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Challenging Increasing Demands for Skilled Labor in Shrinking Cities. The New Meaning of Social Innovation Strategies in the Ruhr Area.

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Abstract

The paper is meant to show why demographic change and skilled labor shortages are endangering the regional economic future in the Ruhr Area, although many companies do not feel affected by the demographic change yet. As one of the leading institutions on the local level, the dortmund-project, has introduced innovative tools to measure and monitor the needs for skilled labor in different knowledge based branches. As a result of that, specific long term projects which could be described as social innovation strategies on the local level arose (such as cross-linking small and medium sized enterprises (SMEs) with educational institutions or sensitizing companies for the new meaning of less integrated labor groups like women, older employees and migrants). With the help of these applied examples the sometimes diffuse conceptual appearance of Social Innovation should be sharpened on the regional and local level, so that new impulses for strengthening theory building could be gained.

1. Path Dependence: Structural Change in the City of Dortmund and the Ruhr Area

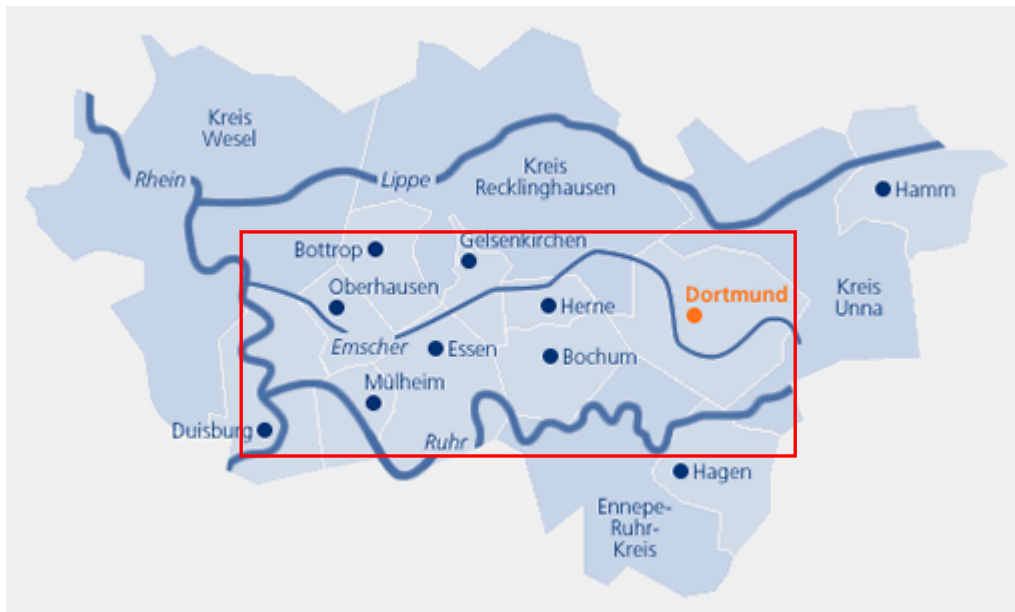


Fig. 1: Graphic: The Ruhr Area

Source: City of Dortmund 2011

With its nearly 600.000 inhabitants Dortmund is the largest city of the Ruhr Area, which is with 5.3 million residents the most densely populated region in Germany. During the 20th century the Ruhr Area became famous as the biggest heavy industry site in Germany and Western Europe (Abelshauser 2003). In the Ruhr Area the city of Dortmund used to be known as the 'city of coal, steel and beer' for several decades. After the 2nd World War these three industries formed the so called "Wirtschaftswunder" with strong employment effects on the local level, until the 1960s. Because of immigration, the local population grew from 341.000 in 1945 to 658.000 in 1965. By end of the 1960's, the coal and steel business unfortunately became too expensive in comparison to other global competitors. From that point of time, the whole Ruhr Area (besides Dortmund, also cities such as Gelsenkirchen, Duisburg and Oberhausen) experienced serious economic crises with painful closures of coal mines and steel plants.

