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Metropolitan Regions and Rural Development. The Case of Bremen-Oldenburg, Northwestern Germany

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Abstract

Metropolitan regions in Germany have gained an outstanding academic and political attention with regard to spatial aspects in the past few years. In the course of globalization, the European expansion and the increasing significance of regions, metropolitan cities are seen as the most resilient, innovative and competitive spaces. Accordingly, the German spatial planning policy has included selected urban agglomerations into a strategy for competition and growth and developed the concept of metropolitan regions. This process has sparked a controversial discussion about a paradigm shift in German regional policy, as regional development has been oriented towards equal living conditions and interregional compensation ever since. Therefore, the fostering of metropolitan regions in Germany implies that the support of structurally weak rural areas has become less important for regional development. This discourse with regard to metropolitan regions versus rural areas has resulted in political and regional negotiation processes, so that nearly half of the area of Germany has become integrated into metropolitan regions, including rural areas. In this paper urban-rural relations and metropolitan governance processes will be discussed from a rural perspective by using the case study of the metropolitan region of Bremen-Oldenburg in northwestern Germany.
Introduction

Rural aspects are given emphasis in several geographical analyses. Traditionally, research focuses on agriculture, social factors, settlement patterns or the quantification of the term ‘rural’. Rural geography as a distinctive subdiscipline directs its attention at rural development strategies and evaluates these processes and initiatives in order to adjust to economic changes and globalization (Woods 2009). Woods (2007) outlined rural areas as the “emergent global countryside” because of their cumulative integration into global commodity, trade and mobility networks through local and external actors. Therefore, rural localities establish themselves in global networks as well as regulations and policies. Recent neoliberal approaches of rural governance, in particular endogenous processes and partnership working, involve the participation of communities and various actors (Goodwin 1998, Little 2001, MacKinnon 2002, Woods 2009). Originally, the concept of governance was an urban approach through the increasing connection of public, private and voluntary actors for urban economic growth (e.g. Chhotray & Stoker 2009, Stoker 1998). These processes were successively transferred onto rural areas and research has come to reflect relationships of communities to local state agencies and initiatives (e.g. Murdoch & Abram 1998, Pemberton & Goodwin 2010, Ward & McNicholas 1998). In addition, and in the context of regulations and policies, rural-urban interactions have come to occupy a significant agenda in research. Commonly, analyses delineate the urban fringe or rural-urban interfaces (e.g. Bryant 1995, Caffyn & Dahlström 2005, Masuda & Garvin 2008). However, rural areas in interaction with urban cores have barely been outlined from a rural perspective. Additionally, the increasingly important aspect of regionalism and global competition seems to be treated most frequently with a metropolitan focus and is hardly applied to rural areas (Hamin & Marucci 2008). An example of this is provided in the outstanding academic and political attention which metropolitan regions in Germany have gained in the last few years.

Metropolitan regions are seen as the most innovative and competitive spaces in the context of globalization, European integration and the increasing significance of regions. Accordingly, Germany’s spatial planning policy has included selected urban agglomerations into a strategy for competition and growth and developed the concept of metropolitan regions (BMBau 1995). This process has sparked a controversial discussion about a paradigm shift in German regional policy, as regional development has been oriented towards equal living conditions and interregional compensation ever since (Richter 2006). Therefore, the fostering of metropolitan regions in Germany implies that the support of structurally weak rural areas has become less important for regional development. However, the concept strengthens metropolitan functions and economic performance, which could take effect on rural areas as well (Sinz 2006). Regional development is exposed to economic and social transitions
such as globalization or demographic changes. Therefore, the regional economy requires a capacity to retain its key functions. Metropolitan regions and adjacent areas are assumed to be more resilient in an economic sense to financial crisis and economic shocks (Davies 2011, Hill et al. 2008, Pike et al. 2010). This discourse of metropolitan regions versus rural areas resulted in political and regional negotiation processes, so that nearly half of the area of Germany has become integrated into metropolitan regions including rural areas.

