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**Social Capital, Local Actor Networks and Differential Economic Performance  
in Rural Areas - Evidence from Case Studies in Germany**

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Abstract

An EU-funded international research project, which has been conducted in collaboration with Scottish, Swedish, German and Greek research institutes, focussed on the dynamics of rural areas (DORA<sup>2</sup>). The project aimed to examine the quantitative and qualitative factors explaining the differences of economic performance (DEP) in selected rural regions of the four member states involved. The approach is characterised by a number of pair-wise comparisons of differing rural study areas in terms of economic performance.

In this paper the role of social capital will be determined in quantitative and qualitative terms and in relation to other "soft" factors of rural development. The analysis is based on exemplary results from the German part of the research project DORA. After clarifying the definition of social capital and explaining the case study approach an operational conception of indicators for measuring of social capital is presented with regard to regional-economic analysis. Statistical methods of location conditions and differences of the socio-economic context are considered. Furthermore, expert interviews with regional actors as well as findings derived from postal business surveys serve as information bases for the analysis. From the comparison of the two regions the conclusion is derived that the regional differences regarding the amount and quality of social capital can contribute considerably to the explanation of differing development paths under similar context conditions and that the role of social capital should be more strongly taken into account with regard to impact assessment of regional policy.

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## **Introduction**

This paper is based on selected results of case study analysis drawn from a European comparative study that is intended to explain the reasons for differential economic performance (DEP) in rural areas of four member states of the European Union. The emphasis of this presentation is focussed on the importance of so-called “soft” factors explaining differences of economic competitiveness between localities and regions, in particular social capital, regional actor networks and organisations as well as their interaction with more traditional factors of locations like real assets, natural and human resources and public infrastructure facilities. It begins with a brief overview concerning the definition and meaning of the term ‘social capital’ in relation to ‘networks’ followed by a presentation of the characteristics and methods of the EU research project on the dynamics of rural areas (DORA) (for the properties of the DORA approach, the main findings and conclusions of the international comparison see BRYDEN 2002) and some peculiarities of the case study analysis in the German part of the project.

## **Conception of social capital and local actors networks**

Since the last two decades an increasing number of studies emphasised the importance of social capital and the role of local and regional networks in explaining the economic competitiveness of locations (WALL; FERRAZZI; SCHREYER 1998, see also COURTNEY; ATTERTON 2001). One famous example is given by Putnam’s study of regional governance in Italy, where strong traditions of civic engagement, club membership etc. indicate a large stock of local ‘social capital’ embodied by trust, norms and networks as preconditions for an economic success of a region (PUTNAM 1993). COLMAN defines social capital as “a set of resources which inhere in family relations and in community social organisation and that are useful for the cognitive or social development of a child or young person” (COLEMAN 1990). Social capital can reduce transaction and information costs, for example via speeding up bureaucracy, advancing social coherence, making co-operative action easier and preventing free-rider problems. Three different levels in which social capital affects the economic development in an area can be distinguished:

- First, informal networks between entrepreneurs influence the diffusion of innovation and know-how and can lead to vertical and horizontal forms of co-operation. Such informal networks are more likely to develop, the higher the social capital between the entrepreneurs. The theory known as ‘innovative milieu’ (CAMAGNI et al. 1991) recognises and develops this relationship.
- Second, social capital between entrepreneurs and institutional or political decision makers can contribute to economic development, when the needs of the business sector can more easily enter local decision-making processes, and synergy effects between the public and private sector can be more readily used.
- Third, social capital between actors in the public administration can improve local development by fostering efficient local and regional governance, and thereby facilitating the quick provision of infrastructure. Regional governance in this sense defines “weakly institutionalised, network-oriented modes of co-operation between regional actors to achieve common goals of regional development” (FÜRST 2001).

There are different ways of how to examine social capital in an area. Beside the interview statements of local actors, statistical indices have been used in order to measure social capital in the population of the study areas. However, such indicators pose problems regarding their reliability and should not be used uncritically (LEVI 1996). Usually, larger household sizes and more widespread membership in clubs and associations indicate a lower degree of individualisation and a higher degree of social capital in a successful compared to a less successful region.

Whereas such indicators attempt to measure the amount of social capital among the total population inside an area, it is also possible to examine social capital within a certain group of people in more detail by empirical network analysis which facilitates to analyse the density and structure of networks among decision makers of a certain area. The network analysis allows to analyse the density and structure of networks among decision makers of an area as it is demonstrated below in the case study analysis.

