

Are there differences in social capital related to corporate regional engagement in dynamic and less dynamic non-core regions?

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Abstract: *This article explores corporate regional engagement and the structure of related social capital in non-core regions. Corporate regional engagement comprises various activities of firms to influence regional contexts, which are challenging in non-core regions (e.g. on account of their organizational or institutional thinness). Corporate regional engagement engenders positive effects for regional development when firms collaborate among themselves (bonding social capital) and with other actors (bridging social capital) to improve regional endowments. We assume that dynamic regions have at their disposal higher levels of inclusive social capital in terms of collaboration for regional concerns, while less dynamic regions have more exclusive and fragmented social capital. Consequently, less dynamic regions in particular appear to have potential to develop in a more social sense by activating the endogenous potential of region-wide collaboration. Those assumptions are tested based on a survey with CEOs from the manufacturing industry from three dynamic and three less dynamic Swiss regions. The findings show that in dynamic regions, more firms are members of regional cross-industry associations, favouring regional collaboration; in less dynamic regions, meanwhile, more firms are members of industry-specific associations and service clubs, where benefits seem to be higher for individual firms than for the regional business environment.*

Keywords: *corporate regional engagement; social capital; non-core regions; disparities; socio-economic development*

1 Introduction

This article focuses on corporate regional engagement and the structure of related social capital in non-core regions. This issue is of both academic and political relevance for various reasons: On the one hand, it responds to the scientific claim to contextualize economic action and contributes to the understanding of socio-spatial embeddedness and regional engagement of firms in non-core regions (McKeever, Jack, & Anderson, 2015; Welter, 2011). Moreover, it takes into consideration the heterogeneity of non-core regions that are often “treated as one and the same” (Müller, 2016, p. 1148). On the other hand, the article is of political relevance, as it addresses the endogenous potential of non-core regions, as an alternative to classical growth-focused strategies and proposes policy recommendations that help improve regional governance structures.

There is a growing strand of literature discussing the importance of corporate regional engagement for development (Heblich & Gold, 2010; Kiese & Schiek, 2016; Kleine-König & Schmidpeter, 2012; Nussmüller, Lengauer, & Tödtling, 2009). However, few studies explicitly deal with the importance of corporate regional engagement in non-core regions; neither do they investigate the structure of related social capital including exclusive and inclusive characteristics. This article helps to bridge this gap by examining those aspects in geographically close, but heterogeneous non-core regions in demographic and economic terms. We assume that dynamic regions dispose of more inclusive, less dynamic regions of more exclusive social capital. High levels of inclusive social capital in turn influence regional development (Westlund & Adam, 2010).

Corporate regional engagement can be defined as the “active involvement of firms in shaping the contexts and networks a firm is involved in” (Lengauer & Tödtling, 2010, p. 7) and can lead to socio-economic change (Nussmüller et al., 2009). This article is particularly interested in social capital related to corporate regional engagement in terms of regional collaboration among firms (bonding social capital), and between firms and other actors (bridging social capital). The potential for regional socio-economic development is highest when the interests of firms and other regional actors overlap and those actors collaborate to tackle matters of regional concern (Kiese & Schiek, 2016).

We examine the social capital of regional firms in terms of trust levels, membership in business associations, participation in regional development associations and service clubs, concentrating on differences in terms of their rather inclusive or exclusive characteristics from

a regional firms' point of view. The theoretical assumptions are tested empirically, based on data from a questionnaire that was sent to the 978 Chief Executive Officers (CEO) of all manufacturing enterprises in six Swiss non-core regions. They consist of region pairs that are geographically close and include one dynamic region and one less dynamic region. Based on our findings, we draw conclusions that help politicians to adopt a more detailed perspective on the potential of corporate regional engagement for development in non-core regions.

The research questions are: 1) Are there differences in social capital related to corporate regional engagement as regards inclusive and exclusive aspects between dynamic and less dynamic non-core regions? 2) Which lessons can be drawn for policy interventions?

2 Corporate regional engagement

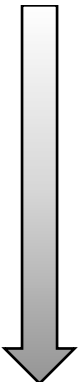
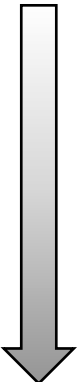
A growing strand of literature emphasizes the regional component of the concept of Corporate Social Responsibility (CSR) (Heblich & Gold, 2010; Kiese & Schiek, 2016; Kleine-König & Schmidpeter, 2012; Nussmüller et al., 2009). While this concept does not a priori have a clear spatial delimitation and underlines the responsibility voluntarily assumed by firms regarding society, economy and ecology in general, the concept of Corporate Regional Responsibility (CRR) underlines the responsibility firms assume for the region in which they are located (Schiek, 2016). The instrument to implement CRR is corporate regional engagement, which means the active participation of firms in “shaping the contexts and networks a firm is involved in” (Lengauer & Tödtling, 2010, p. 7). Through corporate regional engagement, firms can upgrade “regional productive potentials” (Lengauer & Tödtling, 2010, p. 2). As such, the majority of activities are business-oriented (Lengauer & Tödtling, 2010). Corporate regional engagement seems to be particularly successful when firms collaborate with other firms and actors for common goals aimed at improving regional endowments. This, in turn, leads to socio-economic development of the region (Nussmüller et al., 2009).

There is a lack of studies examining corporate regional engagement in non-core regions (Suarsana & Glückler, 2016). Corporate regional engagement, however, seems to be especially important for firms in non-core regions, as they are embedded in challenging contexts characterized by institutional and organizational thinness or a lack of adequate infrastructure (Matuschewski & Leick, 2012; Trippel, Asheim, & Mörner, 2016). Literature on rural entrepreneurship provides evidence that entrepreneurs are strongly attached to their community and place, and engage in activities going beyond their daily business by influencing regional contexts. This high degree of embeddedness of rural entrepreneurs and the corresponding

engagement can have a positive influence on socio-economic regional development (Kibler, Fink, Lang, & Muñoz, 2015; McKeever et al., 2015). Personal engagement appears to be crucial in non-core regions, as economic actors might engage on behalf of their region out of a feeling of personal attachment that is not part of “corporate” regional engagement in terms of firm strategies (Nussmüller et al., 2009). This study potentially includes this personal engagement of decision-makers of firms, when employing the term “firm”.

The degree of socio-spatial embeddedness of firms depends on the type of engagement, as illustrated in a simplified way in table 1.

Table 1. Different intensities of regional engagement, corresponding degree of regional embeddedness and benefit for firms or the region.

Degree of necessity	Intensity of regional engagement	Degree of regional socio-spatial embeddedness	Benefit (rather enterprise or region)
Compulsory/optional	Passive engagement in terms of job creation, demand of regional products and tax paying, which is compulsory for every firm	Low  High	Enterprise  Region
Optional	Reactive engagement for a good cause, such as sponsoring or donations		
Optional	Proactive engagement for regional development by influencing regional business related contexts		

Source: Author’s own illustration based on Kleine-König and Schmidpeter (2012), Heblich and Gold (2010), Lengauer and Tödting (2010), Bertelsmann Stiftung (2010) and Nussmüller et al. (2009).