This paper explores the conceptual and analytical framework of metropolitan regions in Germany and their implementation in the case of Bremen-Oldenburg in northwestern Germany. This metropolitan region barely meets the analytical requirements of a metropolitan region, but it initiated the founding and implementation of the concept in a bottom-up manner. Accordingly, it will be discussed how rural areas participate in the concept and how metropolitan regions affect rural development. Furthermore, the development and dynamics of the metropolitan region will be analysed as well as the strategies of the rural actors. Metropolitan regions primarily have the function of establishing a “vibrant culture of cooperation” (Blotevogel 2006:14), therefore the internal and external network structure of this metropolitan region and its impact on rural areas will be explored. This paper moreover aims to clarify how metropolitan regions indicate and increase regional cooperation in this context. An academic assessment of metropolitan regions and rural development requires a mixture of network analysis and qualitative analysis. Therefore, the existing metropolitan and rural network was identified by examining the members of working committees, boards, clusters and network initiatives. These first insights of the processes and strategies for rural development in metropolitan regions are based on seventeen expert interviews with primarily rural actors.¹

**Metropolitan Regions and Rural Development – the Policy Context**

Metropolitan regions as a new spatial approach were developed by the German Conference of Ministers for Spatial Planning in 1995 in order to strengthen the urban agglomerations in the global competition. The urban cores are considered locations of innovation and economic growth and were defined as “engines of societal, economic and cultural development” (BMBau 1995:27). The functions of metropolitan regions expand across international borders and maintain the economic performance and competitiveness of Germany and Europe (ibid.). Because of the German dispersed settlement system, the Ministry for Spatial Planning initially specified six metropolitan regions and amended this number to eleven over time. The regions vary in their spatial, economic and functional structure and need to compete with each other. On the one hand, the spatial structure classifies monocentric spaces
such as the metropolitan regions of Hamburg, Munich and Berlin-Brandenburg, and polycen-
tric regions such as the metropolitan regions Rhine-Ruhr, Rhine-Main and Bremen-Oldenburg
(IKM 2010). The specification of these regions only constitutes a formal framework, since
regional and institutional restrictions are not provided by the German spatial planning policy
(Blotevogel 2010). The actors in the metropolitan region are responsible for implementing
this concept in order to build independent governance structures. Fürst (2008) outlines that
the approach adds to the simple urban-fringe cooperation with business integration the en-
dogenous impetus, the stronger business influence in governance regimes and the advantag-
es of knowledge regions. The term governance refers to processes of network management
with the integration of economic, political, administrative and societal actors in order to fos-
ter regional development (Fürst 2006, Rhodes 1996). A distinction must be made between
territorial and functional governance regimes, which consist of territorially linked adminis-
tration and political structures as well as functional knowledge networks. The combination of
both regimes is important for the success of coordination processes in metropolitan regions
(Fürst 2008). Moreover, such regions consist of multiple complex governance levels because
of the participation of the federal states, counties and communities (e.g. Benz 2010, Blatter
& Knieling 2009). Constituted regions are more perceivable than individual communities at
a national and international level. Their regional actors are conscious of the importance of
developing as economic location in order to attract highly trained labour and investors. These
advantages and the fear of becoming marginalized provide a certain incentive to regional ac-
tors with an effect equally strong as that of subsidies (Fürst 2008).

In analytical terms, the concept of metropolitan areas or urban agglomerations refers to the
metropolis itself and its suburban area with a certain population threshold. It is argued that a
metropolitan region needs at least one million inhabitants to develop metropolitan functions
(e.g. Blatter & Knieling 2009, BBR and BMVBS 2006, Blotevogel 2005). However, because of
political decision processes, rural areas also become a part of the metropolitan district. In
general, actors of the urban agglomeration appreciate this territorial growth because of the
increase of population, space and notice which it entails (Knieling & Matern 2009). Actors
in rural areas expect to benefit from economic growth spillovers through their participation
in the metropolitan region (Passlick & Prossek 2010). This illustrates that the term ‘metro-
politan region’ is a normative political concept and a new spatial instrument to create regions
and networks. It must be distinguished from the analytical approach of primarily monocentric
metropolitan areas (Blotevogel 2010, Passlick & Prossek 2010).

