Master Thesis

Shrinking German cities
-The cases of Halle and Gelsenkirchen-

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Abstract

The thesis researches the reasons of shrinking cities, especially the impact of deindustrialisation, in Germany using the example of Halle and Gelsenkirchen. Additionally, the policy response towards this phenomenon in terms of urban consolidation in the cities is posed. For doing that, the economic history of the towns is investigated and simultaneously the development of population and of unemployment is researched, as they are closely connected to the economy. With an analysis of the proportion of employees in the different economic sectors in the course of time the structural change becomes more obvious. A shifting has taken place: both cities engage currently more people in the tertiary sector and less people in the secondary sector as twenty years ago. Concluding all indicators it can be said that a deindustrialisation took place. However, also other influences on shrinking, as for example migration, are described and their impact on both cities is explained. With investigating the consolidation areas of the programme Stadtumbau Ost and Stadtumbau West in Halle and Gelsenkirchen the possible course of action by the policy is presented and those areas in Halle and Gelsenkirchen are identified, which have the biggest population decline and the highest vacancy rates. Critique about the Stadtumbau programme is given at the end of the research. The result of the analysis is that deindustrialisation can explain big parts of the shrinking process in both cities. Thought, it has to be taken into consideration that the collapse of the German Democratic Republic has been speeding up the process of deindustrialisation in Halle and also other influences like migration and the demographic change affect the growth or shrinking of cities. The urban consolidation in the cities is a mean to alleviate the urgent consequences of shrinking and to retrieve especially the big housing societies from insolvency. However, the applied modification measures cannot alter the causes of shrinkage.
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**Nomenclature list**

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| BBSR    | Bundesinstitut für Bau-, Stadt- und Raumforschung  
= Federal Institute for Research on Building, Urban Affairs and Spatial Development |
| BMVBS   | Bundesministeriums für Verkehr, Bau und Stadtentwicklung  
= Federal Ministry of Transport, Building and Urban Development |
| ed.     | Editor |
| f.      | following page |
| fig.    | Figure |
| FRG     | Federal Republic of Germany (West Germany) |
| GDR     | German Democratic Republic (East Germany) |
| Ibid.   | ibidem |
| n.d.    | No date (reference had no available year) |
| p.      | Page |
| Vol.    | Volume |
1 Shrinking as a problem

Shrinking cities in Germany have become an up to date topic within the last years. The discussion is connected to the ongoing debate about the demographic change, since the German population is assumed to decline by 2.6% between 2008 and 2020. This means that the growing of one region must come along with the shrinking of another. Since the Middle Ages the shrinking of cities was always a possible type of urban development, for example due to wars, catastrophes or epidemics. Thus, why is it important to research shrinking and what is new about this process? Since the growth period of the big European cities in the 19th and 20th century due to industrialisation urban development is connected to growth. For this reason, the current shrinking processes in several German cities are often seen negatively and are hardly accepted by local politicians and municipalities. Shrinking also causes different problems, for example in social and technical infrastructure, population structure or the cityscape (see chapter 3.5). Additionally, it is a process that will hardly turn into recurring growth in the affected municipalities, due to the lasting population decline that cannot be compensated through immigration. These aspects underline the importance of researching this process and of showing ways to deal with a declining population as well as handling arising problems. The aim of the thesis is to analyse deindustrialisation as a reason for shrinking in Gelsenkirchen and Halle and its contribution to the shrinking process. Additionally, the manifestation of shrinking in the two cities should be researched. The thesis that should be discussed is that the relocation of industry from cities, thus the deindustrialisation, promoted the decline of population in both cities. For doing this, at first the process of shrinking in Germany is introduced. It is

1 Statistisches Bundesamt Deutschland, 2010
2 Benke, 2005
3 Ibid.
4 Gatzweiler; Meyer; Milbert, 2003
5 Ibid.
1. Shrinking as a problem

defined what shrinking cities are and which reasons there are for explaining shrinking. Subsequently, one of the reasons, deindustrialisation, is explained in more detail. In the next step, the study cases Halle and Gelsenkirchen are presented. These two cities were chosen because they currently have a similar number of inhabitants and similar declining rates. Furthermore cities from both parts of Germany were taken as it is expected that due to the iron curtain and thus a separation of Germany into two parts, there were two different ongoing processes of shrinkage in the German Democratic Republic (GDR) and the Federal Republic of Germany (FRG) before and after the reunification. After visualising their location and introducing facts about the population structure, the cities' history in reference to their economic development is briefly described. Furthermore the development of several indicators, population, labour force and economic sectors, is analysed in the course of time. Thus, statements about the deindustrialisation process should be possible. In the following, the demographic and physical consequences, especially influences of shrinking on the population structure, infrastructure and housing space in Halle and Gelsenkirchen is researched.