## **Methodology of the DORA approach**

DORA is a comparative and exploratory project that aims to explain the reasons for differences in economic performance in selected rural areas of the European Community

and, in particular, to analyse the role of specific tangible and less tangible factors with regard to their impact on the development path of rural areas. It is conducted as a case study approach on the basis of results from the preceding EU project RUREMPLO which was designed as an econometric analysis of employment in leading and lagging rural regions of the EU (TERLUIN; POST 1999). The basic hypothesis of the DORA research project is that differences in the development trends of comparable rural areas are explained by a combination of tangible and intangible factors and by the way in which these factors interact under the framework conditions of specific national, regional and local contexts. Ten specific factors have been identified for the analysis. These factors and their related exploratory variables define different opportunities and constraints for local development, as well as the degree of effectiveness of local, regional and national institutions in using available opportunities and ameliorating existing constraints.

The ten explanatory factors of the DORA project were drawn from several disciplines, including economics, economic geography, sociology and anthropology, building on the inter-disciplinary background of the DORA research teams. The factors are:

Tangibles:

Natural Resources

Human Resources

Infrastructure

Investment

Economic Structures and Organisation

Intangibles:

Community

Institutions

Market Performance

Networks

Quality of Life

The factors were subdivided into variables and indicators, from which exploratory hypotheses were derived. Whilst it is recognised that the tangible factors can be important for accounting for differential economic development success of rural areas, it is also supposed that the intangible factors can determine how well tangible factors are put into use for development progress.

The participatory aspect of the methodology involved the formation of a National Steering Group in each member-state as a new element of feed-back with regional authorities and practitioners in order to assist the development and implementation of the project and the dissemination of results. The National Steering Group for the German

study was formed with representatives from the four case study areas and representatives from the two states and the federal level.

### **Specific methodological elements of the fieldwork in Germany**

The fieldwork was based on interviews with regional actors, a network sample and a postal business survey in the producing sector. Interviews were conducted with a set of thirty to forty local decision-makers, depending on the size of the study area. Overall, 142 people were interviewed. In each study area the following actors were subject to interviews:

- the ‘county director’ as the head of the county administration
- county departments for environment, planning, culture, tourism and economic development
- the women’s representative of the county
- chief executives of the five largest enterprises and the director of the local savings bank
- local community leaders, depending the number of local communities
- the heads of the political parties in the county assembly
- the heads of the chamber of commerce, the chamber of trade and office for agriculture
- one to three executives from the labour exchange/job centre
- one to three people from environmentalist or other non-governmental organisations
- one or two executives from the local press
- “story tellers”, i.e. local actors from the past with particular knowledge about the area’s history

In addition to the common interview schedule network survey as part of each interview was conducted in order to explore issues of social capital and network structures among local actors in greater detail. In order to measure directly the contacts between the interviewees of a study area, a network form was sent to the interviewee in advance, including the names of all interviewees in rows, and four potential kinds of contacts in columns. The interviewee was asked to name the code number of the persons where a certain kind of contact applied: professional contacts, private contacts, contacts via clubs and associations etc. Furthermore, the interviewee was asked to name projects he/she is engaged in with other regional actors, and to estimate the share of overall contacts inside the area, as opposed to contacts outside the area. The network survey was analysed with

special software packages, so that density and structure of networks between the interviewees of the study areas can be measured and visualised (PFEIFFER 2000). The survey was intended to provide clues about the amount of social capital between decision makers in the study areas.

A postal business survey in the four study areas was conducted in a second phase of the fieldwork to achieve a more profound knowledge about supply/distribution chains, to obtain more detailed information about the entrepreneurs' perception of location factors and to gain deeper understanding of social capital and networks between entrepreneurs in the study areas.

### **National and regional context of the study areas**

The rural regions in Germany do not generally share the classic attributes of lagging behind urban regions in economic development (NEANDER; SCHRADER 2000). Instead, the urban-rural contrast in economic performance has been weakened over time by structural change (IRMEN 1996). However, those rural regions which do suffer from the problems structural divergence are more often located in East Germany than in the West. Most rural areas in East Germany are more marginal, more depending on agriculture, and more sparsely populated than West German rural areas. Furthermore, unemployment in rural areas compared to other types of regions is more pronounced in East Germany than in the West, as Table 1 indicates.

Tab. 1: Unemployment rates in different regions in East and West Germany, 1997

	West Germany	East Germany
Regions with agglomerations	10.9	17.0
Urban regions	10.1	19.5
Rural regions	8.9	19.8

Source: BBR 1998

As study regions in Germany the two regional states Niedersachsen and Mecklenburg-Vorpommern were chosen (at NUTS-1-level of the EU-statistical systems of regions). This selection has been made on the basis of GDP per head, the historical background, the status for regional support programmes, and degree of rurality of these regions. Furthermore, it was considered worthwhile to compare an East German region

(Mecklenburg-Vorpommern) with one from the West (Niedersachsen), because of the different socio-economic situation in each part of Germany. Sharp socio-economic contrasts became apparent after reunification which still divide the country today.

