnish customers and managers are argued to be more collectivist than Swedes (Hofstede. 2001) and tend to use and understand tools and technologies that are widely used in the rest of Finland, both Swedish and Finnish groups are likely to perceive themselves as more different from each other (Swedes from Finns and Finns from Swedes) in this aspect. Therefore, *there is a difference in the perceived cognitive proximity in technology between the Finnish and Swedish groups, perceived by both Swedish and Finnish customers and managers*. *Language* is considered to be very influential on knowledge transfer in general (Holt and Macpherson 2006; Nahapiet and Ghoshal 1998), and has been identified as a barrier to joint collaboration initiatives in CBRs, particularly in Sweden (Smallbone 2006; Paasi and Prokkola 2008). *Both Finnish and Swedish managers and customers are assumed to perceive themselves as different in this aspect (H5).*

Focus on specific details Sweden is a more individualistic society than Finland, and Swedes are more likely to require longer discussions and knowledge processing when coming up with new ideas as they look at issues more broadly and out of context. By contrast, people in countries with more collectivist cultures than others (such as Finland compared to Sweden) are more likely to focus on more specific and contextualised details when discussing and describing ideas (Hofstede 2001; Yalcinkaya 2008). Therefore, we hypothesize that Finnish managers and customers are more likely to perceive Swedes as providing insufficiently detailed ideas and therefore perceive Swedes as less proximate in this aspect (H6). Swedish managers and customers are also likely to perceive Finns as providing more information when engaged in discussions than Swedes. *Therefore, Finns would also feel less proximate to Swedes than Swedes do towards Finns in focusing on specific details.*

Problem solving. Customers' *ways of solving problems* may also differ between national cultures depending on their cultural similarity. This is important because innovation is adaptive, undertaken typically in response to unfamiliar, unexpected, or non-routine problems. Product and service development is, at its core, *a problem-solving process* and often consists of trial and error, involving user innovation (Hippel 2005). Given that Swedes are less effective decision makers and giving more emphasis to consensus building, discussions, diversity of views, polite phrasing and avoiding controversial issue (Auer-Rizzi and Berry 2000; Paasi and Prokkola 2008; Vaara 2000; Smallbone 2006), compared to Finns, Finnish customers and managers are assumed to adopt a more practical than planned approach, when expressing their ideas. *Therefore, there is a hypothesized difference in the perceived proximity of Swedes in relation to Finns and vice versa in the ways of approaching 'problem solving' i.e. difference between Swedish managers' perceiving themselves as proximate to Finnish customers and vice versa as well as between Finnish managers and Swedish customers and vice versa (H7).*

Research methods

Research area

This study focuses on two remote European border regions with some cultural and economic similarities, that are typical of many other European CBRs. The neighbouring towns of Tornio (Finland) and Haparanda (Sweden) in the southern part of the Tornio River Valley represent EU internal CBRs with high levels of spatial proximity, cross-border mobilities and daily interactions between two populations from relatively similar (but still different) national cultures. Tornio and Haparanda are physically proximate and unlike other border villages/towns on the border they are not divided by the river Tornio. Their history dates back to the beginning of the 19th century when the border was drawn between the Russian Empire (annexing the entire Finland) and the Kingdom of Sweden, which later was followed by the emergence of Haparanda on the Swedish side as a market place (Häkli 2009). This has been followed by the cultivating of the national identities of the populations of both sides of the border (see Jakola and Prokkola 2018 for a more detailed history). Since the 1960s, and particularly with the beginning of the twin city project at 1987 and EU membership for Finland and Sweden in 1995, a key strategy of regional development and many cross-border projects have gained co-funding from EU structural regional development funds aimed at bridging cultural differences and emphasising similarities (Jakola and Prokkola 2018; Häkli 2009; Joenniemi and Sergunin 2011). These created synergies in the provision of public services between the two towns including education, tourism, environment, medicine and coordination of cross-border issues, which is addressed by a supranational body, Provencia Bothniencis founded in 1987. For business development the project Rajalla På Gänsen shopping centre can be noticed as a major investment,