In the subsequent chapter the policy response towards shrinking in form of urban consolidation is explored. At first, “Stadtumbau Ost” and “Stadtumbau West” (“Urban consolidation East” and “Urban Consolidation West”) are described briefly. Secondly, the urban consolidation areas in Halle and Gelsenkirchen are overviewed and the actions that took place are introduced. Thirdly, criticism about the Urban Consolidation Programme is given. The last chapter summarises the outcome of the research, elaborates the contribution of the theoretical approach of deindustrialisation to the topic and includes prospects on further research questions. In this thesis, shrinkage and decline are used synonymous as well as New and Old Laender and New and Old Federal States.
2 Shrinking - a new type of urban development?

Shrinking seems to be a figurative expression for the development of a city. This chapter aims to light up the concept of “shrinking cities”. What is new about this phenomenon? Which attributes do shrinking cities have and why are cities shrinking at all? At the end of the chapter one of the reasons, economic change, is explained in more detail.

2.1 What are shrinking cities?

After the industrialisation caused a migration from the countryside into the urban agglomerations in the 19th century in Germany and other industrialised countries, the development of cities was set equal to growth for a long time\(^6\). Even though cities were shrinking at all times in history, due to epidemics or wars, there were also some cities shrinking because of their monoculture geared industry or their dependency on one company\(^7\). Those cities were usually small cities and when the company closed down or the industry was not economically efficient anymore, the inhabitants had to migrate to other cities to find a job. The new phenomenon is that no longer just small cities that are slanted toward one industry are affected but currently also big cities face the problem of shrinking. Nevertheless, the decline of cities came into the focus of urban planning just during the last few years but it is still hardly accepted by the policy\(^8\). Municipalities are afraid of a negative image and of frightening off potential investors, if they are frank about shrinking\(^9\). The causes of shrinking in urban areas are manifold. It occurs due to the demographic change, because of migration or as a result of a structural crisis in the economy of a city\(^10\) (see chapter 2.2). It usually affects cities with economic problems, for example when they suffer from a cutback of

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\(^6\) Weidner, 2005  
\(^7\) Benke, 2005  
\(^8\) Gatzweiler; Meyer; Milbert, 2003  
\(^9\) Glock, 2005  
\(^10\) Grabbert, 2008
2. Shrinking - a new type of urban development?

industries\textsuperscript{11}. A kind of circular flow comes into being: Through the moving-away of people the city is shrinking in its population. Especially families with children are moving into the suburbs for living in a nice neighbourhood if they can afford it. With this urban sprawl is promoted, even though the town is just sparsely populated. The remaining empty houses and unoccupied shops have an impact on the attractiveness of the town and thus more people are moving away, if they have the financial resources. Since those who have the needed social, cultural and economic capital\textsuperscript{12} are moving away, the migration is social selective: especially young and qualified people leave shrinking cities to find jobs in growing regions\textsuperscript{13}. This is because young people are usually more independent than older ones and did not invest as much as older people in their domestic place. Additionally qualified people are strongly demanded in many German regions, so they have a good chance to find a job in another city\textsuperscript{14}. Those who stay back are mostly old people who are immobile and people who have a low-income or are unemployed. That leaves the municipality back with financial problems: a shrinking population means shrinking financial returns, since the height of the grants of the federal states is measured by the population of the municipalities\textsuperscript{15}. Additionally, due to the social selective migration the share in potential tax payers is decreasing whilst the share in people who require public financial support is increasing\textsuperscript{16}. The shrinking of cities is not a phenomenon that occurs at one point in time and changes easily into growth in another, even though it is not the first time in history when cities are declining. With it a dynamic gets under way that enforces the processes that result out of the shrinking: The industrial decline has an impact on the employment, since many jobs get lost. The rising unemployment leads in turn to the migration of the population and thus fewer services are demanded, what causes more unemployment. After a massive loss of jobs,
for example, people migrate to other cities, where they are able to find work. If a lot of people are moving, the density in the city decreases and there are possibly some areas that are more affected by the loss of population than others. Due to the rising feeling of emptiness in the areas that are affected by shrinking, the inhabitants who remain can develop a feeling of insecurity, for example due to a dilapidation of the buildings. In the last resort the old, immobile and unemployed population remains in the city at the end of the downward spiral. Shrinking cities are not an exception anymore, especially in the new federal states, but rather the normal case. Additionally, the development of a city cannot be measured by its population growth anymore, since in times of the demographic change the growing of one city means the shrinking of another. Therefore shrinking must be accepted as the new type of urban development. In Germany the declining of cities was an unpopular topic for a long time and no city wanted to be connected with this problem. However, with the constitution of the commission Wohnungswirtschaftlicher Strukturwandel in den neuen Bundesländern (“Structural change in the housing industry in the New Laender”) in February 2000 the discussion got a new dynamic. The commission published their report in November in the same year where they state that shrinking must be accepted as a new challenge for urban planning. The result of the document was a programme called Stadtumbau Ost (“Urban Consolidation East”) established in August 2001 by the Federal Cabinet. This programme intends to give financial help to cities and municipalities to support their economic and urban planning strategies to face shrinking. According to the Stadtumbau programme the attractiveness of shrinking cities should be increased by the strengthening of the inner city, a reduction of the vacancy of dwellings and the valorisation of city districts. After the introduction of Stadtumbau Ost, also in Western Germany a programme was requested to help to finance urban consolidation