Firms contribute to regional development as taxpayers and employers of regional workforce (Lengauer & Tödting, 2010). This engagement is largely passive and compulsory, often within firm boundaries and socio-spatial embeddedness of firms is rather low. When firms sponsor regional events, donate regional facilities or participate in voluntary work, they react to certain expectations the local community has towards them. Hence, they interact with community and place, create dyadic relations and become corporate citizens. This engagement may be reactive and rather short-term and corresponds to a medium degree of embeddedness of firms. Finally, firms can proactively and sustainably engage for regional development by extending their embeddedness and become good corporate citizens by connecting with other firms and/or regional actors, such as public authorities or civil society (Heblich & Gold, 2010; Kleine-König

& Schmidpeter, 2012). Different types of engagement benefit firms and the region to varying degrees. Punctual engagement in terms of sponsoring or donations in particular can benefit a firm's reputation. Engagement that includes different actors from the economic, public and civil society spheres and aims to solve a concrete regional problem has a more significant impact at the regional level. Hence, regional engagement has effects at the firm and the regional level, but one of them might predominate (Kleine-König & Schmidpeter, 2012). When interests of firms from different industries and other regional actors overlap, there is a huge potential for regional socio-economic development (Kiese & Schiek, 2016). This article takes a more nuanced look at collaboration among firms and between firms and different actors and the inclusive and exclusive characteristics of these various forms of collaboration.

3 Social capital related to corporate regional engagement

Social capital seems to be a suitable concept to examine this embeddedness in terms of networks shaped by corporate regional engagement. The main components of social capital are “social networks and the norms of reciprocity and trustworthiness that arise from them” (Putnam, 2000, p. 19). Those norms and networks “enable people to act collectively” (Woolcock & Narayan, 2002, p. 226). Social capital seems to play a pivotal role in non-core regions, since by collaborating for common goals, firms and other actors can bundle their forces to overcome challenges of the periphery (Callois & Aubert, 2007).

Social capital is a multi-level phenomenon, as it occurs at the individual and the collective level at different spatial scales (Adler & Kwon, 2002). Accordingly, social capital can be conceptualized at the micro-level as a resource that engenders gains for individuals and can be understood as a private good (Bourdieu, 1986). Authors like Putnam (1993, 2000) or Fukuyama (1995) emphasise the macro-level of social capital and understand it as the property of a region or a country and therefore as a public good. As a result, social capital has aspects of a private and public good and can engender externalities for a collective (Putnam, 2000). This article is especially interested in the characteristics of social capital at the regional level and, therefore, the structural aspects (Granovetter, 1985; Nahapiet & Ghoshal, 1998). High levels of regional social capital positively influence the economic development of a region (Fukuyama, 1995; Putnam, 2000).

However, it is vital to examine exclusive and inclusive characteristics of social capital. When regional social capital consists of different exclusive groups that do not collaborate, are “inward looking and tend to reinforce exclusive identities” (Putnam, 2000, p. 22), the overall structure

of social capital is fragmented, which negatively influences the social cohesion of a region (Jack, 2005). Regions that persist in such traditional structures face the risk of “lock-in” (Grabher, 1993). In contrast, when regional social capital has high shares of inclusive groups that are “outward looking” (Putnam, 2000, p. 22) and include different firms and other regional actors, such as municipalities, region-wide collaboration might be better developed and large parts of regional actors can benefit. It is however important to note that exclusive and inclusive aspects are not dichotomous, but rather different ends of a continuum. We focus on bonding and bridging social capital, defined as networks among regional firms (bonding social capital) and networks between regional firms and other actors, such as municipalities or politicians (bridging social capital) (Westlund & Gawell, 2012). Unlike Putnam (2000), who equates bonding with exclusive social capital and bridging with inclusive social capital, bonding and bridging social capital as defined in this article can have exclusive and/or inclusive characteristics from a regional firms’ point of view.

4 How to measure social capital related to corporate regional engagement?

There is a lack of studies investigating the regional structure of social capital related to corporate regional engagement. We measure social capital in terms of trust among firms and between firms and other actors and membership/voluntary work in associations/clubs that shape regional contexts, integrating criteria for inclusiveness and exclusiveness (see table 2). Those are common measures for social capital (Sørensen, 2012).

We argue that trust levels and inclusive bonding and bridging social capital are higher in dynamic regions, based on the assumption that this leads to region-wide collaboration and therefore social (Sørensen, 2016; van Oorschot, 2006) and economic development (Fukuyama, 1995; Kiese & Schiek, 2016; for a list see Westlund & Adam, 2010). Less dynamic regions not only seem to lag behind economically speaking, but also seem to be characterized by more fragmented and exclusive social capital (Jack, 2005) and thus lower trust levels. This leads to the following hypothesis:

H1: Firms’ trust in other firms, municipal councils and politicians at a regional level is higher in dynamic regions than in less dynamic regions.

Furthermore, we are interested in differences regarding membership in associations that shape regional contexts and have inclusive and exclusive aspects, respectively. We classify associations as either inclusive or exclusive from a regional firms’ perspective in at least one

of four aspects: composition, spatial extent and the expected benefit of their activities. As to composition, we distinguish between associations that are accessible to an exclusive group of firms (e.g. only firms from one industry) and associations that are potentially accessible to all firms of a region (e.g. cross-industry associations). When a group encompasses only a subregional level, it is spatially exclusive from a regional point of view. Groups that encompass the regional and supraregional level, meanwhile, are inclusive. Then, the outcomes of the activities of an association can rather benefit individual firms (exclusive benefit) or a large proportion of regional firms (inclusive benefit), creating additional value for regional development (Kleine-König & Schmidpeter, 2012). This is not always easy to determine, as exclusive and inclusive characteristics can coincide and are more or less prevailing (Putnam, 2000). Table 2 shows the different types of social capital, their characteristics as regards inclusiveness and exclusiveness and their measurement in the questionnaire.

Table 2. Social capital variables, their characteristics and measurement.

Social capital variables	Type of social capital	Characteristics (inclusive/exclusive)			Measurement
		Composition from a regional firms' point of view	Spatial extent	Benefit (individual firm or region in terms of business environment)	
<i>Trust</i>					
Trust in other regional firms	Bonding	<i>Pre-condition for regional cooperation, the higher the better (Fukuyama, 1995; Putnam, 1993)</i>			Five-point Likert scale
Trust in members of the municipal councils of the region	Bridging	<i>Pre-condition for regional cooperation, the higher the better (Fukuyama, 1995; Putnam, 1993)</i>			Five-point Likert scale
Trust in regional politicians	Bridging	<i>Pre-condition for regional cooperation, the higher the better (Fukuyama, 1995; Putnam, 1993)</i>			Five-point Likert scale
<i>Associational activity</i>					
Membership and voluntary work in cross-industry business associations	Bonding	Inclusive	<i>Municipal: exclusive Regional: inclusive Supra-regional: inclusive National: inclusive</i>	More inclusive than exclusive: rather municipal/regional benefit	Yes/no
Membership and voluntary work in industry-specific business associations	Bonding	Exclusive (only one industry)	<i>National/international: inclusive</i>	More exclusive than inclusive: rather firm benefit	Yes/no
Voluntary work in regional development association	Bridging	Inclusive	Inclusive	More inclusive than exclusive: rather regional benefit	Yes/no
Membership and voluntary work in Service Clubs	Bridging	Exclusive (not everybody can participate)	Inclusive	Exclusive and inclusive benefit	Yes/no

A first group of associations is business associations (bonding social capital). Cross-industry business associations, such as employers' associations, have inclusive characteristics, as their aim is to engage for the economic framework of the whole region including the interests of firms from different industries. Furthermore, collaboration between firms from non-core

regions with firms from adjacent regions in a supra-regional inclusive association could be crucial for building a critical mass of firms, e.g. for innovation (Rodríguez-Pose & Fitjar, 2013). By ‘supra-regional’ we mean associations that include adjacent regions below the national level. As to membership in national, cross-industry business associations, we assume that firms from dynamic regions are more active since such associations provide firms in the periphery access to important political decision-making processes, which could help them to shape regional contexts (Eriksson, 2008). However, cross-industry business associations can also be spatially exclusive when organized e.g. at the municipal level, which could be an indicator for a fragmented character of less dynamic regions. Moreover, it makes sense to include voluntary work of firms in associations, as this is an indicator of even greater engagement (Sørensen, 2016). This leads to the following hypotheses:

H2a: More firms are members of / volunteer in municipal cross-industry associations in less dynamic regions than in more dynamic regions.