With a population density of 165 inhabitants per km<sup>2</sup>, the state of Niedersachsen is more thinly populated than any other in West Germany. Niedersachsen embodies various heterogeneous characteristics: mountainous as well as level areas, Catholic as well as Protestant areas, industrialised conurbations as well as extremely rural and sparsely populated areas. The region's location at important European crossroads provides good conditions for export-oriented industries to reach their markets, which are basically in the EU. Within Niedersachsen two study areas were chosen with respect to their recent medium term differences in economic performance. The county Emsland was chosen as an example for successful development, and the county Luechow-Dannenberg as an area with lagging economic performance. Both areas have been subject to Objective 5b spending (Emsland with the exclusion of the cities Lingen, Meppen and Papenburg), and subject to national regional policy in the form of GRW-spending. Table 2 provides some key statistics on Niedersachsen and the study areas.

Tab. 2: Socio-economic profile of case study areas in Niedersachsen

		Emsland (leading study area)	Lüchow- Dannenberg (lagging study area)	Niedersachsen (region)	West Germany
Population	1997	297,500	52,100	7,845,400	64,548,300
Size (in km <sup>2</sup> )		2,881	1,220	47,613	248,454
Density (inh./km <sup>2</sup> )	1997	103	43	165	260
Population change (%)	1980- 1997	+23.6	+6.8	+8.1	+8
Net migration per 1000 inhabitants	1995 1997	19.1 2.1	15 9.2	9.2 3.6	1.6
Employment change	1990- 1998	+16.8	+14.1	+2.5	-1.2
Unemployment rate (%)	1980 1998	11.9	8.1 18.7	4.7 12.3	3.8 10.5
GDP per inh. in ECU	1996	21,200	16,000	21,250	
GVA at market prices per employee in DEM	1980 1996	56,627 107,838	41,090 76,416	48,721 91,147	52,481 99,228

Source: BBR 1999, NLS 1999



Mecklenburg-Vorpommern is the most thinly populated state in Germany. With the region's coastline along the Baltic Sea and its multitude of lakes, Mecklenburg-Vorpommern has become an attractive summer tourist destination in Germany. However, located at the North-Eastern periphery of Germany, the geographic location of the region is somewhat unfavourable, compared to other German states. The remoteness of the region is aggravated by the fact that there are no major agglomerations in the region. Today, Mecklenburg-Vorpommern is the economic problem area of East Germany. It lags behind in almost every socio-economic indicator. With only 52% of the EU average in 1996, the region has generated one of the smallest GDP per capita in the European context.

Mecklenburg-Vorpommern is entirely subject to European regional support (Objective 1 of the EU structural policy) and national regional policy schemes. It suffers from economic stagnation, depopulation and extremely high unemployment. Due to sharp contrasts in unemployment rates and economic growth, the county Ludwigslust was chosen as an example for successful development and the county Uecker-Randow as the less successful study area. Uecker-Randow is the poorest county in the region, and has had a GDP per head of only 22% of the EU level.

Table 3 shows some key socio-economic statistics on Mecklenburg-Vorpommern and its study areas, compared to the East German average. Rising unemployment and massive depopulation in most parts of the region constitute the key problems. The pronounced unemployment in Mecklenburg-Vorpommern causes a variety of secondary social effects, such as low incomes, widespread resignation, vandalism, neo-fascist youth, and so on.

Tab. 3: Socio-economic profile of case study areas in Mecklenburg-Vorpommern

		Ludwigslust (leading study area)	Uecker-Randow (lagging study area)	Mecklenburg- Vorpommern (region)	East Germany
Population	1997	129,600	88,400	1,807,800	17,509,100
Size (in km <sup>2</sup> )		2,517	1,624	23,170	108,567
Population density (inh./km <sup>2</sup> )	1997	52	54	78	161
Net migration (%)	1997	14.6	-6.4	-1.9	-0.6
Employment change (%)	1994- 1998	+3.8	-6.3	-7.4	-5.7
Unemployment rate (%)	1995 1998	12.9 16.4	19.8 24.1	16.2 20.5	14.9 19.5
Business start-ups, enterprises per 1000 inh.	1997	8.3	7.2	8.9	8.7
Employees in industry per 1000 inh.	1998	34	15	24	38
Sum of ind. wages per employee in DEM	1998	3,380	2,677	3,844	4,251
GVA at market prices per employee in DEM	1992 1994 1996	40,198 53,247 59,011	38,153 49,088 54,708	41,071 52,905 62,057	41,198 55,486