which kick started after Ikea had announced its plan to establish a store in Haparanda in 2005 (Jakola, 2013). While actual unification is pursued by the councils, it is rejected by constituents in both towns. This can be explained by a cultural landscape of both trust and lack of trust along with some manifestations of Swedish nationalism which shape cooperation across the Swedish-Finnish boundary (Häkli 2009; Pikner 2008). Thus, successful attempts at de-bordering and the blurring of national identities have been countered by some tendency for Swedish-speaking inhabitants of Haparanda to feel that the down-playing of differences favours Finnish-speakers too much on both sides of the border (Joenniemi and Sergunin 2011).

Cross-border mobilities are characterised by commuting, school, day-care and homes over the border, with approximately 3.7 million private cars, 18,000 buses and 10–12 million people crossing the border annually (Ruotsala 2009; Paasi and Prokkola 2008). Nevertheless, as mentioned above the border still divides people and the mental distance between Finnish and Swedish citizens is significant. The vast majority of people living in each side of the border are culturally and nationally Finnish in Tornio, Finland and Swedish in Haparanda, Sweden. Different cultural groups in Tornio-Haparanda region can be differentiated by the linguistic, social and cultural differences as well as unwritten rules of behaviour into four main groups: Finland Finns, Sweden Swedes, Tornedalians and Sweden Finns. Finland Finns and Sweden Swedes live in Tornio or Haparanda and speak Finnish or Swedish with little knowledge of each other's language and cross the border mainly to buy cheaper products and services. The two other groups, are mostly bilingual, live on both sides of the border and are culturally mixed as a result of historical mobilities (Lundén and Zalamans 2001).

Research instrument

Two similar versions of a questionnaire survey in Finnish and Swedish, which were checked for their linguistic consistency, were administered to a sample of managers (or senior members of staff) and a sample of customers belonging to Finnish and Swedish cultures in Tornio-Haparanda. The questionnaire was initially translated from English to Swedish and Finnish by native speakers and then cross translated by one of the researchers who is a native speaker in Finnish and Swedish. The questionnaire measured CCP between the two in terms of the extent to which Swedish managers perceive their Finnish customers as proximate (or distant) from them and vice versa (i.e. the extent to which Finnish customers perceive themselves proximate to Swedish managers) in relation to the above hypothesized 7 elements (Table 1). The same was measured for Finnish managers and Swedish customers and vice versa. Multivariate Analysis Of Variance (MANOVA) was used to identify significant differences between the perceived values of CCP between the four groups including Finnish managers and customers and Swedish managers and customers to control the covariance between the dependent variables i.e. the 7 elements.

Customer questionnaires

The questionnaire survey included two sections. The first one comprised general questions regarding age, education, gender, nationality, place of residence as well as a question allowing respondents to select up to two cultural affiliations. The second section included a set of questions, which asked respondents to grade on a 5 point Likert scale (1- strongly disagree to 5- strongly agree) the influence of 7 elements of CCP on making suggestions about and discussing ideas relating to improving services and products with a staff member from the dominant culture of the neighbouring cross-border region. For example, Swedish customers graded the extent to which they agreed with the statement: 'my ideas are not specific or detailed enough for Finnish members of staff'. Based on suggestions from a pilot survey, only minimal changes were made before the main questionnaire survey was undertaken in both towns' main shopping areas adjacent to the border.

A systematic method of selecting every 10th customer-resident visiting two shopping centres, adjacent to each side of the border during mornings and afternoons in weekdays from the end of June to mid-august 2011 produced a representative socio-economic sample of residents (employed, unemployed, age etc) based on official data from the two municipalities. A total of 190 Finnish and 180 Swedish questionnaires were administered to customers by Swedish and Finnish research assistants, who were native speakers. The survey resulted in a 44.7% response rate and 169 valid questionnaires in Haparanda and 43.8% response rate and 154 valid questionnaires in Tornio (49.5% females, 46.8% males and 3.7% missing) with respondents aged 15 to 75. Some customers expressed reluctance to complete the full set of questions in the second section due to sensitivity towards cultural differences. Only customers whose main self-identified culture matched their country of residence (e.g. customers whose main culture is Swedish and reside in Sweden) were included.

