Urban decline within the region: Understanding the intra-regional differentiation in urban population development in the declining regions Saarland and Southern-Limburg
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Intra-regional differentiation of population development in Saarland
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ABSTRACT – We increasingly understand the causes of urban population decline: these can be, among others, processes of deindustrialization, decreasing fertility, political instability or climatic disasters. However, we are still insufficiently able to explain why differences still exist between cities within regions experiencing the same macro-processes. This research addresses this intra-regional differentiation in population decline in the declining former mining region of Saarland (Germany).

Quantitative and qualitative analysis revealed that the differentiation in current decline stemmed from 1) differentiated population development trajectories of the past, with a massive population boom followed by an aged and declining population in the industrial municipalities, and 2) the spatial distribution of amenities over the region, and 3) the spatial distribution and accessibility of housing opportunities steering migration flows. These housing opportunities are not necessarily concentrated in those areas that are attractive. Rather, the distribution of these opportunities strictly follows the planning logic of the supralocal institutional framework, with a concentration of housing along the main infrastructures and in larger centres. The case study thus reveals that the mechanisms behind this intraregional differentiation are much more complex than often portrayed in the urban development- and decline debate.

5.1 Introduction

In several regions in Western Europe, Eastern Europe, the United States and Japan, the population is decreasing, getting older and fertility rates are dropping. In Western European countries, the fertility rate already dropped below the replacement level in the early 1970s. However, this was still compensated for by immigration (Grant et al., 2004). The terms urban decline and urban shrinkage are – often interchangeably – used for these processes. Although commonly accepted definitions are still lacking, generally, urban decline is considered to be a transformation process comprising demographic and economic changes and often leading to other spatial and social
changes in the city (Bradbury et al., 1982; Pallagst et al., 2009). Economic change is often simultaneously seen as both an indicator of urban decline and a cause of population decline via out-migration. In order to circumvent this conceptual ambiguity, in this research the decision was taken to focus on the indicator population decline only, and to perceive economic decline as a (possible) cause rather than as an indicator.

Often mentioned causes of changing natural developments are decreasing fertility rates due to changing family structures and living preferences, and ageing, while migration is often triggered by structural economic changes such as deindustrialization, political changes and wars or changing residential preferences like suburbanization (Wiechmann and Pallagst, 2012; Beauregard, 2009). The relationship between economic and demographic changes is a key point in urban shrinkage and decline debates (Lang, 2008).

Although the general picture of underlying drivers is clear, difficulties arise when we explain why within a region in decline, the development of municipalities suffering from the same general processes still differs. These general processes are apparently not sufficient to explain those differences. It is exactly this question that will be addressed in this chapter: how can intra-regional differentiation in the level of urban population development in the declining region Saarland be explained? It is aimed to contribute to a more profound understanding of the theoretical concept of urban decline by extrapolating how the constituent parts of the concept (births, deaths, in-migration and out-migration) impact on each other and which factors, in their turn, fuel these constituent parts.

A conceptual model was drafted on the basis of the literature relevant to explaining intra-regional differences in natural developments and migration. The explanatory power of this model was assessed on the basis of a quantitative and qualitative examination of the municipal developments within a declining former mining- and steel region in Germany: Saarland.

5.2 Theoretical framework
In order to understand the intraregional differentiation in population development, we must subdivide population decline into its components (developments in the number of births, deaths, in-migrants and out-migrants), and investigate what causes the intraregional differentiation in these components in a declining region. Changes in fertility behaviour and ageing are said to be rooted in the second demographic transition (Lesthaeghe and van de Kaa, 1986; Billari, 2008). Decreasing fertility together with increasing life expectancy, lead to population ageing and eventually
population decline. Intraregional differences in births and deaths stem from
differential population age compositions, which are the result of past and present
migration patterns.

In the decline and shrinkage debate, the focus is on out-migration and it is
linked to structural economic changes flowing from changes in the global division of
labour, such as deindustrialization with concomitant job losses (Rink et al., 2010), or
the political shift like the post-socialist transformation (Wiechmann and Pallagst, 2012;
Steinführer and Haase, 2007). Again, such general economic and political processes
may explain why within a larger geographic area (e.g. Eastern Europe, large industrial
regions) population decline occurs, but they cannot explain the differences in
population development within the region.

Intra-regional differences in migration can perhaps better be understood by
treating urban population decline as another form of urban population change. One of
the frequently used interpretations of growth and decline of urban areas is the idea of
urban areas passing through a number of successive stages of growth and decline. The
stages of urban development model of van den Berg et al. (1982) is an example of such
models. Even though this model has been criticised for its mechanical and
deterministic nature and lack of theoretical underpinnings (Rérat, 2012; Elliot, 1997;
Capello and Faggian, 2002), as “forces driving net centralisation and decentralisation
were more complex than the simple ones determining industrial decentralisation by
itself, or cross-sectional patterns of residential segregation” (Cheshire, 1995, 1046), it
can still be useful as a first attempt to describe these processes of growth and decline.

This body of theory distinguishes different successive cycles of urban growth
(urbanization, suburbanization, desurbanization and reurbanization), more specifically,
the causes of the onset of a new stage in which a different part of the functional urban
region starts growing often at the expense of the other parts, and the causes of the
spatial differentiation of population development within this urban system in a
particular stage (figure 5.1).
In these models, it is assumed that urban actors maximize their well-being by choosing those locations offering the most ‘welfare potentials’ (housing, employment and amenities). After Geyer (1996), I will call such welfare potentials productionist (employment-, education-, and income related) and environmentalist (living conditions related). Which of these motives dominate in migration decisions, codetermines which part of the urban system grows. What is perceived as a welfare potential can change due to fundamental economic, social, demographic and cultural developments – thus heralding a new stage (van den Berg et al., 1982). For instance, suburbanization is enabled through parallel wider societal opportunity-creating processes like decreasing transportation costs, rising incomes and increased car possession. The intra-regional differentiation in growth depends on where those opportunities appreciated in this particular stage are concentrated (in an urban, suburban or rural setting).

Besides the fluid nature of the appreciation of those opportunities, the spatial distribution of those opportunities is not fixed either, as employment can concentrate and deconcentrate under the influence of changing production methods or spatial
divisions of labour for instance, and housing opportunities can shift due to housing market planning. The institutional context with its taxation, legislative and planning arrangements affect these processes as well (Gyourko and Voith, 1997). Besides the higher-level governmental structure, agents can also influence opportunities. Land owners, banks and mortgage lenders and real estate agencies impact on the supply and access to these opportunities (Pahl, 1969). Local political agents might be just as important place-shaping agents (Tricket and Lee, 2010; Lewis, 1996) as they can improve the local amenities, but also permit expansion of the housing stock. However, the degree to which local actors are able to shape place, via all kinds of policies, again depends on the institutional context with its planning instruments and arrangements and financial structures (Sellers, 2002).