Source: BBR 1999, Statistisches Landesamt Mecklenburg-Vorpommern 1999

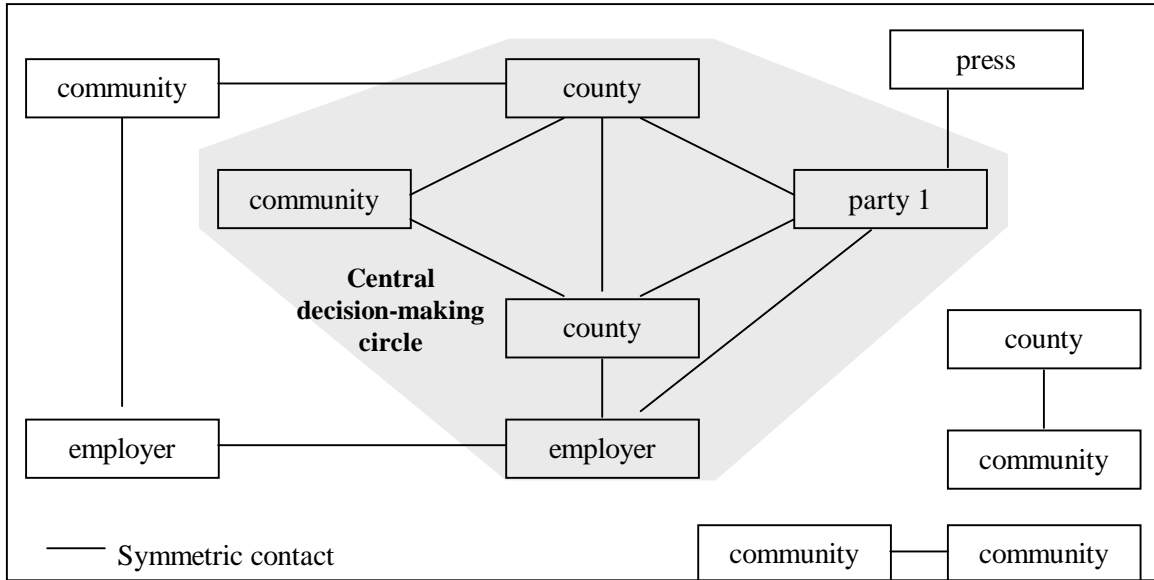
### **Social Capital, Local Actors Networks and Institutional Collaboration**

The network analysis was intended to analyse the density and structure of networks among decision makers of a rural area as it is demonstrated in the following case study analysis. In addition, valuable information was collected in the interviews about the quality of these networks, which proved vital to correct interpretation of the data. In the network survey, interviewees were asked to tick their contacts to other local actors on a list with four different kinds of contacts. While some of the resulting networks are too complex for a handy illustration, the network structures formed by 'private contacts' can be illustrated. Such private contacts have particular relevance as these are probably some sort of co-operative relations, which in sum get close to the concept of 'social capital'.

Figures 1 and 2 show the symmetric private contacts of the interviewees in the counties of Emsland (well-performing area) and Lüchow-Dannenberg (less well-performing area) of Niedersachsen. Symmetric means that the private contact had to be confirmed from both sides. As an exception to this in Figure 2 two cases with non-symmetric contacts

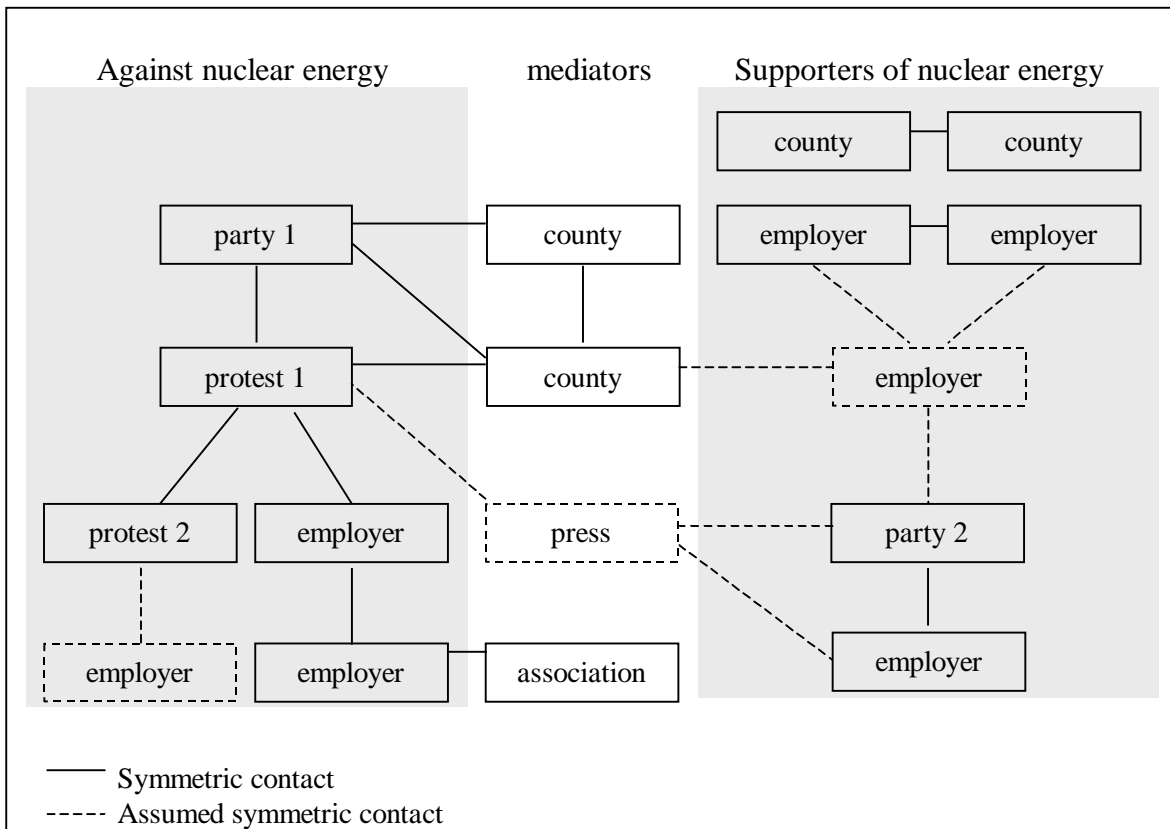
are shown (interrupted line). In these cases certain actors could not be interviewed personally.