H2b: More firms are members of / volunteer in regional / supra-regional and national cross-industry associations in more dynamic regions than in less dynamic regions.

Industry-specific business associations (bonding social capital) however, are rather exclusive from a regional point of view as they “only” engage for the interests of one industry. Hence, their benefit for a collective of regional firms from different industries is limited (Schiek, 2016). Even if they have positive effects for their members, they could have a negative influence on bonding social capital at a regional level when they grow too powerful and do not interact with other industries for regional interests. This may lead to a fragmentation of overall social capital (Adler & Kwon, 2002). As industry-specific associations are in most instances organized at a national level in Switzerland with regional sections, which correspond to our regions or encompass a larger perimeter, we focus on national and international industry-specific associations. However, voluntary work in international industry-specific associations is limited due to spatial distance and association size, for instance. Therefore, we do not expect differences in this regard. These reflections result in the following hypothesis:

H2c: More firms are members of / (volunteer in) national and international industry-specific associations in less dynamic regions than in more dynamic regions.

As to bridging social capital, regional development associations are crucial, as they explicitly aim to improve regional contexts (Kiese & Schiek, 2016; Kleine-König & Schmidpeter, 2012). These should be accessible to all firms in a region, meaning that they are inclusive from a

regional firms' point of view. Moreover, we argue that a decision-maker at a firm who engages in a regional development association is motivated to engage for the region. As not all associations for regional development in the six case study regions invite firms to be members, we compare volunteer work, which is possible in all of them. We conclude that:

H3: More firms volunteer in regional development associations in more than in less dynamic regions.

Service clubs also create bridging social capital from a regional firms' perspective by bringing together different (regional) actors. However, such "clubs" have a rather exclusive character (Schulz & Baumgartner, 2013), as not everybody can join. Consequently, the structure of regional social capital may be fragmented and in-group ties seem to be especially strong (Jack, 2005). Therefore, their contribution to socio-spatial embeddedness of large parts of regional firms remains limited. Although they are very active regarding charity projects, their projects concern not only the regional but different spatial scales and do not necessarily aim at enhancing regional economic potential. Nevertheless, service clubs can be starting points for new projects for regional development (Gradinger, 2006; Suarsana & Glückler, 2016). In addition to the public purpose in terms of donations and voluntary work, they also serve private purposes, such as networking (Putnam, 2000). It is difficult to determine whether individual or regional interests prevail. Nevertheless, access is exclusive, resulting in the following hypothesis:

H4: More firms are members of / volunteer in a regional service club in less dynamic regions than in more dynamic regions.

5 Methods and data

This article employs a comparative case study method (Doloreux, 2004) to examine the extent to which social capital related to corporate regional engagement differs in non-core regions with diverse development paths. We conducted a survey addressed to all CEOs from the manufacturing industry in three more and three less dynamic non-core regions in Switzerland. The manufacturing industry plays an important role in all six regions. The base population corresponds to compulsory registrations in the Swiss commercial register of 2015. The manufacturing sector was defined according to the Swiss NOGA 2008 nomenclature (Swiss Statistics, 2016) excluding divisions 10 (manufacture of food products), 11 (manufacture of beverages) and 12 (manufacture of tobacco products), as they are closer to the agricultural than to the manufacturing sector. As we are interested in the differences of regional social capital in more and less dynamic regions, we employ descriptive statistics and draw conclusions for the

population based on Pearson's chi-square test/Fisher's exact test and the Mann-Whitney test with a significance level of $p < 0.05$, as the data is available at a categorical or ordinal scale. Since a comparison of the pairs of regions appears interesting, especially due to their geographical proximity and, in the case of Rhine Valley/Toggenburg, institutional proximity at a cantonal level, we also tested for differences between them. We asked the participants to add reasons for their engagement in regional development associations to obtain more qualitative insights and interpreted the data using information from desktop research and secondary literature.

We sent the questionnaire to 1,102 firms. 124 of the addresses were not valid as the company left the region or was no longer active. Hence, the total of manufacturing enterprises in the 6 regions is 978. The response rate was 45.1%, corresponding to 441 completed questionnaires (see table 3).

Table 3. Response rates for region types and individual regions.

	Sent valid questionnaires	Completed questionnaires	Response rate
Total	978	441	45.1%
Dynamic regions	695	285	41.0%
Less dynamic regions	283	156	55.1%
Individual regions			
Rhine Valley	474	198	41.8%
Toggenburg	179	102	56.4%
Obwalden	170	71	41.8%
Entlebuch	44	26	59.1%
Diessenhofen	51	16	31.4%
Klettgau/Schleitheim	60	28	46.7%

The survey is based on Dillman et al.'s (2014) tailored design method, including a postal pre-notice letter, followed by a second letter together with the questionnaire as a paper version. We later sent postcards to all addressees; this served two purposes: 1) to thank those who had already completed the questionnaire and 2) to remind those who had not. A short time later, we sent a second e-mail reminder only to those who had not yet responded, who then had the option to complete the survey online, as mixed-mode surveys have higher response rates (Greenlaw & Brown-Welty, 2009). We did not provide both modes immediately, since potentially more people respond when both options are not available simultaneously (Dillman et al., 2014). Lastly, we called any participants who had not yet responded, to convince them to do so.

6 Case study regions

The six case studies are non-core regions (see figure 1), as they are situated outside the five metropolitan areas (Geneva-Lausanne, Bern, Basel, Zurich, and southern Ticino) of Switzerland (Schuler, Dessemontet, & Joye, 2005).

Figure 1. The case study regions.



Source: Map base layer by the Swiss Federal Office of Topography, www.geo.admin.ch. Cartography by Alexander Hermann, Institute of Geography, University of Bern.

Such a perspective corresponds to Lagendijk and Lorentzen's definition of periphery (2007) and is also consistent with the territories that can apply for financial support under the Swiss "New Regional Policy", which aims to support corporate competitiveness and development of rural and mountainous regions (OECD, 2011). The regions are characterized by small towns with less than 12,000 inhabitants, which have a different economic structure from metropolitan areas - the manufacturing sector is dominant and education levels, average wages and growth rates are rather low (Dessemontet, Kaufmann, & Jemelin, 2010). Switzerland is an interesting case as it is a highly developed country with pronounced spatial differences between non-core regions despite the short distances. The six case study regions are especially interesting as they consist in each case of two regions that are geographically close, but have followed different development paths. Therefore, the pairs of regions consist of a more and a less dynamic region

in economic and demographic terms and regarding their development path (see below). Table 4 gives an overview of important indicators.