Nevertheless, the concept of metropolitan regions is based on functional criteria in order to
specify the eligible urban cores, which is assumed to ensure the integration of the country
into the global economy. Metropolitan functions differ in four categories: decision and con-
trol, knowledge and innovation, gateway and symbol functions (Blotevogel 2010, Blotevogel
& Schulze 2009). The decision and control function relates to metropolitan regions as political and economic power centres with locations of embassies, government agencies or headquarters of international companies. The number of universities and research institutes, the activities in research and development and applications for patents represents the knowledge and innovation function of metropolitan regions. The gateway-function relates to the access to people, knowledge and markets on the grounds of an index of traffic, the handling of cargo, and visitors of international fairs and congresses. The symbol function summarizes the image of a region and is linked to the diversity and presence of architecture, culture, media and tourism (ibid.). Statistically, the metropolitan functions are based on multivariate calculations and are indicated by a system of metropolitan functional indices (Blotevogel 2010). Because of the division of labour structure in Germany and the diverse functional specialization of regions, the distribution of metropolitan functions presents a heterogeneous picture (Table 1). The absolute majority of the defined metropolitan functions are located in the metropolitan regions of Rhine-Ruhr, the capital region of Berlin-Brandenburg as well as in the region of Munich. Compared to the other metropolitan regions, they achieve the highest values in particular functional categories.

Insert Table 1 about here

Considering basic data of the metropolitan regions, especially area and population, the regions diverge as well. With regard to the population density, it is shown that there are regions such as Nuremberg, Central Germany, Berlin-Brandenburg and Bremen-Oldenburg with a population of less than 200 per sq.km in 2008 (Passlick & Prossek 2010), which leads to the conclusion that large rural areas are included. On the analytical and political level, the involvement of rural areas in this strategy for competition and growth is distinctive and has been disregarded so far. Literature especially relates to the development potential of rural areas in the paradigm shift discussion (e.g. Blotevogel 2006; Leber & Kunzmann 2006; Megerle 2008, 2009). Blotevogel (2010), for example, argues that a discrimination against rural residual areas through the new spatial planning concept does not exist, since rural areas participate in metropolitan regions. However, from a rural perspective, it has not been empirically examined so far how they are integrated into the metropolitan governance structure, which functions and commitments they have as well as what the precise benefits are. On the one hand, prosperous rural areas contribute their economic and social capabilities in order to support the urban core in global competition. In this regard, the cooperation under the label of the urban cores seems to provide a new kind of attractiveness to rural areas, in contrast to the previous competition in the rural-urban relationship (Blatter & Knieling 2009). On the other hand, rural areas with weak economic structures require support from the urban cores. Since globalization, demographic changes and the transformation processes in agriculture have influenced a regressive development in many German rural counties (Grabski-Kieron,
it is unknown yet to which extent a metropolitan region with the implemented governance structure provides an adequate instrument for rural development.

**The Metropolitan Region of Bremen-Oldenburg**

Northwestern Germany is shaped predominantly by rural areas. Simultaneously, the area consists of three different metropolitan regions, and only very few rural regions located in the west of Lower Saxony refused to be part of a metropolitan area based on political decisions. Moreover, the territory of the metropolitan region of Hamburg partly overlaps with the other two metropolitan regions (Figure 1). This means that some counties participate in two different metropolitan regions and governance structures by choice.