In Dortmund the last coal mine closed in 1987 and also the last two independent breweries of the city were taken over by the Oetker Group in these days. Thyssen's Westfalenhütte was the last blast furnace in Dortmund and was totally dismantled and rebuilt in China in 2001 (Van Winden et al. 2007: 25). Retrospective, the steel and the mining industry suffered most with a 50% decline in employment from the year 1984 to 2000 (Böner 2005: 16). While the manufacturing industries shrunk, most industries in the service sector increased strongly in a countermove. Especially business oriented services (such as health, and household oriented services) show a strong growth until today (Beck 2011).

With the closure of coal mines and manufacturing plants in the Ruhr Area not only the most job intense regional industry sectors declined, but also a meaningful and long tradition came to an end. Social climbing based on hard physical work in Blue-Collar jobs became an exception and solid education got essential to participate in the new service and knowledge oriented labor market (Meyer-Stamer 2004). In Dortmund overall about 70.000 jobs have fallen away and serious economic and social problems followed up fast, which couldn't be absorbed completely by the local authorities: Even today, Dortmund's social situation is cleaved: The local population shrunk and unemployment

increased from 15% in 1995 to 18.7% in 2006. Today, about 80% of all unemployed people are long-term jobless. Compared to the Ruhr Area (11,6%) or Germany (7,7%) the local unemployment rate (12,9%) is still far too high (Metropole Ruhr 2011; Bundesagentur für Arbeit und Wirtschaft 2011).

2. Social Innovations in Dortmund: First experiments in order to set new impulses for employment

Today, it seems normal that business leaders are engaged with governments to shape public policy. As a consequence of this new type of governance, a host of social innovations have emerged. Meanwhile, especially local governments have moved away from the traditional roles of regulators towards more collaboration (Phills et al. 2008: 42). Between governments and business sectors a social innovation is according to Howaldt/Schwarz

“a new combination or new configuration of social practices in certain areas of action or social contexts prompted by certain actors or constellations of actors in an intentional targeted manner with the goal of better satisfying or answering needs and problems than is possible on the basis of established practices.” (2010a: 21).

The change to knowledge based business sectors also caused rising dysfunctions in established practices between local politics and the business sector. That is the reason why, social innovations are gaining greater importance, also in terms of economic factors. They can contribute proactively with regard to long term developments, such as demographic change and skilled labor shortages (Howaldt/Schwarz 2010a: 22).

In Dortmund the structural change first made traditional policy settings unable to cope with (Schmid/Heinze/Beck 2009; Heinze 2006). That was the reason why the local decision makers had to develop new comprehensive strategies in order to achieve social innovations (Hochgerner 2010; Howaldt/Schwarz 2010): Only with a new type of governance the challenging constellation of structural change could be faced on a regional and local level (Braczyk et al. 1998). These social innovations started as innovative ideas and processes with novel adaptations of already existing structures to achieve improvements in changing the Ruhr Area cities into modern locations for high-tech industries (Meyer-Stamer et al. 2004). In this context initiatives like the so called “dortmund-project” were created. The dortmund-project started as a public-private partnership (PPP) of the city government, the steel company ThyssenKrupp AG², the labor unions, and the consulting company McKinsey & Company. When it began in 2001, the main goal was to compensate the structural change by focusing on new trendsetting sectors like ICT, Logistics, Production Technologies and the creation of high quality places for working, living and leisure on former heavy industry sites (Mager/Röllinghoff 2009).³ In a brief form the main objectives of the project were:

- Promoting entrepreneurial commitment to enhance the development of the city as a modern location for business and living.
- Working together with partners from business, science and political communities as a facilitator and source of inspiration.
- Being a service provider and partner for all companies wishing to expand, be actively involved, restructure or settle in Dortmund - in particular for small and medium-sized companies.

² ThyssenKrupp was responsible for the closure of the plant Westfalenhütte in 2001.