Table 4. Profile of the six case study regions.

	Rhine Valley	Toggenburg	Obwalden	Entlebuch	Diessenhofen	Klettgau, Schleithem	Switzerland
Area (km²)	138.92	488.53	480.63	394.51	41.18	122.12	41,285
Population 2013	69,612	45,261	36,507	16,732	7,020	12,033	8,139,631
Population largest community in 2013	Altstätten 11,168	Kirchberg 8,522	Sarnen 10,084	Escholzmatt- Marbach 4,323	Diessenhofen 3,614	Hallau 2,071	Zürich 384,786
Population growth 2003-2013	9.98%	-0.77%	9.57%	1.22%	9.62%	5.83%	9.92%
Unemployment rate 2013	2.7%	1.78%	0.92%	0.57%	2.36%	1.42%	3.11%
Total employment in 2013	38,069	21,967	17,202	8,646	2,879	4,686	4,864,440
Primary sector	3.76%	13.39%	7.46%	24.09%	12.30%	20.76%	3.58%
Secondary sector	44.62%	35.59%	29.05%	25.39%	40.92%	34.59%	21.63%
Tertiary sector	51.62%	51.02%	63.49%	46.83%	46.79%	44.64%	74.79%
Employment growth 1995-2013	18.29%	4.63%	9.53%	8.70%	5.07%	6.60%	28.26%
New firms in the Secondary sector*	4.17	2.54	3.10	1.55	2.28	3.57	2.69

Sources: Swiss Federal Statistical office, various years.

*Cumulative amount of new firms for the years 2004-2013 per 1000 inhabitants.

Rhine Valley (dynamic) and Toggenburg (less dynamic) belong to the canton of St. Gallen in eastern Switzerland. In both regions, the textile industry prevailed in the 19th and at the beginning of the 20th century. Following its decline, however, they followed different development paths. The dynamic region Rhine Valley is characterized by numerous high-tech firms and an increase in population and employment (Gröble, Benson, & Flockerzi, 2015). Toggenburg, however, shows characteristics typical of non-core regions, such as brain-drain, a decrease in employees and residents and a lack of typical growth industries like ICT or electrical engineering (Anderegg, 2011). The region is fragmented with regard to its interests, partially due to the dominance of the tourism industry in the upper part of the valley (Büchler, 1993).

Obwalden (dynamic) and Entlebuch (less dynamic) are situated in central Switzerland. Starting in 1950, the cantonal authorities of Obwalden began promoting regional industry by encouraging the attraction of different industries. Thanks to those interventions, the food,

plastic and apparatus engineering industries have developed, and many small enterprises in the electrical and automobile industry settled here. However, industrial development was unable to keep pace with the Swiss average. This prompted the cantonal government to successively revise the fiscal laws at the beginning of the 21st century, favouring enterprises and wealthy newcomers (Garovi, 2013). In Entlebuch, glass manufacturing, lactose processing, the brick and the textile industry developed over the course of the 18th, 19th and 20th century. The majority of those industries have now disappeared (Emmenegger, 1971). Until recently, Entlebuch was known as the ‘poorhouse’ of Switzerland (Schilliger, 2012), although the tourism industry has developed. In 2001, Entlebuch was awarded UNESCO Biosphere - an institution that aims to activate endogenous development potentials (Glauser, 2005).

Diessenhofen (dynamic) is situated in north-eastern Switzerland in the canton of Thurgau. Diessenhofen was known for its textile industry in the second half of the 19th century. When crisis hit the textile industry, many furniture enterprises developed. After WWII, building industry suppliers boomed, as did new technology enterprises (Raimann, 1992). Diessenhofen has developed into a cantonal industrial centre with an emphasis on the metal, plastics and timber industries (Stadtgemeinde Diessenhofen, n.d.). The region of Klettgau/Schleitheim (less dynamic) is situated in the canton of Schaffhausen in north-eastern Switzerland. The textile industry was also an important economic sector in the 19th century in Klettgau. Over the years, many successful enterprises were established, including SIG enterprise in 1853 (railway-car production) or Rimuss AG in Hallau, which began non-alcoholic grape juice production in 1945 and exists to the present day. Another important industry has been the metal and engineering industry (Scholz, Bösch, Carlucci, & Oswald, 1999). Nevertheless, in the 20th century, many residents migrated to the cantonal capital Schaffhausen for work (Pfaff, 2006).

7 Results

7.1 Trust in dynamic and less dynamic regions

7.1.1 Trust among regional firms (bonding social capital)

Contrary to our hypothesis, trust levels among regional firms are very high in all dynamic and less dynamic regions. The only significant difference was observed in Obwalden and Entlebuch. Interestingly, the less dynamic region Entlebuch has significantly higher levels of trust than its dynamic counterpart.

In dynamic and less dynamic regions, trust in regional firms is very high: 86.2% of the respondents from dynamic and even 88.3% from less dynamic regions agree on the statement

that one can (rather or fully) trust regional firms (see table 5). Apparently, the potential for collaboration between firms is present in all regions, but has probably not been activated in all of them or collaboration takes place informally and/or temporarily. The results confirm the assumption of high levels of trust in non-core regions in general (Léon, 2005; Putnam, 2000). Trust among firms is significantly higher in Entlebuch than in Obwalden. This is especially noteworthy, as Entlebuch belongs to the group of less dynamic regions. The establishment of the Biosphere in 2001 and its focus on collaboration encompassing all industries and municipalities (UNESCO Biosphäre Entlebuch, 2007) seems to have had an important influence on trust levels among regional firms. Knaus et al. (2017) found that labelled products – another endogenous measure of the Biosphere – make a significant contribution to economic development.

Table 5. Descriptive statistics for “trust in regional firms”.

To what extent do you agree on the following statement: “One can trust the firms of Rhine Valley”.

	Valid N	Mdn	Percentage indicating rather or totally agree
Dynamic regions	275	4	86.2%
Less dynamic regions	154	4	88.3%
Rhine Valley	193	4	85.5%
Toggenburg	101	4	89.1%
Obwalden	68	4	89.7%
Entlebuch	25	5	92%
Diessenhofen	14	4	78.6%
Klettgau/ Schleitheim	28	4	82.1%

Obwalden/Entlebuch: $n = 93$; $U = 609.00$; p -value = 0.021* (Mann-Whitney test)

Notes: * $p < .05$, ** $p < .01$, *** $p < .001$

Our findings are interesting as collaboration in Entlebuch was unsuccessful in the past. Looking to establish the reasons for industrial failure in Entlebuch, Emmenegger (1971) highlights a lack of forward-looking individuals collaborating to achieve something bigger by combining their financial power. Instead, they were characterized by narrow-mindedness and reckless competition, which destroyed goodwill, according to Emmenegger. Today, Entlebuch is a flagship region for endogenous development (Schilliger, 2012).

7.1.2 Trust in regional municipal councils and politicians (bridging social capital)

Similar to trust levels among firms, there are no significant differences between dynamic and less dynamic regions regarding trust in regional municipal councils and politicians, which does not confirm our hypothesis. However, those trust levels are lower than trust levels among firms.

Trust levels of firms in municipal councils are significantly higher in Entlebuch than in Obwalden, which could again be related to the establishment of the Biosphere.