Fig. 1: Symmetric private contacts between local actors in Emsland



Source: Own survey

Fig. 2 Symmetric private contacts between local actors in Luechow-Dannenberg



Source: Own survey

The network of private contacts in Emsland shows a central circle, surrounded by ‘satellite contacts’, giving the picture a hierarchical structure. Since there were 41 participants in this network study, the low number of private symmetric contacts between local actors in Emsland is surprising. Besides the low density of their *private* contacts, the majority of local actors in Emsland emphasised the high quality of their *professional* contacts. Trusting co-operation at professional level seems to be unique to the decision-makers in Emsland. The situation is characterised by great openness and a high amount of trust between the actors. However, local actors from Emsland stated that their close professional contacts generally did not lead to private contacts or meetings. Instead, private contacts of this kind exist for the majority of actors in the neighbourhood, in clubs or through family relations. This leads to the conclusion that there are so called ‘weak ties’ between local actors in Emsland. Such ‘weak ties’ are static, generally disused connections, which can easily be activated when demanded (GRANOVETTER 1973). In theory, weak ties have a high exchange potential, are flexible and adaptive, and facilitate information and innovation flows between the actors (GENOSKO 1999). GRABHER (1993) characterises weak ties as a kind of ‘cultural insurance’, which the local actors can rely on in troubled times, and which reduce the ‘risk of cumulative wrong decisions’ and produce learning effects via ‘positive feedback loops’.

The network of private contacts between actors in Luechow-Dannenberg (Figure 2) has a higher total number of symmetric contacts compared to Emsland and a greater complexity. Because the interviews generally touched the topic of ‘Gorleben’ (a nuclear waste deposit), it has been possible to divide the local actors into three groups: nuclear power supporters, nuclear power opponents and ‘mediators’. The opinion of the mediators about nuclear power either remains unknown or differs from the opinion of their institution or political party. The knowledge of the actors’ view regarding this topic is vital for the interpretation of the network structures. A clear segmentation in the private contacts becomes obvious, dividing the actors in ideological ‘camps’ concerning their attitude towards nuclear energy. Both the supporters and the opponents of nuclear power have a relatively dense network within their group. Also, there are some contacts between nuclear power opponents and mediators. However, it is striking that virtually no direct contacts connect the two opposed camps. In Luechow-Dannenberg there is no

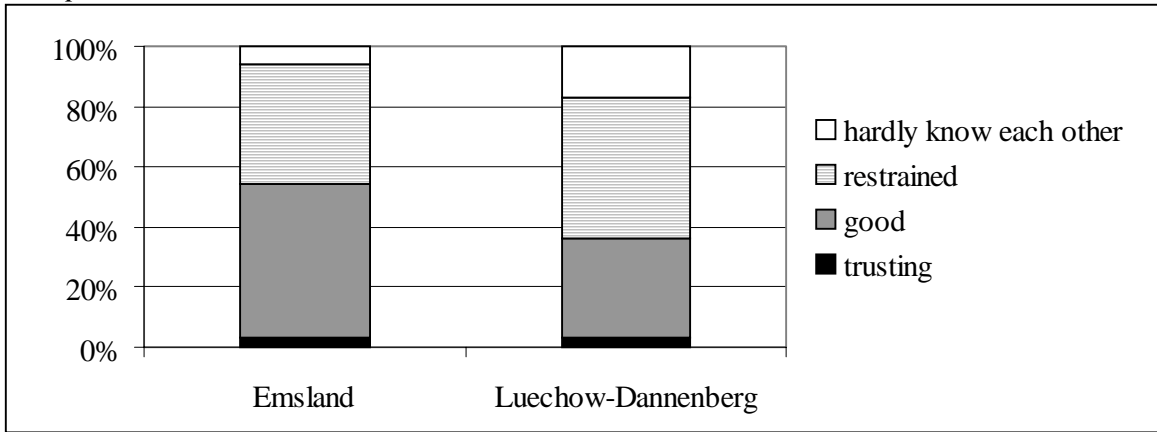
central circle of actors as seen in Emsland. Furthermore, community leaders are not part of the private contacts network.