³ By 10 years of work, the project focuses on further trendsetting industries like Biomedicine, Healthcare, Production Technologies and Energy Engineering. Overall about 40.000 new jobs have been achieved through the “dortmund-project” until today (Mager/Röllinghoff 2009). Furthermore the project gained a widespread acceptance by harnessing resources from the city, local economy and the scientific arena in a wide co-operation network.

Summarized the described working approach of the “dortmund-project” focused on generating technical innovations in the local economy. Independently from this traditional working emphasis (Hirsch-Kreinsen 2010) the mechanisms of co-operation which have established over several years, are very close to the Social Innovation concept. In fact the dortmund-project built up new governance arrangements as a first mover and impulse generator mostly between heterogeneous players, who usually do not (have to) co-operate (for example business and science players). This type of locally embedded governance (Grabher 1993) was transported from the very early days by all relevant local players in politics, economy and public administration (Mager/Röllinghoff 2009).

3. New Challenges: Demographic Change, Unemployment and Labor Shortages as serious restraints for regional economic growth

After ten years of work the structural change has been accomplished quiet good. Especially in the field of technology transfer between business and science serious efforts have been achieved and many start-up companies settled in the Area around the Technical University of Dortmund (Kiese 2008; Heinze/Beck 2009). In contrast to the situation a decade ago, the local economic development is not endangered by the decline of old economy sectors anymore, but by the consequences of the demographic change. Despite of various interventions by policy makers on the federal and regional level, there seems to be no realistic opportunity to reverse the negative demographic inevitabilities in the Ruhr Area. Consequentially, the implications are without scientific controversy: Sinking fecundity because of fewer young people and a growing share of senior citizens on the total population (Beck 2011; Heinze/Naegel 2010a, 2010b; Heinze et al. 2011). In North Rhine-Westphalia this situation implicates that some economically booming cities like Bonn, Dusseldorf and Cologne could expect a population increase of about 7 % by the year 2030 through immigration. In contrast to this trend, the population in the Ruhr Area is going to decline in a dimension of about 15 % and especially young and high qualified people might leave while older persons stay in the region (Danielzyk 2009).

By this specific configuration the demographic change constitutes a serious problem for the economy in the Ruhr Area and also for the city of Dortmund, because the region will probably not benefit from immigration of skilled labor in a large scale – therefore the Ruhr Area might not be attractive enough in comparison to other metropolitan regions. Due to that trend, the fast growing and knowledge based companies, which have been backed up by the local government, will have serious difficulties to cover their demands for people with high professional skills (Beck et al. 2010). Congruously problems in finding not enough people with high professional skills have increased dramatically independent from economic cycles. And the demographical factor will intensify this situation quickly in the Ruhr Area, which means one of the most important social and economical challenges for the local authorities to cope with (Beck 2011).

Like in the decline process of the old economy decades before, local answers in this new and very intricate process are not easy to find, because new abilities of co-operation and configurations are required. Local stakeholders with a traditionally low cut-set like educational institutions, business companies and policy makers have to work together and develop overall policies for developing and binding skilled labor force on a regional level (Beck et al. 2010). In this context the key issue is: Who is the first mover and who is responsible – the education department or the social department, the economic development agency or just the private sector? To set up strategies against skilled labor shortages none of these players could make his own. For this reason the dortmund-project developed purposive strategies to fight skilled labor shortages. In the following part, the paper would like to show some of the new governance mechanisms which could be accurate examples for the new meaning of social innovation to compensate demographic change in shrinking cities.