Most of the customers identified themselves as belonging to their cross-border regional dominant culture and one half had some form of higher education (Table 2). For the purpose of statistical analysis, those who mentioned an additional culture (e.g. international, European), including 21.7% of the Finnish sample and 8.2% of the Swedish sample, were grouped with their dominant culture. Mixed culture respondents who defined themselves as belonging to Swedish and Finnish cultures or Tornio valley culture (Tornedalians), including 17% of the Finnish group and 33% of the Swedish group, were able to choose which culture (Swedish or Finnish)

they refer to in answering the questions regarding CCP. This is considered a limitation in this study and should be addressed in future studies. Multivariate Analysis Of Variance (MANOVA) tests showed only one significant difference between the answers of 'mixed' culture questionnaires and the rest in each group ('focusing or providing specific details', $P < .05$, mixed 2.36 < 2.6 Swedish). This supported the decision to group them as 'Swedish' or 'Finnish'.

Insert Table 2

Managers' questionnaire

A similar questionnaire, in terms of the questions about socio-demographics and CCP, was administered to a sample of 50 Finnish and 41 Swedish managers or senior members of staff of small and micro businesses in Tornio, Finland and Haparanda, Sweden respectively. The target sample includes businesses in the service sub sectors of catering, retail, leisure, tourism and accommodation facilities (e.g. shops, hotels, restaurants) in Tornio-Haparanda, which serve a large number of visitors from both sides of the border and beyond. The sample was selected from the most up-to-date comprehensive lists of service SMEs provided by the city municipalities, including 164 businesses in Haparanda and 320 in Tornio. The response rate was around 70% in both sides of the border with a higher refusal rate in Haparanda than Tornio and therefore represents most of the SMEs of TornioHapranda in these sub sectors. In cases of refusal, a manager of a similar type and geographically proximate business was approached instead as a substitute. Most of the managers in each side of the border belong to their dominant culture and MANOVA tests showed no significant differences between the answers of 'mixed' culture questionnaires and the rest, which supported grouping them as 'Swedish' or 'Finish' according to their choice.

The questionnaire included information about the nature of the business, such as sector, size, markets as well as some information about the managers themselves. Respondents' aged varied from 21 to 60 including 45.2% males and 54.8% females of different small service firms, with 51.1% having at least some form of higher education and 44.3% had at least 10 years of working experience in the business. Businesses employ 1 to 50 members of staff and 82.4% of them have a maximum number of 5 full-time employees in their business. Information was also collected about the nature of the business, such as sector, size, and markets, as well as information about the managers themselves. The questions about CCP were similar to those in the customers' questionnaire (using the same 5-point Likert scale) but referred to learning from customers rather than providing ideas. For example, Swedish managers were asked to grade the extent to which they agreed to the statement: 'Finnish customers' ideas might not be 'specific or detailed enough'. Respondents' age varied from 21 to 60 including 45.2% males and 54.8% females. 51.1% had at least some form of higher education' and 44.3% had at least 10 years of working experience in the business. The businesses had between 1 and 50 employees, and 82.4% had not more than 5 full-time employees. Most (89.2%) serve local customers from TornioHapranda and the vicinity and they represent approximately 15% of service businesses in Tornio and 25% in Haparanda (based on official data from the two municipalities).

Results

The numbers of each perceived level of cultural and cognitive distance of each group to the 'opposite' group e.g. the levels of self-perceived difference by Swedish managers towards Finnish customers is indicated in Table 3. Each CCP for each element was measured in terms of the mean value of the extent to which each 'opposite'

group perceived itself in relation to the other e.g. levels of perceived proximity of Swedish managers to Finnish customers plus levels of perceived proximity of Finnish customers to Swedish managers dividing in two (Tables 4-5). Therefore, the higher the mean cultural and cognitive distance, the lower the proximity. The hypotheses regarding the relevance and levels of the identified elements of perceived average CCP (or distance) and the differences between the groups were tested by using a MANOVA model. In addition, the average perceived proximity of all groups in the sample was the average value of comparison between the mean values. Moderate levels of perceived proximity refer to the value, which is near the average of all the significant mean values in the test. Higher levels of distance from that average would be considered lower levels of proximity (or high distance) and lower levels from the average distance would be considered as high proximity.