17 Killisch; Siedhoff, 2005
18 Gatzweiler; Meyer; Milbert, 2003
19 Ibid.
20 Ibid.
21 Pfeiffer; Simons; Porsch, 2000
22 Liebmann, 2009
in shrinking cities. Thus, in 2004 Stadtumbau West came into being (see chapter 4.1).

One problem that still exists in the research of shrinking cities is the absence of a proper definition. In all times the urban term was shaped by growth. Louis Wirth\textsuperscript{23} connected urbanity with size (populace number), density (inhabitants per km\textsuperscript{2}) and heterogeneity (diverseness of the residents) and therefore connected it to growth. Thus, when it comes to shrinking, this term is not able to explain this process in a sufficient way. In the “Atlas of shrinking cities” Philipp Oswalt (2004) defines shrinking cities as “[…] cities that have temporarily or permanently lost a significant number of their inhabitants. Population losses are considered significant if they amount to a total of at least 10\% or more than 1\% annually”\textsuperscript{24}. Since shrinking is a type of urban development that shows specific problem areas, the reasons for a decreasing population are analysed in the next step.

\textbf{2.2 Reasons of shrinking}

The New Laender had to handle a radical structural interruption after the reunification in 1990. With the transformation from a planned to a market economy, the privatisation of the nationally owned enterprises and the liberalisation of the markets the industrial basis collapsed. In the industrial sector 70\% and in the agricultural sector 80\% of the jobs got lost\textsuperscript{25}. Additionally, the huge military and administrative sector was abolished and thus even more labour force was set free. A migration towards the old federal states took place where people hoped to find a job\textsuperscript{26}. Furthermore, the government started to subsidize the building of one-family-houses on the greenfield site with the help of home owner’s allowances\textsuperscript{27}. That led to a “catch-up” suburbanisation in the new federal states, since suburbanisation

\begin{itemize}
\item Wirth, 1938
\item Oswalt, 2006
\item Grabbert, 2008
\item Glock, 2007
\item Adamowitsch, 2002
\end{itemize}
did not exist in the GDR. Building licenses were given away just in special cases, for example for extended families which would not be able to find a flat in a housing estate. Due to a lack of renovated dwellings and ruinous old buildings in the city centres, a moving towards the suburbs became a “[… ] mass movement in the early 1990s”\(^\text{28}\). However, not only the economic change and the migration were reasons for a shrinking population. Additionally the demographic change was going on. After the reunification the transformation was attended by uncertainty and led to a so-called “birth strike”. The lowest birth rate of a country in the worlds history with statistically 0,7 children per woman caused a considerable population decline in East Germany\(^\text{29}\). However, in the course of time the birth rates of Western and Eastern Germany adapted. The historical low birth rates, the migration to the old federal states due to the economic downturn and the suburbanisation led to a shrinking population in the New federal states.