Less than half of the respondents from dynamic (46.4%) and less dynamic regions (49.3%) rather or fully agree that the members of the municipal council can be trusted. About a third of the firms from dynamic regions rather or fully agree that regional politicians can be trusted, in less dynamic regions the share is 39.6% (see table 6). A high share of participants from both region types is neutral with regard to trust in members of the municipal councils and politicians (44.8% and 49.4% in less dynamic and 44.9% and 51.5% in dynamic regions, respectively). This could be an indicator for respondents not knowing or not wanting to give an answer. The results indicate that it is important to employ a more nuanced view when investigating trust levels in non-core regions, as high levels of trust do not seem to concern all actor compositions. However, trust in municipal councils is significantly higher in Entlebuch than in Obwalden. The establishment of the Biosphere seems to have had its desired effects on regional trust building, again.

Table 6. Descriptive statistics for “trust in regional municipal councils” and “trust in regional politicians”.

To what extent do you agree on the following statements: “One can trust the municipal councils/the politicians of Rhine Valley.”

	Trust in regional municipal councils			Trust in regional politicians		
	Valid N	Mdn	Percentage indicating rather or totally agree	Valid N	Mdn	Percentage indicating rather or totally agree
Dynamic regions	274	3	46.4%	274	3	35.8%
Less dynamic regions	154	3	49.3%	154	3	39.6%
Rhine Valley	192	3	45.8%	192	3	32.8%
Toggenburg	101	3	46.5%	101	3	35.6%
Obwalden	68	3	45.6%	68	3	42.6%
Entlebuch	25	4	68%	25	4	60%
Diessenhofen	14	4	57.1%	14	3	42.9%
Klettgau/ Schleitheim	28	3	42.9%	28	3	35.7%

Obwalden/Entlebuch: $n = 93$; $U = 587.50$; p -value = 0.014* (Mann-Whitney test)

Notes: * $p < .05$, ** $p < .01$, *** $p < .001$

7.2 Associations with inclusive characteristics

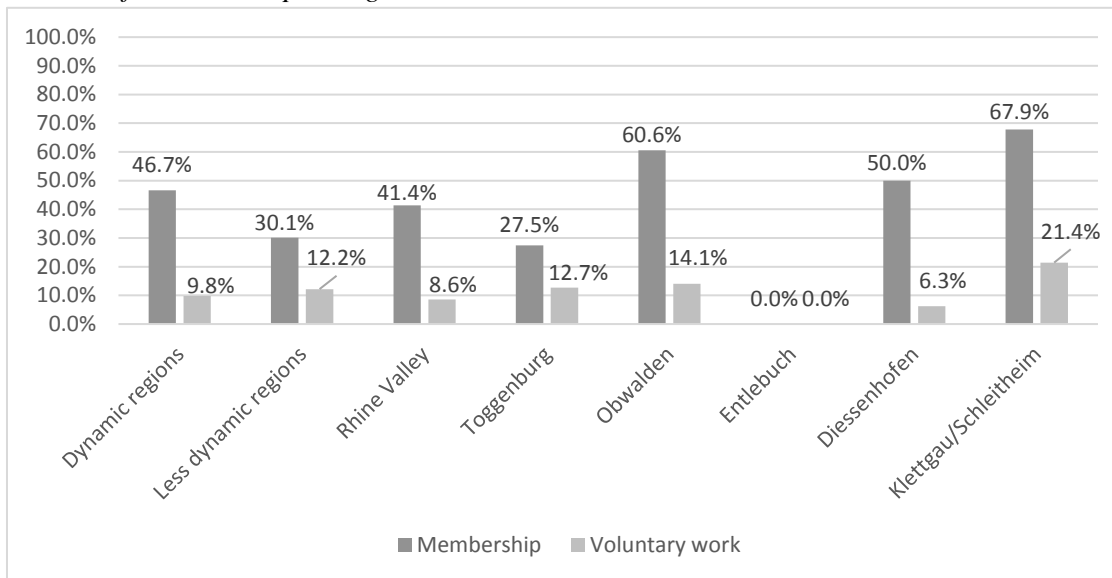
7.2.1 Cross-industry business associations (bonding social capital)

Our assumption of higher membership rates in cross-industry business associations in dynamic than in less dynamic regions proved to be true for the regional scale, but not for the supra-regional and national level. Moreover, we argued that more firms from less dynamic regions are members of sub-regional associations; however, the results did not confirm this neither. There are no differences regarding voluntary work between dynamic and less dynamic regions, but between Rhine Valley and Toggenburg. Volunteering in municipal associations is higher in Toggenburg.

Significantly more firms from dynamic regions (46.7%) are members of regional cross-industry business associations than firms from less dynamic regions (30.1%) (see figure 2). Moreover, the results of Pearson's chi square test are significant for Rhine Valley and Toggenburg. There are more members of regional business associations in Rhine Valley (41.4%) than in Toggenburg (27.5%). The regional employers association of Rhine Valley is known for being especially strong in the region, which is mainly related to their long-term collaboration, especially for cross-border issues. This association was established in 1936 for firms of the textile industry, and, from 1946, firms from every industry could join (Müller, 1986). When collaboration rests on continuance and trust, the willingness to solve (regional) problems prevails over the realisation of individual interests (Meincke, 2008). The association between membership in regional business associations and the corresponding region is also significant in the case of Obwalden (60.6%) and Entlebuch (0%). There are no significant differences for voluntary work.

Figure 2. Membership and voluntary work in regional cross-industry business associations.

Are you or is your firm a member of one or several of the business associations listed below?/ Do you volunteer for the corresponding association?



Membership dynamic and less dynamic regions: $n = 441$; $\chi^2 = 11.415$; 1df; p -value = 0.001**

Membership Rhine Valley/Toggenburg: $n = 300$; $\chi^2 = 5.652$; 1df; p -value = 0.017*

Membership Obwalden/Entlebuch: $n = 97$; $\chi^2 = 28.285$; 1df; p -value 0.000***

Notes: * $p < .05$, ** $p < .01$, *** $p < .001$

There are no significant differences regarding membership and voluntary work in cross-industry business associations at the municipal, supra-regional and national level for dynamic and less dynamic regions. In the case of supra-regional collaboration, we do however not know whether this collaboration takes place between different regional associations without creating a supra-regional one. As to membership at the national level, perhaps a few key persons who engage at a higher spatial level seem to be enough to represent the entire region (see Adler & Kwon, 2002). As to the municipal level, some firms in more dynamic regions may be members of municipal associations out of a feeling of responsibility, without engaging very much. These are however speculations and should be supplemented by qualitative insights in future research.

Nevertheless, significant results were identified for Rhine Valley/Toggenburg with regard to voluntary work in municipal business associations (11.1% vs. 21.6%). According to the results of Pearson's chi square test, there is a significant association between voluntary work in municipal associations and the region of Toggenburg ($n = 300$; $\chi^2(1) = 5.882$, p -value = 0.015*). It is important to note that Toggenburg has a fragmented character and the municipalities seem to be rather independent and have difficulties working together. This is attributable to the longstanding economic and political dominance of the Heberlein textiles enterprise (especially in the second half of the 20th century), established in 1835. Heberlein was located in the central municipality of Wattwil and closed its doors in 2001. In 1943, a

number of firms created an employers' association at the municipal level as a counterweight to the Heberlein enterprise. A region-wide employers' association has existed only since 1986 (Anderegg, 2012). Recently, some firms in Toggenburg started to motivate the municipalities to step up their collaboration at a regional level (Hemm, 2013). As to membership in supra-regional business associations, only Entlebuch and Obwalden differ significantly with more members in Entlebuch (57.7% vs. 22.5%). The results of the Pearson chi square tests are: $n = 97$; $\chi^2(1) = 10.817$, $p\text{-value} = 0.001^{**}$. This seems to compensate for the absence of regional employers' associations in Entlebuch.