Some of the questions were difficult or sensitive for respondents to answer, particularly regarding: 'technology', 'conservative ideas' and 'specific details'. The questionnaires received a relatively high percentage of 'I do not know' replies (around 20%), which were treated as 'missing values'. Therefore, in order to retain a larger number of cases a subsequent one-way Analysis Of Variance with Bonferroni correction [i] (dividing p-value in the number of examined variables or tests) was conducted and shows that significant differences were found for each element excluding 'technology' (Table 3).

Insert Table 3

Gabriel post hoc and independent samples t-tests also show significant differences between specific groups in the perceived average CCP. Finnish customers and Swedish managers perceive each other as significantly different in 'values', 'problem solving' and 'specific ideas' (Table 3). Significant differences were also found between Swedish customers and Finnish managers in 'language', 'technology', and 'mentality' with bordering significance for 'values' (p=0.007) (Table 5). The two columns in both Tables 4-5, 'average distance' and 'differences in perceived distance' provide a measure of CCP for each element; First, the means of the significant cultural and cognitive distances (or proximities) of each element as graded by the respondents e.g. 2.89 and 2.75, for mentality, (Table 4) and secondly, the differences between the means of the perceived distances between the groups of customers and managers are provided in the next column (e.g. 0.14 for 'mentality'). All the examined significant elements of average distance between customers and managers vary between 2 to 3 except for 'values' between Swedish customers and Finnish managers (1.8, Table 5).

Insert Table 4

Insert Table 5

All the hypothesized perceived elements, except conservatism towards new ideas, were confirmed as being significant elements of average perceived CCP. The insignificant difference in the element of 'conservatism towards suggested ideas' as perceived by Finnish customers and Swedish managers may be explained by the possible reluctance of Swedish managers to express negative views towards their customers (i.e. as conservative). They may have moderated their views (2.21) in order to portray themselves as less prejudiced and more in tune with the perceived liberal nature of their culture. Similarly, Finnish customers may have preferred not to perceive themselves as being more conservative than Swedes, even though as noted earlier Swedes tend to be more democratic and plural than Finns. Another reason may be related to the small size of the managers' sample as hypothesis 5 is confirmed without Bonferroni correction (P = 0.013, Table 4) and the fact

that customers are unlikely to perceive themselves as conservative since the very fact that they are customers.

'Shared values' received the highest levels of average perceived CCP (1.8 and 2.32, Tables 4-5), particularly by Swedish managers (2.62 > 2.02, Table 4) and Swedish customers (2.00 > 1.58, Table 5). Lower than the calculated average of the proximity of other groups in *'mentality'* was found between Swedish customers and managers (2.37 < 2.45, Table 5), which confirms hypothesis 3. *Technology* was found to be significant for cognitive proximity between Swedish customers and Finnish managers. Swedish customers perceived themselves as less proximate than Finnish managers perceived themselves in relation to Swedish customers (2.82 > 2.58, Table 4), which confirms hypothesis 4.

Language received the lowest levels of proximity between Swedish customers and Finnish managers (3.06, 0.86, Table 5) with Finnish managers perceiving themselves as more distant than the Swedish customers, confirming hypothesis 5. *Provision of sufficient specific details* received slightly higher than average proximity (2.43 < 2.58, Table 4), which confirms hypothesis 6. Ways of solving problems received the second lower levels of proximity between Finnish customers and Swedish managers (2.98, 0.66, Table 4), which confirms hypothesis 7. The average cultural distances of the significant elements between Finnish customers and Swedish managers show that 'problem solving' has lower proximity (2.98) than 'specific ideas' (2.43) and 'values' (2.32). Language has the lowest proximity (3.06) between Swedish managers and Finnish customers and 'values' have the highest proximity (1.8) between Swedish customers and Finnish managers (Table 5).