In the old federal states the shrinking was initiated by an economical structural change from an industry to a service society\(^\text{30}\). The mining crisis in the 1960s was fatal especially for monostructural regions like the Ruhr and the Saarland, the sales crisis of the shipbuilding industry hit in particular Northern Germany. Since the severe decrease of jobs in the producing sector could not be compensated with new jobs, it led to the downfall of traditional industrial regions\(^\text{31}\). Though, not only the long distance migration of the work seeking population but also suburbanisation caused a shrinking of the cities. Due to wealth after the so-called economic miracle in the 1950s and the possibilities of individual transport living on the greenfield site became popular especially for families with children. Between 1989 and 1992 Western Germany could register a net migration gain especially from Eastern Germany and from resettlers from Eastern Europe. However, with the worsening of the economic situation in some parts in Western Germany in 1992 the attractiveness for immigrants dropped. Since the structurally

\(^{28}\) Bontje, 2004  
\(^{29}\) Keim, 2001  
\(^{30}\) Glock, 2007  
\(^{31}\) Grabbert, 2008
strong regions are still a destination of immigration, the decline is reflected in
the structurally weak regions\(^{32}\). Additionally, as in Eastern Germany also the
demographic change plays a role in Western Germany. In the two decades
after World War II the birth rates increased and the baby boom took place.
This development ended in the so-called baby bust in the middle of the
1960s due to the invention of the birth control pill. Down to the present day,
every generation is reducing by one third – an exponential population decline
is going on\(^{33}\). Since 2003 immigration cannot compensate the death surplus
anymore and thus the population is shrinking in Western Germany.

2.3 Deindustrialisation as a reason for shrinking

As it was shown in chapter 2.2 there are several reasons for shrinking in both
parts of Germany. Since the economic change plays a major role in Eastern
and Western Germany, its extent and impact on shrinking processes is
researched detailed in this chapter. The first ones who analysed “shrinking
cities” in Germany and made it a matter were Hartmut Häußermann and
Walter Siebel in their article “Shrinking cities and the urban sociology” in
1988. Their theoretical approach to research the decline was the perspective
of deindustrialisation. They understand “deindustrialisation” as a constant
loss of jobs in the manufacturing sector\(^{34}\). However this term means also
tertiarisation while there is a cutback of traditional areas of production
without the creation of other jobs in the tertiary sector.

HÄUßERMANN and SIEBEL (1988) pointed out that urbanisation was
historically always connected to the industrialisation of production, but for two
reasons a deindustrialisation of cities is taking place. The first one has to do
with the ageing of products. When a product is in the phase of its
development, workers who are qualified and therefore well-paid mature it.
That is connected with high costs for the company. However, when the
product is developed and can be put on the market, a standardised

\(^{32}\) Grabbert, 2008

\(^{33}\) Ibid.

\(^{34}\) Häußermann; Siebel, 1988
technology for the production can be established. That is important for the reducing of costs and with a standardised fabrication a cheaper mass production is possible. That also means that unqualified workers can be put into work to handle the machines, what beats down the price additionally.

Since the cheapest workers are to find outside of urban agglomerations and sometimes even outside the republic in underdeveloped countries, the factories migrate to more rural areas in the course of the ageing of their product. That leads to an industrialisation of rural regions, decentralisation and a deindustrialisation in towns\textsuperscript{35}. Another problem of the manufacturing industry, especially if they are settled in the urban cores, is the limitation of their expanding due to the lack of free space. If they have the need for more space, they have to leave the agglomerations and move to the greenfield site. HÄUßERMANN and SIEBEL (1988) point out, that in this case the migration usually ends in the suburbs and that it is not expanding to other, underdeveloped countries. The movement out of the cities arises in this case due to an economic growth and investments\textsuperscript{36}. If the moving of industries and the loss of jobs in the manufacturing sector can be counterbalanced with new jobs in the tertiary sector, this change is a structural change of the economy. However, if the tertiary sector is not growing that much or the amount of jobs even decreases, it is rather an economical erosion in the concerned cities. The question is now: What is the difference between the processes of shrinking that have always taken place and the shrinking that we face these days? On the one hand our society is an urbanised society. In times of structural changes and the loss of jobs there are just few possibilities to temporarily migrate back to rural areas and to be caught up in the traditional sector. HÄUßERMANN and SIEBEL describe this as the valve, that existed in the past and that does not exist anymore\textsuperscript{37}. On the other hand there is the problem of demographic change. The birth rates are declining and due to a better health care system in the developed countries the