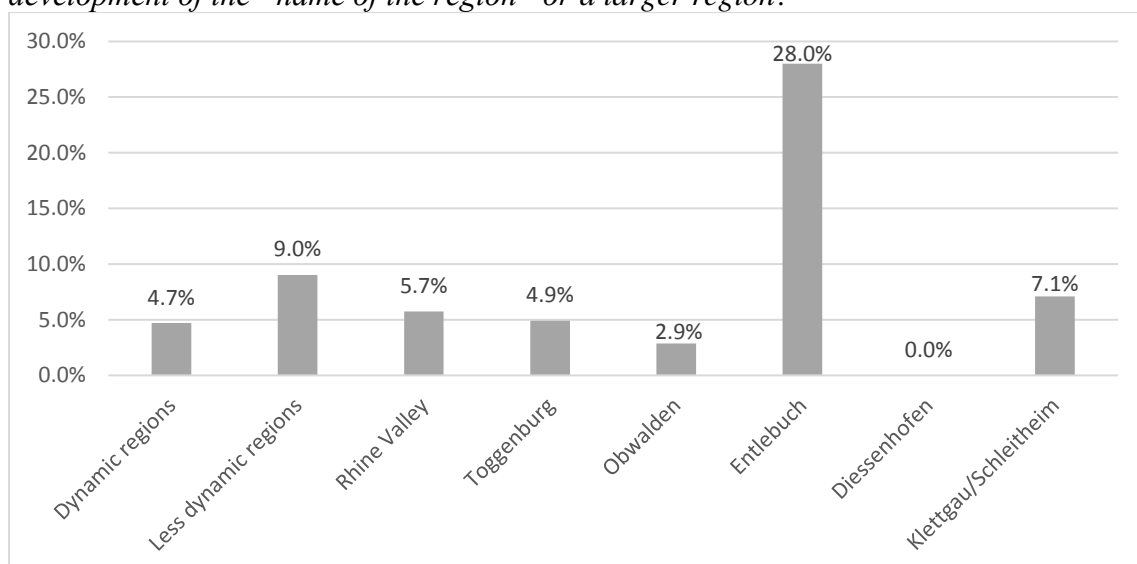
7.2.2 Regional development associations (bridging social capital)

Contrary to our assumption, there are no significant differences between voluntary work of firms in more and less dynamic regions. However, Entlebuch achieves high levels of engagement in regional development associations.

More firms from less dynamic regions indicate to volunteer in regional development associations (9% vs. 4.7%). The results of Pearson's chi square test however, are not significant. In general, only a small share of firms volunteer in regional development associations (see figure 3).

Figure 3. Voluntary work in regional development associations.

Do you volunteer for the association "name of the association" (e.g. participation in projects, membership in an expert group)? / Are you involved in other associations that engage for the development of the "name of the region" or a larger region?



Voluntary work Obwalden/Entlebuch: $n = 95$; Fisher's Exact Test: $p\text{-value} = 0.001^*$ (one-sided and two-sided).
Notes: $*p < .05$, $**p < .01$, $***p < .001$

One reason for this could be that not all firms can participate and the quality of engagement of key persons seems to be more important (Adler & Kwon, 2002). The results are especially surprising with regard to Obwalden and Entlebuch with 2.9% of the respondents from Obwalden doing voluntary work and 28% from Entlebuch. Fisher's exact test is significant with $p = 0.001^*$ (one-sided and two-sided), $n = 95$. Among respondents from Entlebuch, the reasons for engaging are: pleasure, networking, representation of business interests, finding joint solutions, promoting the development of the region, or simple interest. Another respondent wrote the slogan: 'assume responsibility – co-think – co-steer – co-design'. Here again, the establishment of the Biosphere seems to have had an important influence on the collaboration of different regional actors beyond individual firm interests. Engagement of firms in regional development associations seems to be highly relevant in the context of corporate regional responsibility, as those associations bring together different regional actors and cover a broad range of regional interests (Kiese & Schiek, 2016). Therefore, with the exception of Entlebuch, all regions still have huge potential to collaborate with other actors.

7.3 Associations/clubs with exclusive characteristics

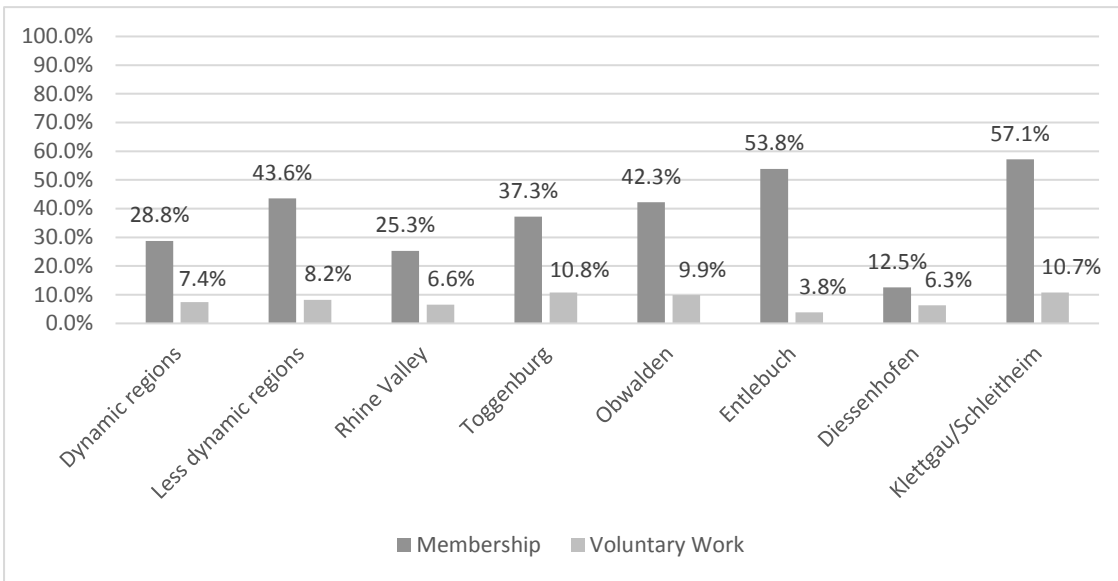
7.3.1 Industry-specific business associations (bonding social capital)

As expected, membership rates in national and international industry-specific associations are significantly higher among firms from less dynamic regions than those from dynamic regions. The results are significant for Toggenburg/Rhine Valley and Diessenhofen/Klettgau, Schleithem. There are no significant differences for voluntary work.

Considerably more firms from less dynamic regions are members of national industry-specific associations (43.6% vs. 28.8%). However, only small numbers of firms from more and less dynamic regions volunteer for those associations (7.4% vs. 8.2%) (see figure 4). The difference is not statistically significant. The results of Pearson's chi square test are significant for Rhine Valley/Toggenburg and Diessenhofen/Klettgau, Schleithem. The results are not significant for voluntary work.

Figure 4. Membership and voluntary work in national industry-specific associations.