The realization of such preferences, however, hinges on a wide array of resources, constraints and opportunities, both at individual and macro level (Mulder, 1993). Resources relate to household income, but also human capital, (family) norms and social networks (Haug, 2008). The government can affect households’ resources via national subsidization arrangements for stimulating homeownership or deduction of mortgage interest. Constraints relate to the ‘intervening obstacles’ (Lee, 1966) blocking opportunities, like housing opportunities shortages, but also national boundaries, language differences or costs of the move.

These relocation decisions may not always be fully rational or focused on maximizing utility though: “people are sometimes satisfied with less than optimal profit levels and [...] decisions are often made in a context of incomplete knowledge and uncertainty” (Cadwallader, 1992, 11). Additionally, we should be careful with inferring the relationship between the presence of amenities and migration, as there is more to it than just the appreciation of a certain amenity in a certain place: for example, a person can migrate to an area because a certain amenity is nearby; it does not necessarily need to be present in the area of destination. We thus need to take ‘comparative place utilities’ into account as well (Brown and Longbrake, 1970).

A declining region such as Saarland can be considered as being at the end of the desurbanization phase, in which none of the parts of the functional urban region are growing anymore. If we follow the line of reasoning of van den Berg et al. (1982), the fact that the FUR is declining is the result of large-scale out-migration because of negative externalities of previous rounds of urbanization, together with productionist and particularly environmentalist opportunities offered outside the FUR. In line with the model, population decline must then be highest in the core area and lowest in the surrounding (suburban) area. However, I expect that there is still more differentiation in population development within the FUR than the simple core-ring dichotomy
predicts, and that, based on the above, this intra-regional differences must be the result of the interplay between the spatial distribution of opportunities – be it employment or amenities – and the appreciation of and ability to seize these opportunities by migrants.

Based on the above, a conceptual model of intra-regional differentiation in decline was formulated. Each arrow represents a hypothesis that was tested in the case study region (figure 5.2).

**Figure 5.2. Conceptual model**

![Conceptual model diagram]

*Source: Based on Hoekveld, 2012, 17; Bradbury et al., 1982; Kazepov, 2005; Sellers, 2002; Lewis, 1996*

The first assumption (marked arrow ① in the model) comprehends the influence of migration and natural changes on population development. In the stages of urbanization models, little room is reserved for natural increases and decreases steering differentiated population development, yet according to the urban decline
and particularly the urban shrinkage debate natural change is a powerful steering mechanism behind population decline. The effect of migration on total population development is twofold: directly, and indirectly via natural developments. If young people leave, they may have children elsewhere thereby lowering the birth rate in the area of departure (②).

Net migration in a locality depends on the availability of employment within a reasonable commuting time and the availability of local amenities. It remains to be seen which of these local amenities (in line with the general residential location theories: quality of the housing market, quality and supply of public services and shopping facilities and education) dominate in a declining region (③). Furthermore, the relative position in the settlement system, that is, the accessibility of other settlements with their supply of amenities, arguably matters as well (④).

The presence and quality of local amenities and the degree to which these preferences can be met through migration are subject to the local and supralocal institutional context, which comprises both agents and structures. Arrow ⑤ expresses the expectation that local politicians and other local agents and policies can influence the local amenities and the housing opportunities. These local agents in turn are only able to do so within the limits posed by the supralocal institutional context (⑥). As all municipalities are subjected to this framework, for explaining intra-regional differentiation in population decline the supralocal effect is expected to be subordinate to the direct effect of the local institutional context. Arrow ⑦ represents the expectation that wider societal forces unrelated to shrinkage can affect the appreciation of the local context and thus migration behaviour (as was the case with the widespread changing appreciation of the suburb) and arrow ⑧ indicates the effect of the wider societal force of deindustrialization on local employment opportunities.

5.3 Methodology

Method of analysis
The analysis takes place at two levels, the regional and the local level, as the developments at the local level cannot be understood without reference to the regional developments and vice versa. At regional level, briefly Saarland’s economic and demographic development will be sketched. At municipal level, the primary question is how the differences in demographic development between the municipalities can be explained. Unfortunately, data concerning the demographic component variables births, deaths, in-migrants and out-migrants dating is only
available since 1975. Firstly, regression analyses reveal the relations between the demographic component variables population decline, net rate of natural increase and net migration rate. Then regression analyses between the demographic variables and a range of standardized local amenity variables cover the ‘preferences’ part of migration (see table 5.1). The choice for the amenity variables is based on common residential preferences literature, and covers these amenities as much as data availability permits. These are general factors like the accessibility of schools, housing price, accessibility to employment, characteristics of the housing stock (Frey, 1983; McFadden, 1978; Kim et al., 2005; Clark et al., 2002).

Since this research did not include the interrogation of the actual migrants themselves and their migration-decision-making processes, the outcomes provide insight into the revealed preferences only, rather than stated preferences or the negotiation thereof.

The qualitative analysis covers the question of which and how opportunities, constraints and resources impact on local population development. The analysis consists of 30 in depth semi-structured interviews with regional administrative, economic and societal key persons and stakeholders, and in these interviews underlying mechanisms steering local and regional population and economic development were discussed. Of those interviews held in 2012, 20 were with local heads of municipal departments of spatial planning and housing and the remaining 10 interviews included five representatives of five regional property valuation committees, a representative of the Ministry of Environment of the federal state Saarland, representatives of the chamber of commerce and the largest housing cooperation, two scientists (regional geographers) and a real estate broker.
Table 5.1. Hypotheses, methods and data