*Insert Figure 1 about here*

The metropolitan region of Bremen-Oldenburg in northwestern Germany shows only few metropolitan functions in comparison to the further defined regions in Germany (Table 1). The gateway function is the most pronounced function in this region because of the harbour location and the numerous resident logistic and shipping industries. Moreover, the region with 2.72 million inhabitants (2010; Regionalmonitoring 2011) provides the location for several industries such as the automotive industry, food and agriculture, health, energy, aeronautics and the space industry (Metropolregion Bremen-Oldenburg 2010). In an administrative sense, the metropolitan region consists of eleven counties in Lower Saxony, three cities and the city state of Bremen. As a result of the counties-to-cities proportion, rural areas occupy a significant area of the metropolitan region and shape the regional structure. Very different rural areas can be found in the region of Bremen-Oldenburg. The south of the territory is a very prosperous region, an area of intensive agriculture with a highly innovative cluster of agri-food industries (Klohn & Voth 2008). In contrast, the north of the rural metropolitan region is affected by economic weakness and depopulation (Lutzky et al. 2006).

**Organizational Structure and Dynamics**

Based on functional criteria, this metropolitan region of Bremen-Oldenburg does not meet the requirements of a metropolitan region per se. Nonetheless, political and strategic processes led to a nomination as a metropolitan region. Bremen-Oldenburg was appointed by the Ministry for Spatial Planning in 2005 and represents one of the younger metropolitan regions in Germany. Regional actors who previously cooperated in the regional working group Bremen-Lower Saxony as well in the joint federal state planning initiated this process
by sending a nomination request to the Ministry for Spatial Planning (Baumheier 2007). This move was brought about by the increased political attention on metropolitan regions in Germany and the missing representation of northwestern Germany in this context. Moreover, the relations between Bremen and Lower Saxony which have existed since 1963 supported the approach of becoming a metropolitan region. In this bottom-up process, pivotal actors from rural areas promoted the foundation of the metropolitan region of Bremen-Oldenburg. After the official nomination, the already established structures converted into a new and upgraded governance approach named “Metropolitan Region Bremen-Oldenburg in Northwestern Germany”. In addition to the administrative actors, the founding members were the regional Chambers of Commerce and Industry (CCI). The membership of the Chambers of Commerce and Industry is a nationwide feature, because in contrast to other German metropolitan regions, businesses were represented by CCI’s from the beginning of the constitution process (Baumheier 2007). Companies themselves are not allowed to become institutional members of the formal governance structure; but they are represented by the chambers. However, all companies in the region have the opportunity to participate in the association for the promotion of businesses in the metropolitan region (Figure 2). With specific membership fees, they can thus become involved organizationally in the region of Bremen-Oldenburg.

The strategic orientation, the budget, the operational governance through appointing the committees and the development of projects are, amongst others, the functions of the board (Figure 2). A secretary for the association of the metropolitan region does not exist, although the board is divided into the board itself and a representative board. General decisions about strategies, key activities or the acceptance of new members are made by the metropolitan conference. The operative level of the metropolitan region is organized by working groups which concentrate on the spatial structure, economic frameworks and culture. These operative structures are dynamic, since sub-working groups for particular projects are founded temporarily or working groups are terminated. The working group ‘tourism’, for example, terminated because a corporate tourism concept for the metropolitan region was not achievable, as the competition between the regional tourism destinations is too high.

The metropolitan region Bremen-Oldenburg also involves the interests of non-political actors and a variety of regional organizations. Various academic institutions participate in the metropolitan region, for example through membership on the advisory board; however, they are only consultants or guests. Besides these, members of the advisory board are the presidents of regional universities, local organizations, for example nature conservation organizations, transport associations. It is the task of the coordination department to coordinate and assist all activities (committees, requests or public relations).

*Insert Figure 2 about here*
The relevance and impact of these committees is evaluated differently by the rural actors. Most frequently, the working groups are seen as the most essential committees for rural actors with regard to the development and realization of projects as well as the exchange of information. The board is partly considered the most important committee in the governance structure, but there is criticism to the effect that, except for the framework, too few projects are initiated, for example. In contrast, the metropolitan conference possesses an essential voting function, but has only little significance for rural actors due to its strategic focus.