\textsuperscript{35} Häußermann; Siebel, 1988
\textsuperscript{36} Ibid.
\textsuperscript{37} Häußermann; Siebel, 1988
expectation of life is raising. That means that the population grows older. This fact and the fact that it is an urban society, indicates that the population growth of one city implies the populace shrinkage of another, since people are migrating from one agglomeration to the other. Such a migration usually emanates from the younger generation and additionally from well educated people who are looking for better jobs. For this reason disparities in the society become more obvious, because those who stay back are the older ones and those with fewer opportunities on the labour market. The migration turns out to be social selective.

Something that the authors could not know about at this time was the different situation of deindustrialisation one year later, in 1989, in East Germany. After the fall of the Berlin Wall the communist system broke down. With it, the economic system collapsed, many factories were closed down and whole branches of industry were abolished. On the one hand a structural change took place: The former socialist country became a capitalistic country. Along with this the country was hit by a sudden change from a planned economy towards a market economy. “The transformation from Fordist to post-Fordist modes of production, a rather gradual process in most of the Western capitalist countries, took place as a 'shock therapy' in the course of only a few years in post-socialist countries”38. Most of the agricultural production cooperatives but also of the national industries were not able to adapt to the change towards privatisation and had to close down. Some companies were also bought from West German investors and were either displaced to a West German city or closed down, when the bought company was a competitor. Especially those cities which were based on one industry struggled after the reunification and faced large-scale unemployment. Additionally, there was the de-militarisation and the industry that was needed for the army, for example factories for tanks or for the production of army uniforms, was cut back. At the same time, the huge administrative machinery was not required anymore. Halle, for example, was a county town and had therefore a high share in administrative workers.

38 Bontje, 2004
Halle did not just lose this important position but also did not become the capital of the in 1990 newly established federal district Saxony-Anhalt. Thus, the structural change led to the unemployment of many people. The massive loss of jobs everywhere in the former GDR could not be compensated with new jobs in the tertiary sector.
Nonetheless, before investigating the process of deindustrialisation in more detail, the cities are introduced first.

3 Halle and Gelsenkirchen

This chapter introduces the study cases Halle and Gelsenkirchen. Their history in reference to their economic development is briefly described and the development of the population, the labour force and the economic sectors is analysed. Subsequently, the demographic and physical consequences of shrinking in the cities is researched.

3.1 Introduction of the cities

The next part introduces each of the cities with a description of their geographic position and gives information about their population structure.

3.1.1 Halle

The city Halle is located in the east of Germany, more precisely in the south of the German Federal State Saxony-Anhalt (see figure 1).
The City has around 230,000 inhabitants in an area of 135 km\(^2\) and a density of 1,706 inhabitants/km\(^2\) (2009). The average age is 45.2 years (2009)\(^{39}\). With this the average age is 2.6 years above the German average\(^{40}\). That can be explained by the migration of the mainly young population to other parts in Germany, a low birth rate and a higher expectancy of life. About the gender mixture it is to say that there is a surplus of women in the population. That results due to a higher percentage of women than men in the group of

\(^{39}\) Amt für Bürgerservice, 2010b

\(^{40}\) Institut der deutschen Wirtschaft, 2008
people older than 65 years. There are around ten percent more women than men in this group of age based on the death of many men during the Second World War. However, in total the difference is just slightly, there are 52.6% women and 47.4% men in Halle as measured by the total population.

The share in foreigners is quite low with 3.9%\textsuperscript{41} (9,000 persons) in the city compared to the German average of 8.8%\textsuperscript{42} in 2008. In the times of the German Democratic Republic, that existed from 1949-1990, there were a lot of so called “contract workers”, especially from Cuba and Vietnam, living in the city as well as there were immigrants in West Germany. Those foreign employees in East Germany had temporary working agreements and left the country with the end of their contracts\textsuperscript{43}. In contrast many of the immigrants who came to work in the West Germany stayed in the country, what explains the huge difference between the share in foreign people in Halle and Gelsenkirchen.