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<tr>
<th>Hypothesis</th>
<th>Type of analysis</th>
<th>Data</th>
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<td>Quantitative:</td>
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<td>Regression</td>
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<tr>
<td>1</td>
<td>Total municipal population since the year population decline started, in %</td>
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<td>5-year average of natural increase and net migration, %, since 1975</td>
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<td>Quantitative:</td>
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<td>2</td>
<td>5-year average of number of births, deaths, in-migrants and out-migrants %, since 1975</td>
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<td>3 / 4 / 6 / 7 / 8 / 9</td>
<td>Qualitative:</td>
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<td>5</td>
<td>Total municipal population since the year population decline started, in %</td>
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<td>Impact migration and natural changes on total population since start decline, in %</td>
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<td>Amenity variables:</td>
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<tr>
<td>5</td>
<td>Total population size, 2011</td>
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<td>5</td>
<td>Population density: number of inhabitants per km, 2010</td>
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<td>5</td>
<td>Industrial character: yes or no mining/steel municipality</td>
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<td>5</td>
<td>Employment density: number of jobs per 1000 inhabitants, 2011</td>
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<td>5</td>
<td>Industrial jobs in total employment, %, 2009</td>
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<td>5</td>
<td>Deindustrialization: change in percent point of industrial jobs in total employment, 2000-2009</td>
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<td>5</td>
<td>Distance from centre municipality to highway exit: in km, 2012</td>
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<td>5</td>
<td>Accessibility regional employment: % of all employment in Saarland reachable within a 20 and 30 minutes’ car drive (2009)</td>
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<tr>
<td>5</td>
<td>Primary education: number of schools per 1000 inhabitants, 2012</td>
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<td>5</td>
<td>Distance to closest higher education facility: in km, 2012</td>
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<td>Distance to closest hospital: in km, 2012</td>
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<td>5</td>
<td>Average municipal residential land value for owner-occupied dwellings, per m², 2011</td>
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<td>5</td>
<td>Expansion of municipal housing units 1990-2011, in %</td>
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<td>5</td>
<td>Average living space: per person, in m², 2011</td>
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<td>5</td>
<td>Detached housing in housing stock, in %, 2009</td>
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<tr>
<td>5</td>
<td>Real estate tax: Level of real estate tax, 2011</td>
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Source: BBSR (2012); Bertelsmann Stiftung (2013); IHK, 2013, Statistisches Amt Saarland 2011a,b; 2012a,b; 2013a; ZGGA, 2011.

Impact is calculated as follows; impact natural decreases is (Σbirths year decline started -2011 minus Σdeaths year decline started - 2011) / total population of year decline started. For migration idem.

In German: Bodenrichtwerte
Case selection

The region of Saarland with its economic specialisation in mining and steel industries is a suitable case as it is affected by the wider societal force of deindustrialization. The spatial demarcation of the case study region is based on Functional Urban Area criteria and comprises all administrative districts in the Land Saarland except Merzig-Wadern. Merzig-Wadern is excluded because this part of the region is not part of the FUA of Saarbrücken as it is more oriented towards Luxemburg than Saarland’s capital city, Saarbrücken, and can hardly be associated with the mining and steel history of the region. All municipalities within this region were entered in the quantitative part of the analysis (n=45). Due to time limitations, 20 of the 45 municipalities were selected for the qualitative analysis (underlined in figure 5.3). This selection was based on three criteria taken from the literature:

- Differentiation in population development
- Differentiation in population size of the municipality
- Differentiation in level of centrality

Since the differentiation in population decline must be explained, a range of severely and moderately declining municipalities were required. The second criterion stemmed from the expected importance of level and amount of services, education or leisure facilities, which are largely expressed in population size (Reiner and Parr, 1980). The third criterion, level of centrality, expressed the position of the municipality in the urban system hierarchy (core, ring or hinterland), of which all categories needed to be represented. The municipalities have been plotted on their population development and population size scores in a scatter plot and subsequently in every quadrant of the plot municipalities with different levels of centrality were selected.

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The demarcation of the Functional Urban Area is based on ESPON (2007) ESPON project 1.4.3 Study on Urban Functions. Final Report.
Figure 5.3. Case study region Saarland in Germany, with case study municipalities

Source: Made by author

5.4 Saarland

Geo-historical context

Saarland is located at the western border of Germany with France and Luxemburg. Its border has been heavily contested; in the 20th century alone Saarland has changed between French and German control (and the League of Nations) four times (Clemens, 2012). Only since 1957 has Saarland (again) been part of Germany. This unstable geopolitical situation has had economic repercussions. After the First and Second World War, Saarland not only had to recover from heavy war damage, it also had to reorient from a German to a French internal market and political administrations (Dörrenbächer et al., 2007).

Agriculture dominated the regional settlement system until the industrialization and structural exploitation of the large coal basin from 1850 onwards, inducing urban growth. The mining and steel ‘Saarrevier’ (figure 5.4) urbanized as it attracted large numbers of rural workers. The larger cities of Saarbrücken, Völklingen and Neunkirchen grew, as did typical worker settlements (Hartz, 2007). Prussian authorities controlling the area between 1815 and 1919 actively encouraged the construction of owner-occupied housing for the miners, as they expected the miners to remain loyal to their employers if they had their own house (Sander, 2012). After the Second World War, a process of suburbanization and development of commuter villages took place, altering the settlement pattern once again. These two
development cycles with differential urbanization patterns resemble the traditional cycles of industrial urbanization followed by suburbanization.

**Figure 5.4. Saarrevier**

![Map of Saarrevier](image)

*Source: Made by author, based on © 2013 by GR-Atlas*

**Demographic decline in Saarland**

Until the mid-1960s, the population boomed (figure 5.5). Unlike other German federal states, this growth primarily resulted from natural increases and less from in-migration (von Hohnhorst, 2007). This increase in births was – besides the general baby boom that was occurring in that period throughout Western countries – fuelled by the fact that after the Second World War Saarland belonged to France, which had generous family-planning facilities (Ertl, 2004). After 1965, the population started declining and this decline was only shortly interrupted, firstly in the mid-1980s, due to a small ‘echo’-baby boom as the baby boom generation of the 1960s reached their reproductive phase and, secondly, due to the increase in international immigrants in the 1990s (especially “Aussiedler” or Germans who had lived in former Eastern Europe). This recovery was short-lived and since 1994 the regional population has been declining steadily, without any likelihood of future growth (Statistisches Amt Saarland, 2010).
Figure 5.5. Population development Saarland, 1950-2012

Source: Statistisches Amt Saarland, 2013b

Economic decline in Saarland

Saarland’s economic development can be characterized as both a generic industrialization/ deindustrialization process and a region-specific trajectory. One fourth of all jobs in the 1970s were found in the coal and steel industry and estimates are that including related branches and suppliers 50% of all jobs were dependent on coal and steel (Lerch and Simon, 2011). The arrival of cheaper foreign coal and oil heralded the collapse of the coal market in the late 1950s, leading to the first mine closures. This development came to a halt with the oil crisis of 1973. The German government feared for its supply of energy, stimulating the political decision to stabilize the amount of coal extracted. The government protected its mining industry through various financial instruments. Severe earthquakes and damage resulting from coal mining gradually increased the public willingness to close the mines with the eventual closure of the last mine in 2012 (Klimmt, 2012). Since the mid-1970s, the steel industry suffered the same sort of crisis with massive job losses.