The findings confirm all the hypotheses but the element of conservatism (H2), which does not show any significant differences between the groups and therefore could not be confirmed. There are slightly higher levels of proximity than the average for shared mentality (2.37 < 2.45, Table 5) and close to average for 'technology' (2.49 = ~2. 45, 2.82 > 2.45, Table 5). One of the six significant elements has moderate levels of CCP and the others have lower levels than the average of 2.45. Table 6 summarises the results of the testing of the hypotheses set out in Table 1.

Insert Table 6

In addition, the means of all the examined elements of proximity (graded by each respondent) were combined in order to calculate an overall measure of perceived CCP. One-way Analysis of Variance was used to identify significant differences between the groups (Table 7). A significant difference between Finnish customers and Swedish managers was identified (M = 2.9 versus 2.49), $F(3,392) = 6$, $p < 0.05$ and Levene's test[ii] confirmed the assumption of variance homogeneity ($p > 0.05$*). Based on this finding, Finnish customers perceive themselves as less proximate to Swedish managers, whereas there are no differences in the perceived CCP between Swedish customers and Finnish managers. This difference can be explained by the earlier view that Swedes tend to identify themselves as open and tolerant of different views compared to Finns, which are perceived to belong to a more insular and collective society.

Insert Table 7

Conclusions

This paper attempts to improve our knowledge on the relatively neglected topic – compared to business to business links - of the perceived CCP between managers of service businesses and their customers. More specifically, it focuses on CCP between Swedish and Finnish managers and customers in Tornio and Haparanda on the border between Sweden and Finland. The cognitive, cultural and technological dimensions were examined by selecting 7 elements, which were hypothesized as being most relevant for studying CCP or distance between Swedish and Finnish customers and managers.

A questionnaire survey was used to study these elements and measure their levels. In this study, we suggested a fine-grained analysis for measuring cognitive and cultural proximity between actors. Moderate levels of CCP are required for facilitating successful interregional knowledge transfer and innovative processes between actors though lower or higher levels of proximity are not necessarily advantageous or disadvantageous for this process and both may involve barriers to cross-border learning (Lundquist and Trippl 2013).

The quantitative survey data reveal significant differences in the examined elements of CCP except for conservatism. Relational moderate-low values of CCP were identified between customers and managers from relatively similar cultures with some critical difference in the Swedish and Finnish cross-border region, which can potentially engender learning. This is in line with the fact that cultural proximity between Swedes and Finns are fairly similar due to a common history, similar institutional structures and spatial proximity (Vaara, 2000). Finnish customers and managers perceived themselves as relatively similar (but still different) to Swedish managers and customers respectively in the element of 'shared values', which can be related to them being more collective society and perceiving themselves as sharing fewer values than the Swedish society.

Perceived proximity in ways of thinking and reacting to ideas by those who share the same or similar national culture determines shared mentality. Both perceived shared mentality and perceived approach to 'ways of solving problems' were found different between Finnish and Swedish actors in the study. Technological proximity between Swedish customers and Finnish managers was found to be statistically significant. This may indicate for future studies that cross-border diffusion of technological knowledge is more likely to flow faster and earlier from Finland to Sweden than vice versa. Shared vocabulary, codes and collective narratives, which constitute the 'language' element, received the lowest levels of proximity. This is consistent with previous evidence about the importance of the linguistic barrier to collaboration of knowledge sharing between actors from Finnish and Swedish CBRs (Paasi and Prokkola 2008; Smallbone 2006) and is mostly germane to learning and understanding customers' feedback and suggestions. 'Provision of sufficiently detailed ideas' was perceived as less proximate by Finnish customers and managers, who found it difficult to understand and absorb new ideas from Swedes. The Swedish tendency to less contextualised and focused provision of ideas than the Finns, probably stems from their more individualist culture, compared to the more collectivist Finnish culture.