The analysis of the networks with professional contacts and contacts within associations and the analysis of statistical network indicators support the observations from the private contacts. There is more evidence for the centralised structure and the high integration of community leaders in the networks in Emsland (well-performing), while in Luechow-Dannenberg (less well-performing) a division of the actors into two ideological camps is supported. In contrast to Emsland, in Luechow-Dannenberg the contacts at professional level and at private level are relatively consistent, and there is a strong conformity on each side regarding political viewpoints. This situation as well as the great density of private contacts suggests the existence of so-called 'strong ties' between the local actors in Luechow-Dannenberg. In contrast to the static 'weak ties', such 'strong ties' are more intensively used and maintained. Those strong ties arguably impede the dissemination of new ideas and innovations (e.g. from opposed ideological camps) in the actors' network (GENOSKO 1999).

Three different levels of impact can be identified in which social capital influences economic development: Between entrepreneurs (facilitating information flows and co-operation within the business sector), between actors in the public administration (fostering efficient local governance), and between entrepreneurs and actors in the administration (forwarding business needs to local administration and exploiting public-private synergy effects).

Evidence about social capital in the business sector can be achieved from the business survey. Entrepreneurs were asked to characterise the relationship between entrepreneurs in their county on a scale from 'trusting' to 'hardly know each another'. The results show marked differences between the two study areas (Figure 3). Statements from interviewed entrepreneurs confirm the impression that overall, entrepreneurs in Emsland have a better relation to co-operate compared to the lagging area Luechow-Dannenberg.

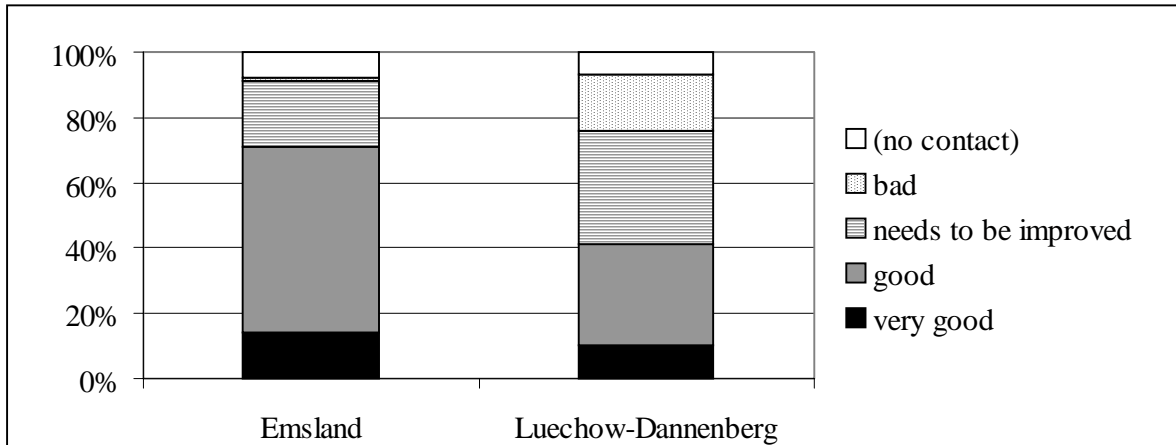
Fig. 3: Business survey: „How would you characterise the relationship between entrepreneurs in the area?“



Source: Own survey

Secondly, as for the relationship between the business sector and local institutions, the results of the business survey give further indications. Figure 4 mirrors the relationship of the surveyed enterprises of both counties with their county administration. More than 70% of the enterprises in Emsland rate the relationship as ‘good’ or ‘very good’, while the majority in Luechow-Dannenberg valued the relationship as ‘needs to be improved’ or ‘bad’.

Fig. 4: Business survey: „How would you characterise your relationship to the county administration?“



Source: Own survey

Overall, the relationship between businesses and the administration seems to be better in the Emsland than in Luechow-Dannenberg. This result is by no means a surprise, taking into account the degree of social capital and quality of networks in the two areas.