Despite the dramatic economic changes in the past 50 years, the region is not entirely deindustrialized. The industrial past still impacts on the regional economic structure to this day; the car and machine manufacturing industry was partly spun off

\[\text{\textsuperscript{p}}\] With the “Kohlepfennig” for instance, the end user of electricity was forced to pay for the price difference between the German coal and the cheaper foreign coal. This taxation measure prevailed between 1974 and 1995 (Storchmann, 2005).
the metal industry. The interviewees of the Chamber of Commerce argued that these new industries profited from the specific qualities of the Saarländer labour population, such as being used to shift work and acceptance of heavy industries. Nowadays, the car and machine manufacturing industry – though vulnerable to economic trends – is highly productive and important for the Saarland economy. This economic diversification strategy through car manufacturing is found in other mining and steel regions like Belgian Limburg, North-eastern Britain and Lorraine as well (Herrmann, 2012). Saarland’s economic structure thus went from being dominated by coal and steel to being dominated by steel, car and machine manufacturing. The tertiary sector increased too, currently employing around 71% of the working population (Statistisches Amt Saarland, 2013c). Although the economic structure has diversified, many of these service industries are still closely tied to and depend on industrial companies (Lerch, 2007).

The onset of the stage of desurbanization

The interviewees identified two drivers leading to the start of overall regional population decline; the extremely low fertility rate in combination with high death rates and out-migration. The total fertility rate fluctuated between 1.19 and 1.36 children per woman since 1973 (Ertl, 2007), which was among the lowest of all federal Länder (Statistisches Bundesamt, 2013). General causes of the declining rate were the introduction of the contraceptive pill, economic recession and the worldwide oil crisis, but there were also specific national and regional causes, such as the high rate of childlessness among German women (national effect) and the fact that young women left the region in search for jobs and have children elsewhere, lowering the total fertility rate in Saarland and increasing the total fertility rate in the area of destination (regional effect). The employment opportunities offered by mining and steel industries caused high population growth and a skewed population composition, leading to high death rates in later decades (a population boom echo effect).

Changes in the economic structure were not only caused by wider societal trends such as economic restructuring exclusively: the interviewees pointed out that the institutional context has been important too. The collapse of the mining industries was the result of the arrival of cheaper foreign coal, yet the insufficient ability to adapt to these changes was – at least partly – rooted in the institutional framework. The strong industrial location policy employed by the regional government between 1968 and 1972 led to the attraction of quite a number of firms, yet the economic structure
remained industrial, as these were again primarily manufacturing firms with a particular focus on car manufacturing (Burtenshaw, 1972). They could not compensate for the immense job losses in the coal and steel industry and subsequent out-migration. Another hindering factor was that, as some interviewees pointed out, the executives of the main industrial companies prevented other industries from settling in the region out of fear for competition for labourers and concomitant higher wages (see also Herrmann, 2012).

Because of this undiversified economic structure with a overrepresentation of subsidiary companies and the underrepresentation of headquarters, there is a lack of suitable employment in R&D and administration, which led, according to the interviewees, to an exodus of primarily young highly-educated people. However, statistics cannot confirm the out-migration of young highly-educated people, as the statistical institute does not register the educational level of migrants. Nonetheless, Saarland does have a large migration deficit in the age cohort of 25-50 years old, in turn affecting the fertility rate (Saarländische Landesregierung 2007). According to the Chamber of Commerce, this outflow of highly-educated youngsters is not decreasing regional attractiveness for firms. What is decreasing regional attractiveness is the lack of technically-trained craftsmen, but this is caused by the general decrease in youngsters due to decennia of low birth rates and the wider trend of young people choosing non-technical education.

The spatial context, especially the influence of the border, has played a role in the economic- and demographic development as well. Saarland’s political instability – reaching its present administrative form only in 1957 – enforced repeated adaptation to different political and economic markets. The fact that Saarland remained highly industrial after WWII had to do with the fact that France (ruling Saarland at that time) found benefit in a strong industrial structure in Saarland. When Saarland joined the Bundesrepublik Deutschland again in 1957, it faced a double restructuring of dealing with the economic restructuring and the political restructuring (Linsmayer and Reichelt, 2012). Because of these geopolitical developments, Saarland was economically always one step behind, which impacted on the perceived economic place utilities of the region (Hamm and Wienert, 1990; Klimmt, 2012). A further spatial disadvantage was the relative distance to the political centre of power, Berlin, and other economic agglomerations.

“The border is still a disadvantage, it doesn’t help to say that we are at the heart of Europe [...] those agglomerations that are important are not located within a 150-200 kilometre reach.”

C
A second institutional border-effect stems from cross-border differences in taxation and regulation. From the 1980s onwards, Lorraine (in France) offered opportunities to Saarländer families and young couples in the form of inexpensive housing (plots) and less restrictive building laws (IBA, 2012). Conversely, Luxembourgers moved towards the north of Saarland where housing was cheaper than in Luxemburg, which influenced migration balances positively. The border is, according to the majority of the interviewees, much less disadvantageous than it used to be and the disadvantages (tax differences-induced migration, and language difficulties) are largely outweighed by the advantages (cross-border trade partnerships, commuting and shopping and Saarland’s ‘savoir vivre’, which seeped in from France). The cross-border cooperation Saar-Lor-Lux (which had its roots in the cooperation of the mining companies (Dörrenbacher, 2006)) is effective at different levels, such as regional governments, Chambers of commerce, municipalities (Schulz and Brücher, 1997). Still, the interviewees agree that the potential benefits of being a border region and the location at the heart of the European economic core, are not exploited to its fullest yet, which partly has to do with the fact that some problems of border regions cannot be solved at regional level, but only at national level (such as tax system differences or deviating educational requirements of cross-border workers).

At third border-effect is cross-border labour exchange. Saarland attracts a substantial number of French workers, which form 5.6% of all the labourers in Saarland. These are partly those former Saarländers who migrated towards Lorraine for housing reasons. These incoming labourers far outnumber the number of Saarländers working in Luxembourg (IBA, 2012). It could be hypothesized that those Luxembourger employment opportunities mitigate population decline in Saarland, as those jobs which are not available in Saarland are provided just across the border. However, these cross-border labour opportunities in Luxemburg are particularly taken up by people living near the border (the average commuting distance is 46km, just enough to get from Luxemburg city to the most North-western sub-region of Saarland) (Schmitz, 2012). Therefore, the effect on population development in terms of a lower need to out-migrate due to the proximity of employment is likely to be spatially limited to this border area.

A final regional characteristic influencing migration – positively – is the Heimatverbundenheit of Saarländers or their rootedness to their native soil:

“If it wasn’t for this Heimattreue, population decline would be much higher.”