It needs to be highlighted that the federal government and the European Union do not provide any financial funding for metropolitan regions in Germany so far (Federwisch 2011). Therefore, the practical implementation of the concept is shaped by the development of network initiatives, events, economic, tourist, cultural or social projects, and the support of infrastructure measures or regional marketing. The metropolitan region of Bremen-Oldenburg is financed by membership fees from local authorities and Chambers of Commerce and Industry, classified through the number of inhabitants or territory. Furthermore, the shares of the Chambers of Commerce and Industry are partly composed of company membership fees through the association for the promotion of businesses in the metropolitan region. Additionally, the federal states of Bremen and Lower Saxony provide proportional funding as well, which covers a large part of the financing, especially for projects in the metropolitan region.

In order to promote regional development and marketing, cooperative relationships and the exchange of information are the primary focus of the metropolitan region. Therefore, the institution metropolitan region considers itself “the network of networks” (Int. 1). Basically, the metropolitan region established a set of committees and working groups in which regional actors, predominantly local authorities and the Chambers of Commerce and Industry, participate. But additionally, numerous analogous non-metropolitan cooperation structures and network initiatives are in place which focus as well on regional development. Regional actors participate in multiple network initiatives, in which similar issues are handled, partly on different scales and levels. Because the metropolitan structures are based on historically developed relationships, the cooperation is one of acquaintance and familiarity, on the one hand. On the other hand, this circumstance leads to a dependence on pre-coined paths, because the actors tend to use existing consolidated network structures, mainly with spatial neighbours. To counter this development, the chance of project funding by the metropolitan region depends on the number of participants. The funding of projects is regulated by a point-based system. To increase the chance of funding, more than three local authorities from Lower Saxony need to participate as well as the urban core of Bremen or ideally the entire metropolitan region (Förderkriterien Metropolregion Bremen-Oldenburg 2011).
Certainly, the multiplicity of actors produces conflicts of interests and the working level is more superficial, because “the more project partners participate, the more complex a project is” (Int. 6). Therefore, actors are more likely to cooperate with spatial neighbours, but this also depends on the project itself and the topic. The structure of the region and the distribution of the sectors are very heterogeneous, so the actors predominantly participate in projects which focus on their own requirements. Consequently, regional thought is partly restricted to the county borders and the nearby environment. It must be considered that rural counties have different problems and topics where projects are needed and the combination with urban demands is often challenging. The north of the metropolitan area is more substantially formed by wind energy, port industry and aeronautics and the south by agriculture and the food industry. Project ideas are developed and submitted by authorized actors, mostly local authorities. The initiative of rural actors and counties with regard to submitting a project is limited. This depends, on the one hand, on the subject and, on the other hand, on the need to cooperate with adequate project partners. When companies are involved in projects “certain topics cannot be handled in a large-area metropolitan region, because they need to be organized closely to the company” (Int. 5). Besides the industry-specific cooperation, the project should only be temporary in order to achieve involvement of companies in regional projects. In the scope of company cooperation, the metropolitan region supports cluster initiatives with a cluster management in some regional key industries. These structures in food industries, automotive and health industries were developed and intensified in the last three years and are considered technically independent of metropolitan structures. Nevertheless, the metropolitan region provides an initial funding limited to three years in order to accelerate the founding process and the organization of these associations. Some economic network initiatives like these clusters have existed in the same key industries in a different constellation before and still do (e.g. food and health). They are partly connected, but this multiplicity of certain networks and lack of transparency proved challenging for actors to decide in which network initiative to participate. Besides, cooperation between companies or economic actors is not in accordance with the administrative borders. Certainly, the metropolitan cluster initiatives are partly restricted to the territory of the metropolitan region.