3.1 Foresighted monitoring of labor force and cross-linking business companies with educational institutions

Distribution of industries in the survey

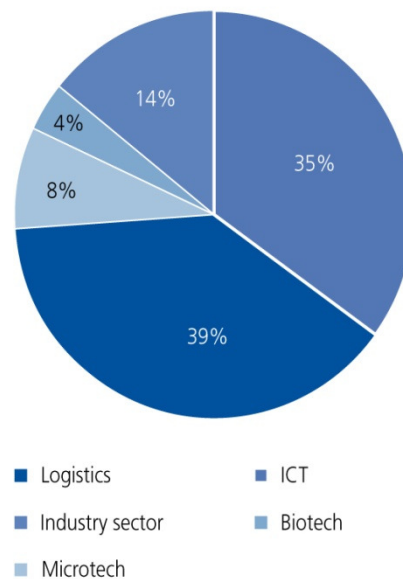


Fig. 2: Graphic: Content of the survey

Source: dortmund-project 2011

In Dortmund, relevant players in politics, economy and public administration have faced the need to develop new strategies to cope with increasing skilled labor shortages. The first step was made in 2008, when a foresighted monitoring of labor force in the mentioned trendsetting sectors was established. The main goal of that monitoring was to get a realistic and reliable set of data on the local level before more action oriented projects would be initialized. As the following graphic shows, 550 companies have been questioned in 2011 about which role skilled labor has in their institution and what are their labor demands for the future. The monitoring is repeated once a year and also offers detailed information such as the qualifications companies await from their potential candidates.

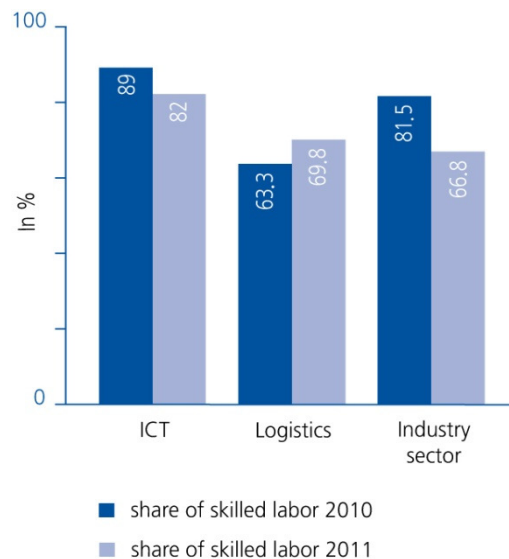


Fig. 3: Graphic: Share of skilled labor in different sectors

Source: dortmund-project 2011

In all interviewed companies skilled labor has an outstanding and important role. Although Dortmund's economy consists especially on knowledge based sectors the clearness of this data accentuates the necessity for securing the availability of skilled labor in the Ruhr Area. Not only in ICT (with 82%) but rather in all trendsetting sectors, specialized staff represents the majority of all employees (Logistics 69.8% and Industry 66.8%). Before the monitoring was introduced, there was no reliable set of data about labor issues on the local level. Because of that, it is essential to note that the structural change does not only consist of the turning towards a knowledge based economy. It is rather based on the new meaning of skilled employees and their regional accessibility, which has become a crucial location factor for the Ruhr Area (Beerheide/Howaldt 2008).

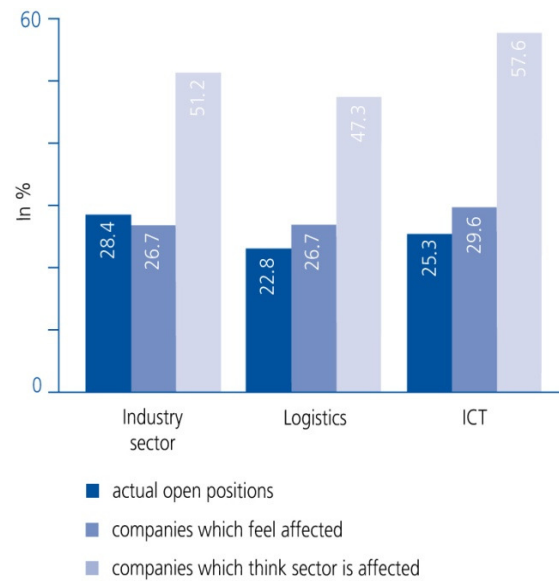


Fig. 4: Graphic: Open positions vs. feeling affected by labor shortages

Source: dortmund-project 2011

The development of the skilled labor monitoring in the dortmund-project helped local policy makers not just to draw this elementary conclusion about the new meaning of skilled labor for the economic future. Furthermore it made the realistic consideration between the following three statistic parameters possible:

- The short term demands for labor (e.g. 1st bar “open positions”),
- The number of companies which expect labor shortages (2nd bar “companies which feel affected”) and
- The local company’s estimations, if the whole sector is going to be affected (3rd bar “companies which think sector is affected”).

By this detailed insights the local and regional controllability for goal-oriented initiatives raised clearly. Summarized, the monitoring offered reliable and locally oriented data, which showed that initiatives to fight labor shortages were necessary. This insight also convinced local policy makers to make no snapshots but rather get into sustainable co-operations on the local level with a long term perspective. The following three applied examples show a cutout of this new local strategy, which has become a sustainable long term aim for the city of Dortmund. These projects are meant to show new approaches for binding and developing skilled labor. They are selected according to the concept of live long learning, so that each case represents an early, middle and late stage to promote employees.

3.2 Project 1/3 (early stage): How to raise the share of young people in technical professions?

Skills of candidates directly after school graduation

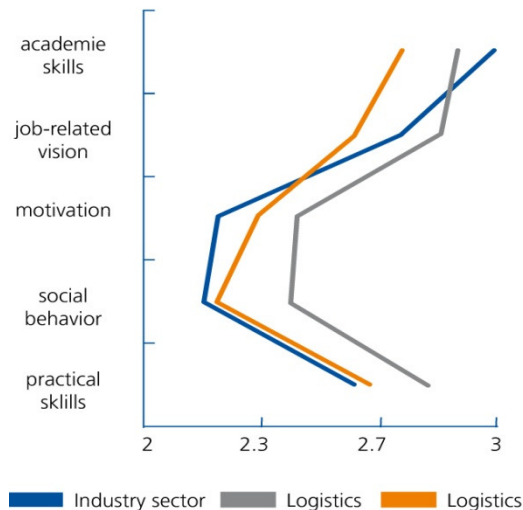


Fig. 5: Graphic: Skills of students after school graduation

Source: dortmund-project 2011

Demographic Change is not the only reason for the company's problems to find suitable employees. Many employers complain about the so called "mismatch". This means that there are empirically enough candidates on open positions, but they don't fit on the specific requirements of the job. The monitoring found out, that labor shortages do not only have a quantitative but rather a qualitative aspect of deficient "academic" and "technical skills" of students while other indicators as "social behavior" or "motivation" are satisfying the employers, as the graphic shows.

For local policy makers the improvement of this situation was a constitutional mission to assure the local availability of labor, because it affects people who do already live in the region and whose employability must be increased quickly. So action-oriented projects started and until today about 150 long-term alliances between schools, companies and senior experts were established to inspire young people to improve their technical and academic skills.

Another major project in this context was the foundation of the technology centre for children (KITZ.do) in co-operation with leading local firms and the local office for education. Within three years about 6.000 young Kindergarten children and teenagers have been taught playfully in mathematics, informatics, natural sciences and technics by experts from universities or companies in the KITZ.do. The class schedule is a mixture between what the children could need at school and what could help just to make them interested in technical professions.

3.3 Project 2/3 (middle stage): How to make high potentials stay in the area?

Share of alumni staying in the region

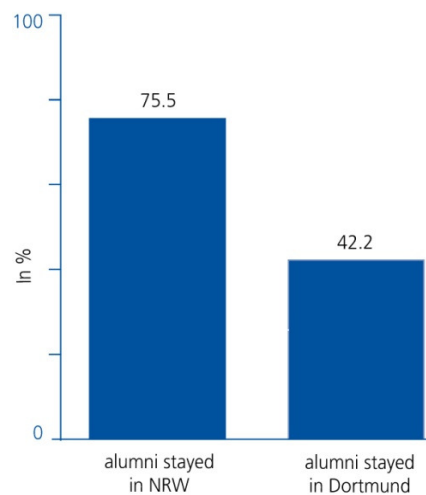


Fig. 6: Graphic: Do Alumni's stay in the region?