Saarländers are generally not eager to leave the region, or even their home town. Indeed, Saarland has the highest percentage of people living longer than 5 years in
their village or a quarter of all Western German federal Länder (BfVBS, 2010). Scholz (2011) investigated the feeling of regional identity among high school pupils in the entire Saar-Lor-Lux area and found that the feeling of regional identity was most pregnant among Saarlander pupils. Although regional rootedness and strong regional identity are typical for regions throughout Germany, in Saarland it might be particularly articulated because the region was always politically contested, therefore the regional identity is highly valued (den Hertog, 2004; Jellonek and Schweigerer-Kartmann, 1999; Kühne and Spellerberg, 2010).

The onset of the stage of desurbanization is thus not so much the result of the successive movement of population through the different parts of the regional urban, as it is the result of general processes like low fertility, aggravated by ageing, high death rates and migration as a result of the specificities of the historical regional economic development trajectory.

5.5 Explaining the intra-regional differentiation
Spatial patterns of differentiation in demographic development
Figure 5.6 shows the extent of decline and the moment decline started. In quit some municipalities, population decline probably started earlier than 1975, but these data were not available due to the large-scale municipal territorial reform of 1974. Many of those early-decline municipalities experienced a short population revival in the 1990s due to the in-migration of former East Germans and East Europeans, but this growth was insufficient to raise the population again to the level of 1975.

The differentiation in level of population decline is not exclusively attributable to the core-ring dichotomy. Figure 5.6 shows that even within the urban and suburban areas, still differentiation exists (with decline varying between -23% and -3.3%). It is true that the first municipalities to start declining were those municipalities in the urban Saarrevier, which would support the propositions of the stage suburbanization (at the expense of the urban core) and hypothesis 8. A fundamental difference, though, is that in those stages the decline of the core area was not only attributable to environmentalist migration motives (the desire to live in a suburban/rural environment), but definitely also by the lack of productionist opportunities after economic restructuring (leading to inter-regional out-migration).
Before turning to the drivers of the spatial differentiation in population decline, first the components of this population decline are addressed (migration and natural decreases). The regression analysis shows a strong and positive relation between total population development and net rate of natural increase and net migration rate (supporting hypothesis 1), yet the beta coefficients were much higher for migration than for natural increases (table 5.2). The often hypothesized relationship between migration and birth rates cannot be confirmed for the local level. Hypothesis 2 should thus be rejected.
Table 5.2. Standardized beta coefficients between 5-yearly demographic components and 5-yearly population development

<table>
<thead>
<tr>
<th>Population development</th>
<th>Rate natural increase</th>
<th>Net migration rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1975 – 1979</td>
<td>0.383</td>
<td>0.837</td>
</tr>
<tr>
<td>1980 – 1984</td>
<td>0.540</td>
<td>0.796</td>
</tr>
<tr>
<td>1985 – 1989 (q)</td>
<td>0.708</td>
<td>0.262</td>
</tr>
<tr>
<td>1990 – 1994</td>
<td>0.397</td>
<td>0.830</td>
</tr>
<tr>
<td>1995 – 1999</td>
<td>0.274</td>
<td>0.963</td>
</tr>
<tr>
<td>2000 – 2004</td>
<td>0.498</td>
<td>0.945</td>
</tr>
<tr>
<td>2005 – 2009</td>
<td>0.486</td>
<td>0.970</td>
</tr>
<tr>
<td>2010 – 2011</td>
<td>0.306</td>
<td>0.738</td>
</tr>
</tbody>
</table>

Source: Analysis based on Statistisches Amt Saarland, 2012

Do local conditions matter?

The next and central question was how these intra-regional differences in population development could be explained. For all 45 municipalities in the case study region, a stepwise multiple regression analysis was performed on a large set of employment- and amenity variables, of which the selection was based on the theoretical discussion. For total population development, 76% of the variation was explained by the following variables (1):

\[
\text{Population development} = \text{Constant} + [0.382 \times \text{housing stock expansion}] - [0.526 \times \text{accessibility regional employment}] + [0.548 \times \text{residential land value}] - [0.240 \times \text{real estate tax}] - [0.262 \times \text{industrial character municipality}] \tag{1}
\]

The population developed most positively in those municipalities with large expansions in the housing stock, with a high percentage of all regional employment reachable within a 20-minute drive by car, with a high residential land value and which were not former industrial municipalities. Both productionist and environmentalist opportunities proved to contribute to this variation. The key question was: which of these local conditions contributes to the differentiation in migration? The regression model of migration explained for only 15% of the variation, which was too little to use (discussed later in this chapter).

\(q\) Calculated minus outlier Lebach as in this municipality a refugee center was located, which led to immense immigration rates in this period.
Housing stock expansion seemed highly relevant to population development. There was indeed a significant correlation between population development, natural increases and housing stock expansion (table 5.3), which had to do with the fact that those new dwellings were often occupied by young couples/families increasing birth rates and lowering death rates. Housing stock expansion thus created opportunities particularly for local households and less to households from elsewhere, as migration was not significantly related to housing stock expansion.

Table 5.3. Correlation coefficients (p = level of significance)

<table>
<thead>
<tr>
<th>Population development</th>
<th>Rate natural increase</th>
<th>Rate net migration</th>
<th>Residential land value, 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housing stock expansion, 1990-2010</td>
<td>0.731</td>
<td>0.767</td>
<td>0.118</td>
</tr>
<tr>
<td></td>
<td>p. 0.000</td>
<td>p. 0.000</td>
<td>p. 0.438</td>
</tr>
</tbody>
</table>

*Source: Analysis based on Statistisches Amt Saarland 2012a, 2011b; ZGGA, 2011*

Housing stock expansion particularly occurs in those non-industrial and non-centrally located municipalities. The industrial Montankranz, or corona of coal and steel industries around Saarbrücken with limited housing stock expansion is generally characterized by low housing quality and an overrepresentation of small owner-occupied miner houses, not meeting today’s housing preferences. These are clear examples of the negative externalities of previous rounds of urbanization. Specific to this area is also the housing damage caused by mining-induced distortion of geological strata. Naßweiler for instance, a village in the municipality Großrosseln, lost almost 50% of its population since 1974 because of severe mining damage. It is in the heart of the former coal and steel zone where path-dependency comes to the fore. As an interviewee from this area states:

“I have the feeling that the problems of Saarland as a whole are all united here in Völklingen”.

Indeed, “the historically grown structures and urban cultures may help or may prevent the city from flourishing in a certain time-space framework” (Musterd and Murie, 2010, 333). So in the industrial zone, migration is constrained firstly by the low level of local amenities in terms of quality of life and housing stock quality and secondly by the low level of housing stock expansion.

Why is there – contrary to the expectations found in the literature – no clear relationship between local conditions and migration (enforcing the rejection of
hypothesis 3)? There are three possible explanations. The first most probable explanation is that housing stock expansion had more to do with municipal housing market policy than with actual municipal attractiveness. Indeed, the insignificant relationship between residential land value and housing stock expansion (table 5.3) indicates that housing stock growth does not necessarily take place in those municipalities which are, based on residential land values, actually regarded attractive.