If you or your firm are/is a member of other business associations (e.g. an industry specific association), please do not forget to mention this. Do not forget to indicate if you volunteer for this association.



Membership dynamic and less dynamic regions: n = 441; $\chi^2 = 9.863$; 1df; p-value = 0.002**

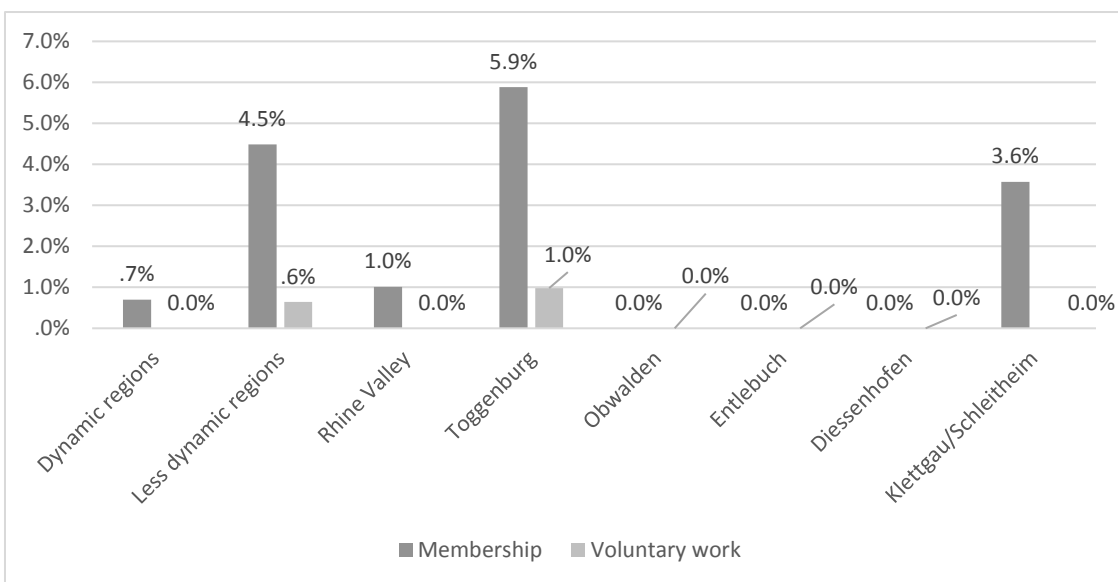
Membership Rhine Valley/Toggenburg: n = 300; $\chi^2 = 4.678$; 1df; p-value = 0.031*

Membership Diessenhofen/Klettgau, Schleithem: n = 44; $\chi^2 = 8.394$; 1df; p-value = 0.04*

Notes: *p < .05, **p < .01, ***p < .001

Figure 5. Membership and voluntary work in international industry-specific associations.

If you or your firm are/is a member of other business associations (e.g. an industry specific association), please do not forget to mention this. Do not forget to indicate if you volunteer for this association.



Membership dynamic and less dynamic regions: n = 441; Fisher's Exact Test: p-value = 0.011* (one-sided and two-sided).

Membership Rhine Valley/Toggenburg: n = 300; Fisher's Exact Test: p-value = 0.020* (one-sided and two-sided).

Notes: *p < .05, **p < .01, ***p < .001

When examining industry-specific associations at an international level, only a few firms indicated membership (0.7% in dynamic and 4.5% in less dynamic regions, see figure 5). Nevertheless, the association is significant. The share of voluntary work is very small in both types of regions (see figure 5) and differences are not statistically significant. The association is significant for Rhine Valley/Toggenburg concerning membership (see figure 5). Firms from Toggenburg in particular seem to join associations that focus on a specific industry, which could mean that they are more firm-centred than region-centred.

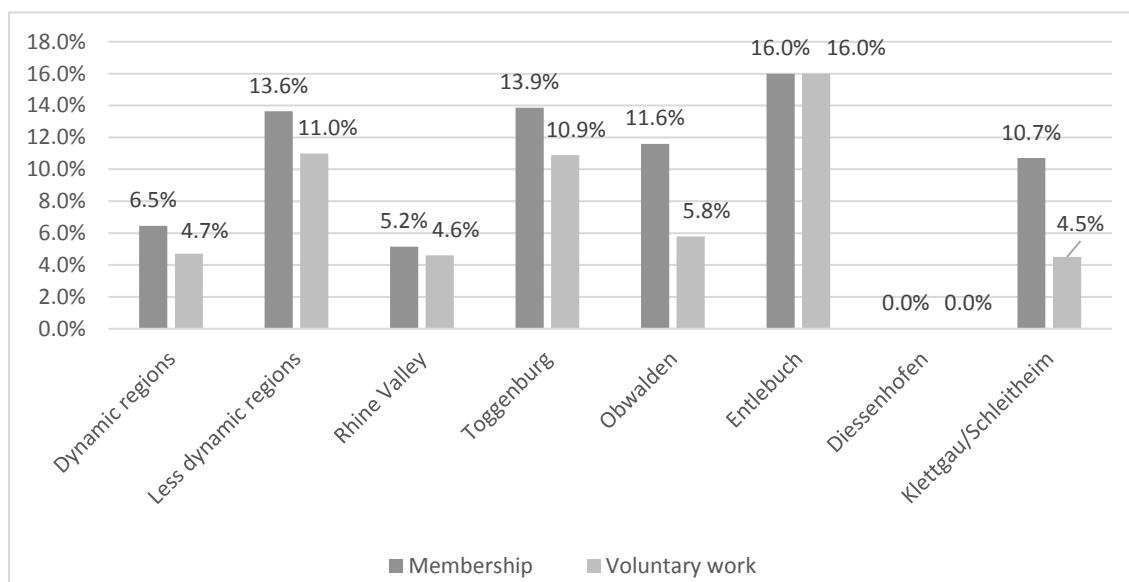
7.3.2 Service clubs (bridging social capital)

In line with our assumptions, membership and voluntary work in service clubs are significantly higher in less dynamic regions. Here, results are significant for Toggenburg and Rhine Valley.

Significantly more firms from less dynamic regions are members of and volunteer in service clubs, namely 13.6% and 11.0%, respectively, compared to 6.5% and 4.7% in dynamic regions (see figure 6).

Figure 6. Membership and voluntary work in service clubs.

Are you a member of a Service Club (Lions, Rotary, Kiwanis and so on)? / Do you volunteer for the corresponding club? / If you are a member of other Service Clubs, do not forget to mention this (see "others"). Do not forget to indicate if you volunteer for this club.



Membership dynamic and less dynamic regions: $n = 433$; $\chi^2 = 6.250$; 1df; p -value = 0.012*

Voluntary work dynamic and less dynamic regions: $n = 433$; $\chi^2 = 6.263$; 1df; p -value = 0.012*

Membership Rhine Valley/Toggenburg: $n = 295$; $\chi^2 = 6.737$; 1df; p -value = 0.009**

Voluntary work Rhine Valley/Toggenburg: $n = 295$; $\chi^2 = 4.108$; 1df; p -value = 0.043*

Notes: * $p < .05$, ** $p < .01$, *** $p < .001$

For Rhine Valley/Toggenburg, the associations with regard to membership and voluntary work are significant (5.2% vs. 13.9% for membership and 4.6% vs. 10.9% for voluntary work). Although the associations are not significant for the two other pairs of regions, more firms from

less dynamic regions indicate membership of a service club and involvement in volunteering (see figure 6). Service clubs often have a strong in-group cohesion, and engage for charity projects and networking at different spatial scales, not necessarily, however, to improve regional economic potentials in collaboration with other actors (Gradinger, 2006). Nevertheless, when they are willing to collaborate with other actors for regional goals, the region as a whole may benefit. Future research should address this aspect of regional engagement.