This paper suggests a fine-grained approach to the study of relational proximity in general and that of CCP in CBRs in particular. There is a need to pinpoint the very specific differences which are important in intercultural interactions between people in CBRs. Such an approach can be adopted by scholars and practitioners, particularly for understanding the barriers for cross-border learning and knowledge transfer. The findings do not only identify the very elements of difference and their importance, they show the complexity of cultural proximity even in the context of these relatively closely culturally aligned regions. Underestimating the impact of these differences, which might not be considered as acute or worth addressing, are those which may impede or stimulate the motivation of key cross-border neighbouring actors to learn and exchange knowledge and potentially engage in cross-border innovation processes. These are particularly relevant for the service industry where human interactions are a source of learning.

This study has several limitations which may have influenced its findings. Firstly, the study focused on the two main dominant cultures and ignored minority subcultures in the research area e.g. Tornedalen. Second, it overlooked actual inter-personal differences between individuals. Third, managers' learning and cross-cultural interactions may be explained by other influences, such as innovation characteristics, situational and marketing factors, service orientation amongst managers rather than CCP. Fourth, the study is limited by studying one CBR between two countries with a relatively high percentage of mixed culture population and a history of relatively borderless interaction between actors. The lack of emphasis on mixed culture needs to be addressed in future studies, which should examine specific perceptions and diversity within its members. The regional specificities related to the impact of the historical trajectory of Tornio Haparanda and the Tornio valley on individual cultural groups needs to be considered and examined; such as the potential impact of the Swedish group's tendency towards nationalism and scepticism towards fair and equal gain from cross-border cooperation (Joenniemi and Sergunin 2011)

It is necessary to undertake further studies in other CBRs, other service sectors and other cross-cultural contexts to confirm or reject the hypotheses. Despite these limitations, this paper does extend our understanding of CCP to the consumer-business links, in contrast to the dominant stream of research on business to business links. This is important given the relative size and growth rates of consumer services, especially in more peripheral regions. The study also helps identify important opportunities for further studies. For example, further

studies are also needed to identify whether lower or higher levels of CCP can predict the intensity of cross-border ideation processes between actors while considering the specific elements identified in this study. Further studies should also examine whether cultural differences can determine whether one cross-border culture is more 'innovative' or 'imitative' in terms of the learning and marketing orientations of service managers and the innovativeness of customers.

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[i] An adjustment made to P values when several dependent or independent statistical tests are being performed simultaneously on a single data set.

[ii] This test is used when samples have equal variances or homogeneity of variance.

Table 1. CCP between Swedish and Finnish managers and customers

Elements of	**Title**	**Hypothesis**
Cultural proximity:		
Sharing similar values	Values	H1
Similarity in ways of solving problems	Ways of solving problems	H7
Cognitive proximity:		
Conservatism towards new ideas	Conservatism	H2
Shared Mentality	Mentality	H3
Knowledge and use of technology	Technology	H4
Use of a foreign language	Language	H5
Provision of specific details	Specific details	H6

Table 2. Cultural affiliation of customers and managers in TornioHaparanda

		Groups				
		Tornio (Finland)		Haparanda (Sweden)		
		Finnish customers (total: 100%)	Finnish Managers (total: 100%)	Swedish customers (total: 100%)	Swedish Managers (total: 100%)	Respondents (N)
Culture	Finnish	81.8	82.0	6.0	0.0	168
	Swedish	1.3	0.0	62.5	56.1	130
	Mixed	16.9	12.0	31.5	43.9	102
	Other		6.0			3
	Total Count (N)	154	50	158	41	403
Type of Businesses (%)						
Retail (shops)		50		50		
Catering (restaurants, cafes)		10		16		
Tourism, leisure and transport (e.g. hotels, bars, clubs, spa, taxi)		12		30		
Other (personal and professional, e.g. optician, barbers, gym)		28		4		

Table 3. Elements of perceived CCP between customers and managers in TornioHapranda measured in terms of distance