The second is the importance of the trade-off between the local and proximate amenities (comparative place utilities). There are clear examples where other local conditions are traded-off against the vicinity factor: Mandelbachtal’s asset is the vicinity of Saarbrücken, together with the attractive countryside surroundings.

“Inhabitants then make do with the limited number of services and shops”\textsuperscript{A3}.

Conversely, there are cases where the vicinity factor is overruled by local conditions: St. Wendel is located about 17 km away from a junction on the motorway to Saarbrücken, yet according to the interviewees it is still attractive thanks to its local amenities like shops, services and employment. Saarländers are used to driving anyway (with 74%, the car is the most often used mode of transportation by Saarländers, which is the highest percentage of all federal Länder) (Winkelmann, 2010). Hence, hypothesis 4 should be more specific: proximity of employment is particularly important, yet a lack of this does not have to be a problem if it is compensated for by other local conditions.

The third possible explanation is Saarland’s exceptionally high home ownership rate, at almost 64% the highest rate of all German Länder (Statistisches Bundesamt, 2012). The real estate broker stated that

“because of this high level of home ownership, people are not moving around as much as elsewhere,”

which thereby poses a constraint on migration. People are tied to their homes and restricted in their opportunities to move, even though their home town may not necessarily be the place meeting their preferences the most (anymore). Therefore, like the regional rootedness, this high ownership rate and stay-at-home behaviour may actually balance the migration decision in favour of staying, probably mitigating population decline in quite a few municipalities.

Even though migration is for these three reasons not linearly related to amenities, still it is worth investigating which amenities are perceived as attractive. A regression analysis on the residential land values (as a rather crude proxy for attractiveness)
showed that the land values were highest in those municipalities with higher education nearby, with a high employment density and little industrial employment in the total employment structure (R square 72%, regression equation 2). Indeed, they are found in the economic (but non-mining) heart of Saarland (see also figure 5.7).

\[
\text{Residential land value} = \text{Constant} - [0.595 \times \text{distance to higher education}] + [0.541 \times \text{employment density}] - [0.306 \times \text{proportion industrial employment}]
\]

Figure 5.7. Average municipal residential land value per m² in 2011 and housing stock development, 1990-2011

The interviews confirmed these findings and provided additional factors contributing to local attractiveness which were not part of the regression analysis. The interviewees underlined the importance of supply of (medical) services, retail and education, more specifically the presence of day-care centres, primary education, physicians, pharmacies, shops, supermarkets, catering and even internet quality:

“You could certainly argue that a ‘competition of infrastructures’ has started, in which municipalities fight over inhabitants”.

Source: made by author, based on Statistisches Amt Saarland, 2011b; ZGGA, 2011
However, not all these local conditions need to be present in the municipality itself: the proximity of the motorway (as a means to reach amenities elsewhere quickly) was particularly important. Those municipalities located near the autobahn or Saarbrücken, Luxemburg and Saarlouis were deemed to be more attractive (see figure 5.7). In sum, the actual influence of environmentalist factors on migration is limited, as the realization of such preferences is constrained by trade-off mechanisms, high homeownership rates and housing policy (figure 5.8).

Figure 5.8. Relations housing stock development, migration and amenities and intervening variables

Source: Made by author

Changing preferences
Some wider societal forces are impacting on these residential preferences. Firstly, in the whole of Germany it is expected that the elderly will increasingly move back from the suburbs to the cities. This elderly-reurbanization is already happening, but to a limited extent (Köppen, 2008). In particular, the elderly of the future are expected to be more mobile and favour urban lifestyles. In Saarland, some interviewees had already witnessed this trend:

“The city is experiencing a true renaissance; older people want to live in the city where there is still a certain level of services.”

In an ageing region such as Saarland such new residential migration patterns may have severe repercussions on local developments, the maintenance of facilities and vacancies. For now, it is too soon to estimate the actual extent of these trends.
For families with children previously attracted to those rural villages with cheap building lots, the distance to infrastructure has recently increased in importance. Interviewees argued that this was prompted, firstly, by the dispersion of jobs and longer commutes and, secondly, by the wider societal trend of increasing fuel prices and, thirdly, by increasing environmental awareness and, fourthly, by an increase in dual-earner households. As a consequence, the areas adjacent to motorway junctions and connected to the regional Saarbahn tramline are getting more popular. This is an example of the extended scope of the catchment area of employment, or a stretching of the demarcation of the functional region, under the influence of macro trends.

A wider societal trend influencing migration via households’ resources instead of households’ preferences is the currently extremely low interest rate in Germany (2012) with which

“people who were previously unable to do so could now borrow money to build or rebuild a house”\(^a\).  

In summary, these changing appreciations mentioned above can lead to a shift in the intra-regional migration flows once again, yet likely with a differential impact on the spatial distribution of the population: the urban areas may profit from elderly-suburbanization, whereas the well-connected suburban areas may profit from incoming families with children. These trends need to be investigated further, yet for Saarland and for now, hypothesis 7 can be supported.

**Macro constraints and opportunities: housing market policies**

The supralocal institutional framework creates and constrains those housing opportunities. The German settlement planning system is organized according to the principles of Christaller, with higher, intermediate and lower level centres, each with corresponding levels of services, employment, housing, etc. This system implies that in Saarland each municipality is allowed to issue a certain number of building lots, corresponding with the fixed level of centrality and relative location in relation to infrastructure (Staatskanzlei Saarland, 2006). A municipality complained:

“we are always at loggerheads with the Federal Land. We want to construct new residential sites, but they won’t let us.”\(^a\)

Consequently, growth takes place in those municipalities where housing construction is allowed on the basis of these criteria: not necessarily the most attractive ones. It is argued that this rather rigid system
“...significantly contributed to the stabilisation of the rural areas. I am convinced that without the central place system, the rural areas would have shrunk even more than already is the case.”

Critics argue that the central place principle does not function in practice because in a small Land like Saarland the hinterlands of the five intermediate centres overlap:

“one and the same citizen is allotted to multiple catchment areas. So we are cannibalizing. [...] If we would revise the central place system according to reality, a couple of intermediate centres would definitely lose their function.”

A strict housing planning system impacting on the spatial differentiation in population development is found in other countries too. An example is the Netherlands, where Marlet (2009) finds that differences in population growth between Dutch cities are almost entirely explained by policy variables and not by amenity variables (see also Bijker, 2013).