Thirdly, social capital between local decision makers have an impact on the functioning and co-operation of local institutions. The local actors in Luechow-Dannenberg stress the obstacles of local governance and the difficult relationship between the regional administration and local communities, which suffers from contrasting ideological viewpoints. Statements of local actors in Emsland are completely different. Here, the relationships between communities and the county are described throughout as positive and efficient. Local actors appear to collaborate towards the same development goal, the relationships are described as pragmatic and constructive. There are several examples of development processes in Emsland which were fostered by the high degree of social capital between local actors, such as a number of large investments (e.g. Nordland Paper, Mercedes-Benz test route), the success of the regional development plan, and the filling in of an interface in the A 31 motorway through joint local finance initiated by county administration, whereas in the low-performing study area Luechow-Dannenberg local development in the post-war period lacks comparable processes.

### **Summary of results from the case studies in Niedersachsen**

The less tangible factors of the DORA project seem more relevant to explain differential economic performance in the two Niedersachsen case study areas, compared to the tangibles. In particular, the social coherence and vibrancy of the local communities differ. In the 'leading' case study area, Emsland, the population features strong neighbourhood networks and large family size. Furthermore, the population is united by common values, beliefs, attitudes and a pronounced local identity. The population backs the decisions and actions of 'their' local actors, and institutions, entrepreneurs as well as community leaders are generally pulling in the same direction. Based on its history of collective poverty, the population in Emsland shows extraordinary openness to modernisation and industrialisation and welcomes new investments, even in those cases where environmental considerations could give rise to concerns. The local actor network is structured hierarchically, and composed of so-called 'weak ties' (GRANOVETTER 1973), which can easily be activated by each local actor. This results in a high degree of institutional and industrial co-operation, which in turn allows for efficient local governance, rapid infrastructure improvement, innovative milieus, industrial clusters and endogenous development. Next to the less tangible factors, the factor "Human

Resources” contributes substantially to the economic success of Emsland. There exists a high level of human capital in the area due to traditionally high birth rates in combination with high quality of school education, social capital, local identity and prospects of employment in the future. Secondly, the people seem to have a pronounced work ethic and show a remarkable loyalty to their employers. Finally, the balanced economic structure makes the local economy relatively robust against business cycles, and the different economic clusters provide economies of scale which offer a clear competitive advantage against other rural areas.

In the ‘lagging’ case study area, Luechow-Dannenberg, social capital is arguably lower than in Emsland. This argument relies on smaller family size, weaker neighbourhood relations, greater heterogeneity of the local population, considerable antagonism between local policy-makers, heterogeneous local mentalities, attitudes and values, and a lack of common identity. In particular the struggle over the nuclear waste facilities in Gorleben was reported to disturb social capital. However, there appears to be a relatively high amount of fragmented social capital within opposed ideological camps. The local actor network is relatively dense, however, being clearly segmented along ideological lines, depending on the actors’ attitudes towards nuclear energy. These circumstances inhibit collective action by decision-makers and compromise on common development goals. The lack of local identity, socio-cultural heterogeneity, poor acceptance of industrialisation and infrastructural improvements, and in particular the ideological conflict around “Gorleben” lead to political instability and the inappropriate outcomes of the local decision-making process. Furthermore, the amount human capital in Luechow-Dannenberg is depleted by the emigration of young people and low birth rates. The weak economic structure, with a high dependence on two production plants of external parent companies, and a lack of local medium-sized enterprises, also adds to the overall poor economic performance of the area.

### **Summary of results from Mecklenburg-Vorpommern**

Contrary to the results from Niedersachsen, the ‘tangible’ factors clearly have the most explanatory power for differential economic performance in the two study areas of Mecklenburg-Vorpommern. First, geographical location and the inter-regional transport infrastructure play a decisive role for economic performance in both areas. This is



supported by the interviews, the business survey and the analysis of development paths over the last decade. In the well-performing study area, Ludwigslust, proximity to West German markets by good access to a motorway, is responsible for particularly high external investments in the area during the 1990s. Furthermore, proximity to Hamburg provides good conditions for commuting, which significantly reduces local unemployment rates. As a result, emigration and loss of human capital, being the typical features of East German regions, has been prevented.

The second most decisive factor for the differential performance is the economic structure of the study areas. Ludwigslust had a more diverse and more competitive industrial mix than Uecker-Randow already in socialist times, with several different strongholds of manufacturing industry, some of which already exported to western Europe. As a result, the transition to market economy was facilitated by successful management-buy-outs or take-overs from West German companies.

As in Ludwigslust, geographical location and infrastructure have also been the most decisive factors for economic performance in Uecker-Randow in the last decade, but in a negative sense. The remoteness and poor access of the area to inter-regional transport infrastructure turned out to be crucial for the area's lagging economic performance in various ways: Its distance to markets made the area less attractive for external investments after reunification and obstructed the operational success of already existing manufacturing plants. Furthermore, there are only limited possibilities for the unemployed to commute to workplaces outside the county due to the peripherality of the location. These features affected substantial emigration and thus a considerable loss of human capital.