Source: dortmund-project 2011

Many persons like scientists and policy maker say for decades now, that the Ruhr Area and especially Dortmund has a strong educational infrastructure (one Technical University and several universities of applied sciences) but a poor attractiveness for skilled labor, which is demanded by companies in the whole nation. To check that argument, the monitoring figured out that unfortunately only four of ten students who graduated from local universities stay in Dortmund. Most of the alumni's get lost by moving into other competing metropolitan regions (e.g. Cologne or Berlin)

To change this situation, a new unit in the dortmund-project was established just in 2011. The aim of this unit is to make high potentials stay in Dortmund and the Ruhr Area. So this project has intra-regional focus, because living in Bochum could easily mean working in Dortmund and vice versa. The whole project is based on a strategic regional co-operation with other cities, universities and about many companies in trendsetting sectors. The main fields of activity are the arranging of internships, job offers and promotion of companies in the Ruhr Area in the regional universities.

3.4 Project 3/3 (late stage): How to get more people integrated into regional labor markets?

Do you focus your HR-Development on the following target groups?
Monitoring in ICT

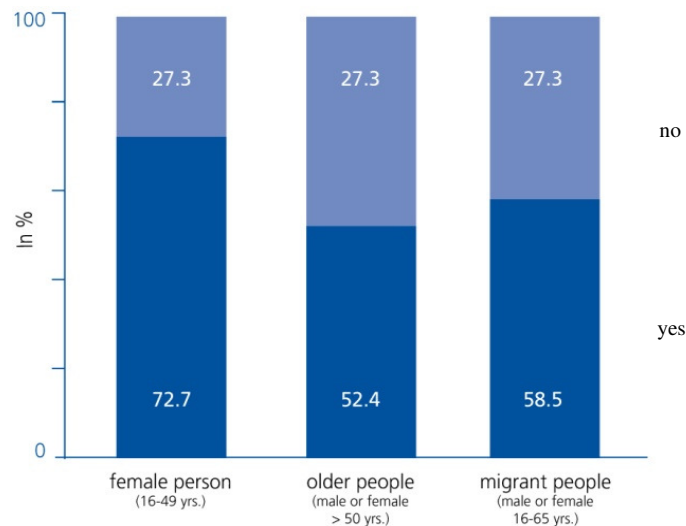


Fig. 7: Graphic: New labor potentials

Source: dortmund-project 2011

As already mentioned before, the most promising way to compensate demographic change in the Ruhr Area is not immigration but rather benefiting from endogenous labor potentials by keeping their employability high. Especially female, older and migrant people are often not integrated in the local labor market although they have economically needful skills. As the graphic shows, for example many of the ICT-companies do not focus on these groups in their HR-development.

With the help of leading ICT-companies, the local chamber of commerce, the labor unions, the federal employment office and the local bureaus of foreign affairs many initiatives with this strategic balance point began. Mainly through information events, HR-awards and financial incentives to promote these precious target groups in the ICT and other knowledge based sectors. As the monitoring shows once a year, especially older and migrant people have become more important target groups for local companies because of these activities.

4. Resume: Structural Change reloaded – Demography is transforming the Ruhr Area

Structural change does not only consist of the turning towards a knowledge based economy. It is rather based on the new meaning of skilled employees and their regional accessibility, which has become a crucial location factor for the Ruhr Area (Beerheide/Howaldt 2008). In order to understand the current demographic dynamics and the challenges shrinking cities in the Ruhr Area are facing, it is necessary to abstract the described economic developments in three future movements:

- Sinking total population by coincidental higher share of older people,
- Continuing high long-term unemployment rates and socio-economic polarization,
- Structural shortages of qualified labor, because of demographic change and external migration of high potentials.