A complicating factor impacting on the relationship between housing market policy and housing market development is the vacancy problem, specifically the number of vacant lots and the ability of the locality to deal with vacancies. These vacancies are partly caused by decreasing demand due to demographic changes and partly by disproportional issuing of building lots in the past (Feldmann et al., 2007). Vacant lots are deducted from the number of building lots a municipality is permitted to issue, calculated on the basis of the centrality and accessibility criteria. So a municipality is in theory allowed to issue a certain number of building lots based on these criteria, but it cannot in practice because the number of vacant lots outnumbers the allowed number of issuable building lots. In particular, those unattractive former mining/steel municipalities are confronted with this problem. Indeed, one might argue that if there are many vacant lots, the municipality must therefore be unattractive and so a reduction in issuable building lots should therefore logically follow. However, this is not necessarily the case: in quite a few municipalities building lots were bought in the past by people to build housing later, but this never happened. This does not say anything about the attractiveness of this municipality.

Reuse of these vacant lots and dwellings might increase the attractiveness without increasing the total number of dwellings. However, this process is for a number of reasons difficult and time-consuming. Since strict privacy laws prohibit local public servants tracing the owner of the vacant lot, they cannot encourage the owners to either develop or sell the property. The majority of the municipalities are making efforts to take stock of the vacant dwellings and undeveloped lots. This is currently already challenging, because
“how do I even register these vacancies? Am I going to count garbage cans? Am I going to check water bills? Officially, I am not allowed to know who is the owner of a vacant dwelling. The tax agency knows, but is not allowed to tell us.”

Some municipalities have experimented with vacancy programs (Leerstandsborse), in which a municipality discloses the addresses of the vacant lots to interested parties – after the owner of the lot has been identified – with the owner’s permission. Another strategy is to issue grants to families or singles with children who buy and redevelop old vacant dwellings, thereby tackling two issues at once: the problem of the vacant dwellings and ageing population. Alternatively and if the owner is cooperative, the municipality can itself buy and redevelop the property and land, most often leading to demolition of the property and redevelopment of the area into a little park or parking lot. This costly and therefore little used method brings little large-scale redevelopment, as vacancies are not concentrated but spatially dispersed throughout the municipal territory. One municipality resold the redeveloped property and the revenues were used to buy other vacant dwellings to repeat the process.

“Those revenues should be earmarked and spent on repeating this procedure, like a revolving fund. [...] But our chief treasurer is happy to receive any money and uses it to fill other financial holes.”

Although all declining municipalities in Germany face these vacancy problems, they may be particularly meaningful in municipalities with high percentages of home ownership, which is the case in Saarland. In municipalities with vacancies particularly in social rental housing, it is easier to relocate inhabitants and demolish vacant dwellings.

Financial situation

The degree to which municipalities are able to maintain their amenities such as infrastructures, services and offer a pleasant living climate, also depends on their financial situation. Not one of Saarland’s municipalities had a balanced budget in 2012 and now a municipal financial relief fund (Kommunale Entlastungsfonds) has been established, which will be distributed among 33 of Saarland’s 52 municipalities in 2013 (Ministerium für Inneres und Sport, 2012). This financial aid is solely intended to balance the budget and not for further spending.

A discriminating factor for varying municipal budgets is the presence of business areas and concomitant corporate tax. However, maintenance costs are higher as well, because of road repairs related to heavy truck usage or sewage system
maintenance for chemical industries. Secondly, when a company does not make a profit, it cannot pay the municipal corporate tax. Thirdly, companies with multiple branches can choose where they pay their taxes. Due to these financial uncertainties, framing municipal budgets is incredibly problematic.

“Every year, we estimate the corporate tax revenues and base our expenditures on this. But when the tax is paid elsewhere or not paid at all, we have a gigantic problem.” A1

Another local characteristic affecting municipal budgets is the number of towns and boroughs in the municipality: the more towns, the higher the costs of maintaining facilities. It is argued that those municipalities which only have a couple of towns are better off in this respect.

“We have here 10 towns and 14 cemeteries, and maintenance costs are EUR 300,000 every year. But we cannot build one central cemetery, because the population would not accept that.” A3

A third discriminating factor is the municipal ability to attract financial aid and subsidies from higher administrative levels. Such subsidies are German-wide programs like Stadtumbau West, Soziale Stadt and the Dorferneuerungsprogramm or EU projects. With an ever tighter financial budget, the municipalities

“...are increasingly relying on financial aid from higher administrative levels.” A5

Because of this increased reliance

“lobbying is becoming increasingly important. You have to have people there where the money is divided.” A5

Perversely, in order to get funding, the municipalities need to pay a certain percentage themselves. Some municipalities do not even apply for such programs anymore as they cannot afford the municipal contribution. Another example is the obligation dictated by the Bund that municipalities must provide day-care for 35% of all local 0-3 year olds, in order to increase the compatibility between employment and raising children (Sharma and Steiner, 2008). Despite substantial financial contributions of the Bund and Land, the financial burden for municipalities in the form of investment, maintenance and human resources costs is still significant. Another interviewee pointed out the ambiguity of such policies;
“we have to build day-care centres, but demolish playgrounds because we cannot afford their maintenance. What kind of strategy is this?” A1

The local financial situation stems from particular local specificities (business areas and number of boroughs) and local capacities to negotiate with higher institutional levels to attract subsidies. These are not specific to Saarland though, but hold for municipalities in general. The interviewees identified three ways out of this financial situation. The first is inter-municipal cooperation. Although municipalities acknowledge the importance and chances of cooperation, inter-municipal rivalries still obstruct cooperation. The second way is through active citizen participation, both in activities and financially. The final and most drastic option is a territorial-administrative reform, which is inevitable and necessary according to the majority of the interviewees as it would save money and increase efficiency. However, this issue is – at least for now – a political taboo for local councillors.

Local political actors
Besides the institutional structures, institutional agents also shape the opportunities. The mayor in particular deserves some attention. The interviewees pointed out how mayors influenced the abovementioned differences in housing market development and policy, the financial situation and certain amenities. ‘Leadership’ is key in understanding these local developments. Hambleton et al. (2001, 7-9), identify three types of leadership: designated and focused leadership, implied and fragmented leadership and emergent and formative leadership. Saarland’s mayors showed varying types of leadership. Examples of designated and focused leaders were the mayor of St. Wendel who actively promoted the image of sport city and the mayor of Illingen, who as much as 10 years’ ago successfully addressed the vacancy problem. The pitfall is that such strong leaders can be perceived

“as monarch-like. It is a bit absolutistic, albeit within the scope of the law, but still.” A4

Conversely, there were mayors who

“didn’t want to address the problems because they feared families would be scared away” B

or feared an electoral rebuke. The latter point is particularly salient as mayors will aspire to “electoral legitimacy as an informal power base” (Wollmann, 2004, 163).
All German Länder employ a dualistic scheme of a local council and the directly elected mayor, with variation in their respective responsibilities. Exceptionally strong mayors are found in other Länder as well, so the importance of local actors is therefore not a typical Saarland-phenomenon, but rather a consequence of the institutional structure. According to the majority of the interviewees, there is, however, also a cultural and specific Saarländer aspect to the effectiveness of local politics: the ‘Vetternwirtschaft’ or nepotistic culture.