	Means of perceived relational distance**					
Elements of relational proximity	Finnish Customers	Swedish Managers	Finnish Managers	Swedish Customers	F	Sig.
Values	2.62	2.03	1.59	2.01	12.386	.000*
Conservatism	2.73	2.21	2.28	2.23	5.333	.001*[ab]
Mentality	2.92	2.75	2.03	2.72	4.872	.002*
Problem solving	3.34	2.66	2.64	2.76	7.756	.000*[a]
Specific ideas	2.79	2.10	2.06	2.60	5.379	.001*
Language	2.92	2.74	3.49	2.62	4.559	.004*
Technology	2.93	2.67	2.16	2.82	3.983	.008

* Bonferroni tests: any means that are significantly different at $p < .005$
[a] does not violate the assumption of variance homogeneity (Levene's test, $p > 0.05$)
[b] Significant differences between managers and customers from the same culture only
** Higher levels of distance mean lower proximity

Table 4. CCP between Finnish customers and Swedish managers in TornioHaparanda in terms of distance**

Elements	Groups	N	Perceived distance (Mean)	Significance	Difference between perceived distance	Cultural and cognitive distance
Values	Finnish Customers	143	2.62			
	Swedish Managers	38	2.02	.005*	0.6	2.32
Problem solving	Finnish Customers	143	3.34			
	Swedish Managers	35	2.65	.006*	0.66	2.98
Specific ideas	Finnish Customers	129	2.79			
	Swedish Managers	30	2.10	.001*	0.67	2.43
average						**2.58**
Insignificant elements						
Language	Finnish Customers	147	2.91			
	Swedish Managers	39	2.74	.574	0.15	2.82
Conservatism	Finnish Customers	127	2.73			
	Swedish Managers	33	2.21	.013	0.52	2.46
Mentality	Finnish Customers	127	2.89			
	Swedish Managers	36	2.75	.541	0.14	2.81
Technology	Finnish Customers	138	2.92			
	Swedish Managers	30	2.75	.251	0.25	2.79

* Bonferroni tests: Any means that are significantly different at $p < .007$

** Higher levels of distance mean lower proximity

Table 5. *Cultural and cognitive distance between Swedish customers and Finnish managers in TornioHaparanda*

Elements	Group	N	Perceived distance (Mean)	Significance	Difference between perceived distance	Cultural and cognitive distance
Language	Swedish customers	141	2.62			
	Finnish managers	39	3.49	.000*	0.86	3.06
Values	Swedish customers	142	2.00			
	Finnish managers	41	1.58	.007*	0.42	1.80
Technology	Swedish customers	129	2.82			
	Finnish managers	32	2.15	.002*	0.66	2.49
Mentality	Swedish customers	137	2.71			
	Finnish managers	37	2.03	.001*	0.69	2.37
average						**2.45**
Insignificant elements						
Problems solving	Swedish customers	130	2.76			
	Finnish managers	36	2.64	.593	0.12	2.70
Conservatism	Swedish customers	121	2.23			
	Finnish managers	36	2.28	.821	0.046	2.25
Specific ideas	Swedish customers	108	2.6			
	Finnish managers	33	2.06	.012	0.541	2.33

* Bonferroni tests: Any means that are significantly different at p < .007

Table 6. *Summary of hypothesis testing*

H	Elements of CCP	Levels of CCP*	Results**
Cultural proximity			
1.	Sharing similar Values	Higher	confirmed
7.	Ways of solving problems	Lower	confirmed
Cognitive Proximity			
2.	Conservative values towards new ideas	Moderate	Unconfirmed $p > 0.05$
3.	Mentality	Lower	Not confirmed
4.	Knowledge and use of technology	Lower	confirmed
5.	Use of a foreign language	Lower	Confirmed
6.	Sufficiently focusing or providing specific details	Moderate	confirmed

*Lower or Higher in relation to average distance
** Confirmed means $P<0.05$

Table 7. *Overall perceived CCP between Finnish and Swedish customers and managers*

Groups	**N**	**Mean**	**Std. Deviation**	**CCP***
Finnish customers/ Swedish managers	159/41	2.90/2.49	0.90/.96	2.69 ($p < 0.05$)
Swedish customers/ Finnish managers	151/45	2.55/2.42	.89665/.83347	2.48 ($p > 0.05$)
Total	396	2.6732	.91628	

*Lower values indicate higher proximity