According to this, it is a matter of fact that the number of young and skilled people is going to decline rapidly. That's the main reason why, demographic change endangers the economic development. Therefore innovative projects had to be developed in the Ruhr Area, because otherwise there will be no way to unlock further growth potentials in knowledge based sectors. That is the reason why, social innovations are important, also in terms of local economic factors. In Dortmund, with the help of social innovations policy makers have engaged proactively to develop long term projects. The examples of this paper demonstrated, that business leaders could profit from engagements with governments in order to shape sustainable labor policies. This also shows that governments have moved away from the traditional roles to collaborative partners and supporters for the local economy (Phills et al. 2008: 42).

The basic necessity for these new types of local co-operations is that appropriate fields of social innovation activities are no "single player" settings. No regional or local institution could boost the development of labor force on its own. Consequentially, stakeholders with a traditionally low cut-set have to work together strategically. Representatively for other cities in the Ruhr Area, the three examples from Dortmund showed, how the development of skilled labor could be managed in a co-operation oriented way. In reference to Social Innovation theory all three examples do achieve specific criteria to define them as social innovations (Hochgerner 2008; Pol/Ville 2008; Moore/Westley 2011; Howaldt/Schwarz 2010):

- They generally showed that the strong will to find innovative ways of working together on economic and social challenges was the principle intervention corridor.
- They do aim the solving of societal and economical problems on the local level.
- They practically showed that strategies to fight skilled labor shortages in ageing societies are requiring new forms of networked co-operation between very different players.
- Last but not least, the concept of Social Innovation has offered the opportunity to develop sustainable and innovative long term projects, which have become demonstrably successful and accepted by the involved players.

5. Outlook: Incentives for social innovations on the local and regional level

The most important implication of this paper is the importance of recognizing the fundamental role of cross-sector dynamics: Exchanging ideas and values, shifting roles and relationships, and blending public and private resources (Phills et al. 2008: 42). Beside this general insight, the establishment of new local governance forms in reality has certain terms and conditions which could be described as an embedding structure, which is necessary for the emergence of social innovations on the local or regional level (Crouch et al. 2004; Grabher 1993):

- The main need to exercise social innovation strategies is the existence of an enabling political environment and clear incentive structures for every player involved. The political preconditions in Germany in that context are often not useful for developing social innovations as a broad effect, because the political system is highly fragmented and regulated especially on the local level.
- Derived from the showed experiences it is an assurance, that social innovations will hardly arise when the leading players are bound in strict responsibilities of public administration. Especially institutions like social or educational offices do mostly not have operational liberties and no unbound budgets.

If these politics-settings are not going to be improved through a deep going process of sensitizing for the new meaning of social innovations, significant barriers for most of the local players will remain. Consequentially the most important step is to analyze in every single case what could be clear

incentives for each player involved to leave his existing fields partially in order to develop new networked co-operations (Scharpf 2006; Howaldt/Loose et al. 2011). Of course the political systems in different national states (e.g. France and Germany) differ partially very strong for which reason basal comparing methods such as the concept of “Varieties of Capitalism” (Hall/Soskice 2001) should be used to fathom the transfer of social innovations in practice in order to categorize different regional and institutional settings.

In context of the implementation of social innovations on the local level, voluntary divisions of government such as Economic Development Agencies have an outstanding role, because they do have the financial opportunities and operative liberties to boost local networks as a first mover between very heterogeneous players who usually do not co-operate. According to this it will be a scientific and a practical challenge to sensitize for this situation and convince such institutions about the advantages of social innovation strategies. Otherwise the concept probably won’t arise on the local and regional level as a broad effect and on huge challenges like demographic change. And this will mean serious problems for most of the cities in Germany, because then they have to face this immense challenge with their old “single player” governance mechanisms and insular political instruments.

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