“Everyone knows everyone here in Saarland, because it is such a small Land.”

“it is all about who you know. I have never seen anything like this elsewhere”

Because of this, those local politicians who have a large social and professional network and who are able to lobby the federal government can influence local development trajectories. Persuasion helps in achieving goals:

“If a mayor wants to build in his municipality, and he is persistent at federal level, he can certainly achieve something.”

Lobbying and negotiating local interests might gain importance, particularly in a context of demographic decline. The importance of the local political actors as postulated in hypothesis 5 can be supported.

It was postulated to explain intra-regional differentiation that the local institutional context was more important than the supralocal context, as all municipalities are exposed to the same supralocal context (hypothesis 6). However, it turned out that the supralocal context was highly important for intra-regional differentiation, particularly since housing stock policy is decreed at this level. Hypothesis 6 should therefore be rejected.

5.6 Conclusion

This chapter focused on intra-regional differentiation in urban decline in a deindustrialized region experiencing population decline. The question was how this differentiation can be explained. The intra-regional differentiation in population development in Saarland long followed the traditional urbanization-suburbanization pattern. A fundamental difference was that in the suburbanization stage, the losses of the core area were not exclusively attributable to the general process of migrants preferring detached living in the countryside, but to large-scale inter-regional out-migration due to economic restructuring as well. A second fundamental difference is
that the onset of this stage of desurbanization is – unlike the model – not the result of amenity-oriented outward migration, but is rather primarily the outcome of the continuous negative natural developments, firmly rooted in the extremely low birth rates of the past decades, which nullified any positive migration rates possibly still occurring. The current new stage of decline can therefore by no means be uncoupled from the previous stages.

Even though population is declining throughout the region, in this new stage still differential levels of decline exist. The research showed that this intra-regional differentiation in population development is the result of migration and natural changes, which are steered by two, partly counteractive, mechanisms. Figure 5.9 depicts the conceptual model introduced in the theoretical framework, refined and adjusted on the basis of the mechanisms found in Saarland.

Figure 5.9. Final conceptual model of regional and urban decline in Saarland

Source: Made by author
The first mechanism is the effect of the economic boom period in the industrial core zone with its echo-effect on differential natural increases and decreases in later decades. The differentiated aged population is the corollary of previous rounds of economic boom and urbanization. The high death rates are in particular found in the former industrial municipalities with their skewed age structure as a consequence of the past population boom. We should therefore not focus exclusively on just current out-migration to explain population decline, but take the effects of past population growth into account as well, particularly if this growth was explosive and took place in a relatively short time frame.

The second mechanism is the complex relation between environmentalist factors and migration, as the realization of such preferences is constrained by trade-off mechanisms, high homeownership rates and housing policy (indicated by the dotted arrows). The population may trade-off between the productionist and environmentalist amenities, particularly between local amenities such as shops and services and proximity of employment. Home ownership may form a constraint and prevent people from moving into the municipality that satisfies their preferences the most. Housing opportunities are a prerequisite of population development, and it turns out that housing stock expansion is not taking place in those municipalities with high levels of services and accessibility (to reach employment), but rather in those smaller, non-industrial municipalities. The partial mismatch between the housing opportunities and the preferences was the result of the supralocal institutional settings, more specifically the strict housing market regime in Saarland.

Local institutional agents matter as well for the spatial distribution of opportunities. Particularly the mayor – and his/her quality of leadership played a role in the way in which a municipality dealt with the vacancy problems, how it positioned itself against the other municipalities and was able to exploit its local attractiveness potential. Furthermore, the ability to lobby at federal level for the local cause and negotiate the housing market policies and lobby for higher level subsidy arrangements was crucial, especially now that the municipalities are increasingly facing financial difficulties.

There are indications that the preferences are changing due to wider societal trends, such as increased environmental awareness and higher gas prices. Furthermore, low interest rates may enable people to realize previously unrealizable preferences. Still, the realization of such preferences is refrained by the previously mentioned institutional framework.
To what extent has the model of stages of urban development been helpful in explaining the intra-regional differentiation in decline? Are declining regions indeed stuck in the stage of desurbanization and are the explanations offered in the model sufficiently able to explain these processes?

Indeed, declining regions can be perceived as being in the desurbanization stage. Similar to the model, it seems that the intraregional differentiation in population development indeed is steered by the spatial distribution of amenities and housing opportunities, which are in turn heavily shaped and affected by the institutional context. There are however some other mechanisms behind this desurbanization process which have received insufficient attention in the original model.

One important drawback of the model is that it pays too little attention to the natural increases and decreases as motor behind differentiated population decline, as these can affect both the onset of this new stage of desurbanization and the intraregional differentiation in population decline. It is expected though that the impact intensity of natural increases and decreases on total population development depends on the type of past population development (gradual or explosive): in declining regions with a less explosive past population growth, the impact of previous rounds of urbanization on current population development may be less, while the impact of migration and particularly out-migration following productionist and environmentalist factors may be stronger.

Furthermore, in the model the primary reason for desurbanization is negative migration rates because of the attraction of migrants to opportunities in small and medium-sized satellite cities just outside the FUR in search of fulfilment of particularly environmentalist needs. However, out-migration in many currently declining regions is much more steered by long-distance productionist needs, since the flow of out-migrants particularly consists of young people in search for employment and education in the larger economically thriving conurbations. This means it is both a stage of desurbanization at regional level and part of the process of urbanization at national level, as the region is partly deurbanizing because regional out-migration fuels the urbanization of other parts of the national urban hierarchy.

Our view on the urbanization process thus needs a temporal up-scaling (looking back into previous rounds of urbanization and path-dependency) and a spatial up-scaling (looking at the interrelated developments of cities throughout the urban system hierarchy). At the same time though, we need a multi-level view for understanding the intraregional differentiation in decline, as this differentiation is the result of spatially differentiated natural increases and decreases and the interplay
between migration and the distribution of local environmentalist and productionist opportunities, constrained by local and supralocal institutional settings.

End notes

Quotes from interviews with:

A1 Large, centrally located municipality
A2 Large, peripherally located municipality
A3 Small, centrally located municipality
A4 Small, intermediate zone municipality
A5 Small, peripherally located municipality
B Regional property evaluation committee
C Chamber of Commerce
D Researcher (University of Kaiserslautern and regional research agency)