Besides the dynamic in development of committees and network initiatives, the metropolitan region of Bremen-Oldenburg is flexible in the spatial dimension as well. In 2010, an additional local authority and associated Chamber of Commerce and Industry joined officially because of strategic and historical relations with parts of the metropolitan region. The spatial dimension of the region is relevant for most of the actors and an extension would be approved. On the one hand, some counties feel limited in the choice of cooperation partners, since spatial neighbours are preferred for cooperation. On the other hand, some actors pre-
fer to extend the metropolitan region with the rural area in the west of Lower Saxony to close up to the border to the Netherlands. In its potentials and structure, this region corresponds to the other rural regions in the metropolitan region and relations with this area have existed before through regional network initiatives. The extension would mean an increase of actors, especially rural counties, and coordination effort. However, a further spatial extension is at present ruled out by the metropolitan neighbouring counties, since they have built their own regional development initiatives.

Strategies and Benefits: An Actor-Centred Perspective

What are the strategies and benefits of local authorities and Chambers of Commerce and Industry participating in a regional construct like the metropolitan region? One main aspect is that local authorities or actors recognise the limited awareness level which individual counties or actors receive in a globalized world and in European competition. Therefore, it is easier to compete as a large metropolitan region with a corresponding regional marketing concept. The label ‘metropolitan region’ seems to have significance for the development of rural areas. Altogether, the participation of local actors is to be viewed in consequence of historical relations and strategic considerations. The metropolitan region provides a platform for information exchange and knowledge transfer in order to learn about activities of other actors in rural and urban areas. From the point of view of Chambers of Commerce and Industry, a large-scale regional cooperation like the metropolitan region should be contributed to by businesses because it is a “positive opportunity for regional development” (Int. 5) and marketing. Accordingly, the metropolitan region offers advanced project marketing preferable for infrastructure facilities. In the actors’ opinion, it is important and a great benefit if a regional initiative – rather than just one or two counties – fosters, for example, the construction of a motorway or a new harbour project such as the new Jade-Weser-Port. However, it is difficult to determine empirically the effect which any endorsement of regional measures by the metropolitan region may have (Fürst 2006).

The participation of regional actors in the metropolitan region extends to their daily workload. Therefore, the involvement of the counties in activities partly varies. Furthermore, the community level, for example, is little involved in metropolitan governance. It is mostly represented by the counties and the communal union of Lower Saxony/Bremen. The latter addresses itself to the urban-suburban cooperation around Bremen; therefore, only few communities relate directly to the metropolitan work and project funding. According to the communal union of Lower Saxony/Bremen, the representation of communal interests is not a task of the metropolitan region, but metropolitan projects should be transferred into concrete measures for communities. Apart from the different level of regional development,
there are potential benefits for the rural counties and actors participating in the metropolitan region of Bremen-Oldenburg. Bearing in mind that the metropolitan region has only existed for five years, the activities have by far surpassed the finding process and are already resulting in first projects. The concrete benefit from the counties’ point of view is that their projects “were funded by the metropolitan region, therefore the membership is considered positive” (Int.8). Besides the funding of projects, the diversity and multiplicity of available cooperation partners through participation in the metropolitan region of Bremen-Oldenburg are advantageous. Entirely new cooperations have not been initiated hitherto, consequently it must be assumed that the benefit lies in the increase of territory and notice of a region. However, the significance of territorial size for marketing purposes has not been scientifically proved yet (Fürst 2008).

Conclusion

“In regional development, rural areas are often cast as passive recipients of urban-driven growth processes, rather than as active contributors to the competitive strengths of regions” (Ward & Brown 2009:1239). The case of Bremen-Oldenburg has shown that rural actors can be active in regional cooperation processes insofar as they are willing to cooperate. An equal integration and commitment (financial and personal) of the businesses in particular is seen as important to build a functional metropolitan governance. Businesses participating in the metropolitan governance are, on the one hand, institutionally organized in project-related networks, which partly do not depend on the territorial dimension of the metropolitan region. On the other hand, territorially-oriented actors belong to administrative institutions like chambers and local authorities with certain self-interests. The functional and territorial governance work alongside under the label of the metropolitan region of Bremen-Oldenburg in order to achieve the common purpose of regional development. Furthermore, multiple network initiatives exist additionally to the metropolitan governance structures, often with the same actors and similar issues on multi-scalar levels (local, regional, national, international). Rural actors (economic and administrative) participate institutionally and strategically in the metropolitan governance but contain themselves in initiating and submitting projects and in their influence on regional development. Therefore, they only partially benefit by the funding possibilities in the first place. From the territorial perspective, peripheral rural counties do not focus on the centres of Bremen or Oldenburg in order to benefit by the dynamics. The counties in the suburban area of Bremen, in contrast, have close relations to the centre because of historical relations. However, it is important to note that governance regimes in metropolitan regions relate mainly to the commitment of individuals in business and political administrative position wherever they are located spatially.
References