8 Discussion of results

The findings show that the dynamic case study regions have higher levels of inclusive social capital among regional firms (bonding social capital). This is an important indicator for corporate regional responsibility, as firms seem to be willing to engage together for regional interests (Schiek, 2016). On the other hand, the results confirm the assumption of higher levels of exclusive and fragmented social capital in less dynamic regions. Hence, those regions have the potential to improve inclusive collaboration for regional goals in order to strengthen regional governance structures and to avoid lock-in (Grabher, 1993). Nevertheless, all case study regions seem to have potential to improve collaboration between different actors.

The results illustrate that membership in regional cross-industry associations is higher in dynamic regions than in less dynamic regions. However, levels of voluntary work are rather low, meaning that many firms prefer to engage in a passive way (Schulz & Baumgartner, 2013). Nevertheless, informal cross-industry associations perform other functions. For example, they seem to be important institutions for the creation of trust and continuance of collaboration, as they outlive individual engagement (Meincke, 2008). To create high levels of trust, long-term experience and a tradition of collaboration appear to play a crucial role (Putnam, 1993). This is the case for example in the employers' association of Rhine Valley, which has been engaging for inclusive benefit since 1946. Such associations can also play an important role as supporting institutions for the engagement of key persons, who seem to be more successful when embedded in a well-connected collective (Putnam, 2000). Moreover, cross-industry associations have the possibility to sanction opportunistic comportment of individuals (Freitag et al., 2014).

Interestingly, trust levels among firms are high in all regions. However, this does not mean that collaboration really takes place, since trust is merely a facilitator of "action and cooperation for mutual benefits and collective goods" (van Oorschot, 2006, p. 150). Another explanation could

be that firms in less dynamic regions already collaborate in informal ways outside formal organizations. Moreover, low levels of trust in municipal councils and regional politicians are present in all case study regions and engagement in associations for regional development is rather low, too. One important reason for this lack of trust and, therefore, collaboration including diverse actors could arise from the different rationales behind private and public organizations. Hence, there still seems to be great untapped potential to find common ground between those organizations (Crevoisier, Jeannerat, Scherer, & Zumbusch, 2011).

The predominance of industry-specific business associations in less dynamic non-core regions could be an indicator for the need of those firms to concentrate primarily on their own interests before engaging for inclusive regional concerns, as doing business in non-core regions is challenging. However, engaging together to improve the regional economic environment, could benefit many firms. As regional cross-industry associations (bonding social capital) and regional development associations (bridging social capital) are not very strong in the majority of less dynamic regions, firms possibly persist in traditional structures of social capital, such as service clubs, that might serve to build important networks including persons with political influence. Moreover, they enable firms to assume social responsibility in terms of charity. Entlebuch is a very good example of a less dynamic region that succeeded in avoiding lock-in in terms of persisting in traditional structures. They have renewed their structure of social capital by bundling resources of firms and other actors and combining complementary competences, which is promising for regional socio-economic development (Kiese & Schiek, 2016; Suarsana & Glückler, 2016). Apparently, this is related to the establishment of the UNESCO Biosphere and corresponding key persons who activated this endogenous potential.

9 Policy recommendations

Based on our results, we derive several recommendations for policy interventions that aim to promote socio-economic development by activating endogenous potential of non-core regions. We particularly address the “New Regional Policy”, a Swiss policy programme that aims to motivate firms to participate in projects at the inter-firm level (bonding social capital) and the inter-sectoral level (bridging social capital), to foster regional development. This is especially relevant as a study commissioned by the Swiss State Secretariat for Economic Affairs demonstrates that participation of firms is still rather limited (Crevoisier et al., 2011). Our results are also interesting for non-core regions that aim to strengthen structures of regional governance, allowing for the assumption of responsibility by representatives from the economy and public sectors (Kleine-König & Schmidpeter, 2012).

The high levels of trust among firms in all case study regions represent a valuable potential. However, many firms, especially SMEs and firms in less dynamic non-core regions seem not to be aware of the strategic importance of corporate regional engagement (Kiese & Schiek, 2016) and social capital that benefits a collective of regional firms and other actors. Therefore, policy programmes should sensitize regional firms to the advantages of regional engagement for firms and regional development (Heblich & Gold, 2010). We suggest supporting cross-industry regional associations by improving their quality and (financial and human) resources. Such associations can serve as platforms for firms (and other actors) to collaborate and develop strategies to tackle the disadvantages of non-core regions, such as a lack of collaboration for innovation and to increase regional governance that depends on legitimate collaboration structures (Suarsana & Glückler, 2016).

Trust in municipal councils and politicians are at rather low levels in all regions. With the exception of Entlebuch, this is also true for participation in regional development associations. Therefore, those organizations ought to integrate more regional firms (Crevoisier et al., 2011). Existing organizations, such as service clubs and regional sections of industry-specific associations, should be sensitized for more collaboration with other regional actors to improve the impact of their activities for regional socio-economic development, which is not necessarily their focus. It seems to be particularly important for less dynamic regions, which are often fragmented, to improve their social cohesion. To motivate firms to participate in projects to improve regional development, key persons seem to play an important role. Hence, it would be very important to identify those key persons in order that they can act as initiators of projects and as mediators between private and public institutions (Crevoisier et al., 2011). The Biosphere Entlebuch and the measures implemented there appear to be a very good example of how to activate endogenous potential in a less dynamic region.

10 Conclusion

The aim of this paper was to compare regional social capital related to regional corporate engagement in three more and three less dynamic non-core regions in Switzerland and to identify differences regarding inclusive and exclusive characteristics of social capital from a regional firms' perspective. The findings partly confirm our assumptions. The socio-spatial embeddedness of firms is rather high in all regions, as many firms engage beyond firm boundaries. Nevertheless, it is crucial to focus not only on regional engagement in general, but also to examine related social capital and its exclusive and inclusive aspects, which shows another picture: More firms from dynamic regions are members of regional cross-industry

business associations, which are inclusive. In less dynamic regions, more exclusive associations (industry-specific associations and service clubs), are more common. Those organizations might particularly benefit individual firms, but less regional concerns of large numbers of regional firms and other actors.

This article contributes to the understanding of the structure of social capital related to corporate regional engagement in dynamic and less dynamic non-core regions based on a unique dataset. By focusing on corporate regional engagement, we follow the claim to contextualize economic actors and investigate their socio-spatial embeddedness (McKeever et al., 2015). The article underlines the importance of social development in terms of region-wide collaboration for regional development, where there is still room for improvement, especially in less dynamic regions. This is crucial when seeking to influence regional contexts, which are particularly challenging in non-core regions.

Further research is needed to improve our understanding of corporate regional engagement in non-core and even urban regions, including more qualitative research to examine potential collaboration practices between different organizations, such as service clubs and informal engagement in non-core regions, which were beyond the scope of this study. Moreover, future research should investigate in more depth the role of cross-industry associations at different spatial levels and their importance for collaboration at the regional level. At a theoretical level, more nuanced models of regional engagement are necessary to take into consideration the various effects of corporate regional engagement.

Acknowledgements

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