Compared to the impact of the 'tangible' factors on DEP between the East German study areas, the 'intangibles' are ranking at a minor position. Only the institutional settings in Ludwigslust have contributed somewhat to economic success in the last decade compared to Uecker-Randow. Rapid availability of industrial sites in the early 1990s fostered investment. Additionally, the efficiency of the county administration contributed to a pragmatic way of policy-making and a good relationship between local institutions. By contrast, in Uecker-Randow the poor degree of local co-operation impeded local development (HACHMÖLLER 2001; SCHRADER et.al 2001).

## Summary and conclusions

The two German study regions, Niedersachsen in West Germany and Mecklenburg-Vorpommern in East Germany, have been subject of different development processes due to their completely different post-war histories. Even ten years after reunification, socio-economic conditions in both regions are still very contrasting. Accordingly, the variables which have been identified to explain differential economic performance between study areas in Niedersachsen and Mecklenburg-Vorpommern are very distinct.

In the Niedersachsen case studies, the 'less tangible' factors are clearly most important for explaining differential performance. The vibrancy of the local community, institutional co-operation, their cumulative reinforcement and their impact on 'tangibles' like human resources, infrastructure and labour market performance, are largely responsible for the divergent economic development of Emsland and Luechow-Dannenberg. Fitting these explanations into the ten-factor model of DORA, the factors "Community", "Networks" and "Institutions", which form the combined properties of "Social Capital", have contributed most decisively to DEP followed by "Human Resources". The other factors arguably have had only limited impact on DEP between the study areas in Niedersachsen.

In Mecklenburg-Vorpommern, a gradation of overall economic performance from the East of the region to the West, and from the more remote areas to the centres of economic activity, suggests a prevalent relevance of different geographic conditions: Unemployment is lower in Mecklenburg (West) than in Vorpommern (East), and lower in the city regions around Schwerin, Rostock and Wismar than in the rural counties lacking cities of these sizes. A predominant commuting pattern exists from the East to the West of the region, and from the remote areas into the city regions. Depending on the geographical locations of the Mecklenburg-Vorpommern case studies, "Infrastructure" and "Economic Structure" have had the most decisive impact on DEP followed by "Human Resources". The appearance of differences in terms of social capital and local actors' networks was not adequately pronounced by the analysis to explain major differences in economic performance. However one has to keep in mind that only ten years after reunification the economic history of Mecklenburg-Vorpommern is too recent to allow sufficient identification of the causes for successful or lagging performance in different areas.

The findings illustrate impressively how “success stories” or “stories of stagnation” respectively can be linked to particular places. The (lack of) economic success of local development in the case studies is to a large extent depending on the areas’ individual development path, on intrinsic local settings and, to some extent, on historic events and chances.

The findings from the West German case study areas demonstrate the need for more in-depth analysis of social capital and its impact on local development. The question needs to be addressed under which circumstances a high (low) degree of local social capital is the result of, or the cause for, success (shortcomings) of economic development. There is also a need for further efforts to explore network structures between decision makers, in particular the quality of such networks. Finally, the quality of negotiation processes among local actors and their impact on transaction costs requires further research.

In the West German case studies, their deep-rooted social and historical peculiarities, and the resulting amount of social capital, appeared to play an important role for the local development path. It is not yet clear whether social capital in an area can be improved like other resources by regional policy at all, because social capital is not a asset which can easily be accumulated. Instead, it is a side-effect of the social milieu or status of the local community, which favours measures of solidarity and social cohesion, and reduces transaction costs in various ways. Its establishment is mainly based on confidence and trust between different social groups or individuals. In fact, local actors and steering group members from the study areas stated that too many ‘artificially’ established formal networks and initiatives often interfere already existing local systems which have proved workable. Results from the Niedersachsen study areas refer to the conclusion that the social conditions are given as particularities to these places, which are difficult to be changed by regional policy measures.

From the comparison of case studies in East Germany a predominance of the ‘tangible’ factors “Transport Infrastructure”, “Economic Structure” and “Human Resources” was identified as the main contributors to explaining differences in economic performance. Taking a macroeconomic perspective, it is questionable whether a peripheral location like Uecker-Randow can reap comparative advantages vis-à-vis Poland in the future. Rural areas in new accessing East European countries like Poland are supposed to have comparative advantages in labour intensive, and low and medium skill-intensive

production, whereas rural areas in countries like Germany should realise comparative advantages in capital- and skill-intensive production and related services.

Corresponding to the case study approach of the DORA project, any kind of generalisation from the findings are rather limited. However, one can conclude from the comparison of the two German regions that regional differences regarding the amount and quality of social capital can contribute considerably to the explanation of differing development paths under similar contextual conditions and that the role of social capital should be more investigated to improve the impact analysis of regional policy.

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