About 15,000 people are unemployed\textsuperscript{44}, that is 14.6% of the civil labour force. Compared to Germany with around nine percent of unemployment this number is rather high and suggests a real problem for Halle. Due to high unemployment the city loses attractiveness and that could push forward a moving away or frighten people off. A serious problem can arise, when well paid workers move to the suburbs and away from the city. Those are usually the residents who want diversity in the assortment of stores and who have the higher purchasing power than those with an average salary or unemployed people. With the moving away of these people, those with a lower purchasing power remain and some stores will probably close down. In the end this leads to a further increasing of the unemployment numbers and to a worsening of the situation.

In Gelsenkirchen the research shows a similar picture, as it is to see in the following chapter.

\textsuperscript{41} Amt für Bürgerservice, 2010c
\textsuperscript{42} Statistisches Bundesamt Deutschland, 2009b
\textsuperscript{43} Bade; Oltmer, 2004
\textsuperscript{44} Bundesagentur für Arbeit, 2009
3.1.2 Gelsenkirchen

Gelsenkirchen lies in the west of Germany, in the federal state North Rhine-Westphalia, which borders in the west on the Netherlands and France (see figure 2). Gelsenkirchen had a population of about 261,000 inhabitants\(^{45}\) on an area of 105 km\(^2\) in 2009\(^{46}\). Therewith the density is 2,490 inhabitants/km\(^2\) and compared to Halle slightly higher. As in Halle, also in Gelsenkirchen the number of women is higher than the number of men, mainly due to the same reason: The loss of men during the Second World War. In this case the difference is even smaller than in Halle: Measured in percentage there are 51.4% women and 48.6% men in the city. The number of foreigners living in Gelsenkirchen is higher than in Halle and also above the German average. There were about 35,000 foreign people\(^{47}\) living there in 2009 which is 13.4% of the population. Most of the immigrants are coming from Turkey, who are about 20,000 people, followed by Poland with 2,000, Italy with 1,500 and Bosnia and Herzegovina with 1,000 people\(^{48}\). The difference of 9.5 percentage points in both cities can be explained by the fact, that due to their labour demand, Gelsenkirchen has always been a city for immigrants. Especially in the times of the industrialisation the manufacturing industries attracted a lot of Polish workers and after the Second World War mostly people from Turkey came to work there as employees and, in contrast to Halle, a lot of them stayed in Gelsenkirchen.

\(^{45}\) Statistikstelle Stadt Gelsenkirchen, 2010d
\(^{46}\) Statistikstelle Stadt Gelsenkirchen, 2010f
\(^{47}\) Statistikstelle Stadt Gelsenkirchen, 2010c
\(^{48}\) Ibid.
When it comes to unemployment there are 19,000 people without a job. As measured by the civil labour force this is 15.1%\(^{49}\). That means that the unemployment level is about the same in both cities and both are about six percentage points above the German average. This can have similar impacts for Gelsenkirchen as for Halle. Due to a high unemployment and a decreasing purchasing power the diversity of shops is going to be reduced and thus even more people can be affected by losing their jobs and becoming unemployed.

\(^{49}\) Statistikstelle Stadt Gelsenkirchen, 2010a
3.2 History until the 1970s

For the settlement and development of Halle one of its natural resources has always been important: Salt. Due to this resource the city grew originally. Already since 2000 B.C. Celtic, Germanic and Slavic tribes used and prepared the saline water that came to the surface at this place. It even explains the city's name, since “Halla” is Celtic for “site of salt preparation”\(^{50}\). In the 19\(^{th}\) century another natural resource became important for the city’s development: brown coal. Thanks to its detection, an early connection to the train system and good conditions regarding the cities location in general, Halle developed rapidly with the beginning of the industrialisation\(^{51}\). Especially the steel and coal industry settled down, but also light industry for eatables or cosmetics was established, for example. With the founding of the German empire in 1871 the economy boomed even more. The city had the need to expand, because the population increased explosively. In 1840 about 28.000 people were living in Halle, just 40 years later the population increased to about 150.000\(^{52}\). When in 1916 the Leuna factory was opened, a new branch of economy developed: the chemical industry. In a short time more and more chemical factories were built around Halle. Together with Leipzig it formed a dynamic area with close connections to other economically successful German areas at this time like Jena or Dessau. It also got an airport, which was built in 1927 and which developed into an important German airport during the Nazi regime. Within the Second World War even more people were moving to Halle because the chemical industry was highly supported by the national socialists and thus there was a demand for workers\(^{53}\). However, with the end of the Second World War many companies and employees migrated to later West Germany. After the founding of the German Democratic Republic in 1949 the region became important again, due to its richness in resources. Its chemical industry in

\(^{50}\) Stadt Halle, n.d. a  
^{51}\) Stadt Halle, n.d.b  
^{52}\) Ibid.  
^{53}\) Stadt Halle, n.d. b
Leuna, Buna and Bitterfeld-Wolfen close to Halle was well known and large settlements for their workers were built in and around Halle. However, the dynamic high-tech area of the past was not that modern anymore. In 1964 the salt production in Halle was stopped, because it was not economical enough anymore and also the intended adaptation to petrochemicals failed in the 1970s.