1 The research project is accomplished under the supervision of Christine Tamásy. The interviews were conducted by Annika Neubauer during the period from April 2011 to January 2012. The interviewed experts belong to three regional Chambers of Commerce and Industry, four business development departments of counties, three spatial planning departments of counties, three metropolitan cluster initiatives and one regional union. The duration of the individual interviews was 50 to 90 minutes. Furthermore, an interview with the coordination department was conducted as were two participant observations at regional conferences.
Tables and Figures

Table 1: Ranking Metropolitan Indices 2008 - 2010

<table>
<thead>
<tr>
<th>Metropolitan Region</th>
<th>Total Index</th>
<th>Decision and Control Function</th>
<th>Knowledge and Innovation Function</th>
<th>Gateway Function</th>
<th>Symbolic Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rhine-Ruhr</td>
<td>14.67</td>
<td>22.31</td>
<td>13.35</td>
<td>16.86</td>
<td>10.64</td>
</tr>
<tr>
<td>Berlin-Brandenburg</td>
<td>13.02</td>
<td>9.61</td>
<td>14.61</td>
<td>6.98</td>
<td>15.92</td>
</tr>
<tr>
<td>Munich</td>
<td>9.80</td>
<td>11.88</td>
<td>11.61</td>
<td>3.80</td>
<td>9.90</td>
</tr>
<tr>
<td>Frankfurt/Rhine-Main</td>
<td>7.64</td>
<td>8.98</td>
<td>7.05</td>
<td>13.44</td>
<td>5.77</td>
</tr>
<tr>
<td>Hamburg</td>
<td>6.88</td>
<td>5.16</td>
<td>5.44</td>
<td>7.23</td>
<td>7.29</td>
</tr>
<tr>
<td>Stuttgart</td>
<td>5.49</td>
<td>8.64</td>
<td>9.33</td>
<td>3.94</td>
<td>3.46</td>
</tr>
<tr>
<td>Hanover-Braunschweig-Göttingen-Wolfsburg</td>
<td>4.16</td>
<td>5.39</td>
<td>5.87</td>
<td>5.19</td>
<td>1.89</td>
</tr>
<tr>
<td>Central Germany</td>
<td>3.75</td>
<td>1.68</td>
<td>5.90</td>
<td>3.20</td>
<td>3.30</td>
</tr>
<tr>
<td>Nuremberg</td>
<td>2.01</td>
<td>0.93</td>
<td>3.32</td>
<td>3.17</td>
<td>1.38</td>
</tr>
<tr>
<td>Rhine-Neckar</td>
<td>1.02</td>
<td>0.78</td>
<td>3.02</td>
<td>1.23</td>
<td>0.42</td>
</tr>
<tr>
<td>Bremen-Oldenburg</td>
<td>1.08</td>
<td>0.40</td>
<td>2.48</td>
<td>1.59</td>
<td>0.34</td>
</tr>
</tbody>
</table>

Source: Blotevogel 2010

Figure 1: Rural Areas and Metropolitan Regions in Lower Saxony

Source: modified according to Jung et al. 2010
Figure 2: Organizational Structure Metropolitan Region of Bremen-Oldenburg

Source: modified according to Metropolregion Bremen-Oldenburg im Nordwesten e.V. 2011