Gelsenkirchen’s history began a bit later. The first time the city was mentioned in records was in 1150. In contrast to Halle, Gelsenkirchen was a small village with just a few hundred inhabitants living from farming up until its industrialisation. At the beginning of the 19th century Gelsenkirchen had still just 650 inhabitants. However, in the middle of the 19th century coal was found around Gelsenkirchen and as Halle it got a train connection with an own train station which turned out to be an important advantage for the village. At the same time the first coal-mine was built and the mining industry started. The coal and steel industry grew and Gelsenkirchen became one of the most important European coal mining cities. Out of the small village Gelsenkirchen and its surrounding neighbour settlements with few inhabitants, a large city arose with almost 400,000 inhabitants at the end of the 19th century. As Halle, Gelsenkirchen had a significant position in Germany during the Second World War, from an economical point of view. Due to its importance in delivering the German troops and the economy with coal and steel, 75% of the city was destroyed during the war by the allied. In Halle especially the city centre was destroyed, but not in such extend as it happened in Gelsenkirchen. After the war the city tried to rebound, so the pit reopened in 1949 and in 1953 the first German newly built coke oven could be opened in the city. In the post-war period the coal and steel industry was needed for the rebuilding of Germany and thus many guest workers, especially from south- and south-east Europe, were recruited and came to work not only in Gelsenkirchen but whole Germany. However, in the following years a cutback of industries was apparent. In 1959 the central coke oven Scholven was closed down, one year later the pit Wilhelmine Victoria and
again five years later the pits *Dahlbusch* and *Graf Bismarck* were closed and a lot of jobs got lost.

Both cities grow due to the industrialisation but there are differences. Gelsenkirchen was a small village living from agriculture. With the industrialisation the population increased significantly and the small neighbouring villages coalesced as one big city. The names of Gelsenkirchen’s urban districts still remind the people of that time, since they have the names of the villages they developed from. This is why Gelsenkirchen has not just one, but more city centres. In contrast to this Halle has one historic centre and its townscape was not as affected by the industry as Gelsenkirchen, since Halle’s industry was not located in the middle of the city, but in the periphery of the town.

### 3.3 Development from the 1970s until 2004

With the closing down of many of the pits, Gelsenkirchen had to realign and to find another branch of economy in which it could succeed. Whilst during the 1970s and 1980s more power plants and steel works were closed down, in the 1990s a rethinking towards a knowledge based society took place and the first science park, the Science Park Rheinelbe (*Wissenschaftspark Rheinelbe*) was opened in 1995 and commenced the structural change in Gelsenkirchen. Various technology- and service oriented companies settled down there. It calls itself the cradle of the Solar City Gelsenkirchen (*Solar Stadt Gelsenkirchen*) since the world’s largest solar power station installed on a roof at this time was built on the top of this science park. Just few years later, in 1999, the Shell Company[^54] opened one of the world’s most modern solar cell factories in the city. The last pit in Gelsenkirchen was closed down in 2000, but to emphasise their effort to accomplish a structural change and to strengthen the new image of being a Solar City, Gelsenkirchen has besides many solar collectors, not just on

[^54]: The Shell Company was absorbed by the Scheuten Solar Cells GmbH in 2007
private but also on a lot of public buildings, a development association which aims to bring all actors in this branch and city together.

The closing down of the pits is reflected in the unemployment rates of Gelsenkirchen. In 1975 the unemployment rate was 6.8% and it reached a peak in 1987 and 1988 with 17%. With the fall of the Berlin Wall and the first two years of the reunification the unemployment rate decreased by five percentage points, due to the extension of the market and a high demand for products from West Germany in the former GDR. From 1992 on, the rate increased by six percentage points until 1999 and remained approximately at this quote, thus the unemployment rate in 2004 was 18.1%. Gelsenkirchen was more affected by unemployment than other German cities averaged, since the average unemployment rate in Germany was more than seven percentage points lower that year. If jobs are rare, people tend to move to other places, where they can find work. In Gelsenkirchen that is what happened. Additionally to their unemployment problem they got the problem that the population moved away. Already since 1975 the city lost population continuously. From around 330,000 inhabitants in 1975 they lost more than 11.4% until 1989 when the city had 292,300 inhabitants. With the fall of the Berlin Wall and in the following years, the number of inhabitants rose up to 297,400 in 1992, which can be explained by an immigration of people from the New Federal States and economic growth. Nevertheless the populace number decreased again in the following twelve years by 8.6% (271,800 inhabitants) until 2004. That means a loss of 17.6% of Gelsenkirchen’s inhabitants since 1975. As there is a connection between the job market and the population development, a possible explanation for the new loss of residents after 1992 is the development on the job market. When there was a better job situation around 1990, the population rose. However, with increasing unemployment, the population started to decline again, since the qualified and mobile workers moved to other regions to find a job.

55 Statistikstelle Stadt Gelsenkirchen, 2009a
56 Bundesagentur für Arbeit, 2008
57 Statistikstelle Stadt Gelsenkirchen, 2010e
Also Halle had to struggle with economical problems in the 1970s. At the beginning of the decade not only its salt production but also the mining of brown coal should be stopped. However, as a consequence of the oil crisis there was even a revival of it\textsuperscript{58}. Nevertheless, the used technology was obsolete and the money for modernising was scant. Without new investments the productivity decreased and at the end of the 1980s 56\%\textsuperscript{59} of the industrial plants in the Halle/Leipzig region had to be closed down because they were too old and fret. In 1989 mass protests started first in Leipzig and at the end of the year in the whole German Democratic Republic. The protests took place because of the peoples’ discontentedness with the existing circumstances of working and living. After the protests exert such a big pressure that the travel conditions of the German Democratic Republic were eased and thus the Fall of Berlin Wall was inescapable, a big number of people migrated to former Western Germany, due to a better economic situation. Whilst many companies closed down in East Germany, the West German economy was booming and thus especially qualified workers were required. Halle and the whole region lost a lot of its inhabitants but also the industry was declining. Between 1990 and 1993 80\% of all jobs in the industry were lost in the Halle/Leipzig region\textsuperscript{60}, for example due to the fact that many industries could not adapt to privatisation and became bankrupt. That led to a jump up of unemployment and the developing tertiary sector was not able to absorb and compensate all of the lost jobs. Furthermore, after the reunification Halle had a negative image as a polluted city due to its industrial history. The environment was diseased and the nature highly impacted. With the aim to put people into work, a lot of redeveloping projects came into being. Old mines were filled up with storm- and ground water and serve now as a place for recreation. The pollution problem in general has been improved up until now. A lot of investors spent money especially to develop the outskirts of Halle. A big mall was built, the

\textsuperscript{58} Rink, 2005  
\textsuperscript{59} Ibid.  
\textsuperscript{60} Ibid.
Halle-Leipzig Airport was modernised and enlarged to fit the new standards and several logistic firms settled down\textsuperscript{61}. Currently the Saalkreis, the area that surrounds Halle, has the second most settling of logistic companies in Germany\textsuperscript{62}, that suggests that the location of the city in the “heart of Germany” and close to the new members of the European Union is attractive for those kind of firms who needs a good connection to whole Europe.

As in Gelsenkirchen, also in Halle the closing down of industries led to a turn from industry towards a knowledge based economy and in 1998 the scientific- and innovation park Biozentrum opened. At this time it was the most modern research building in Germany and its aim was to centralise modern and expensive instruments and equipment to make it accessible for a multiplicity of user, for example for scientist of the university and other institutes.

As unemployment did officially not exist in socialistic states, it did also not exist in the GDR, but with the fall of the Berlin Wall and the breakdown of the socialism the unemployment increased. In 1990 the unemployment rate was 4,1\%\textsuperscript{63} and thus lower as in Gelsenkirchen, which had an unemployment rate that was almost eight percentage points higher at that time. Until 1995 12,7\%\textsuperscript{64} of people were without a job and within five years the unemployment rate increased by almost nine percentage points\textsuperscript{65}. It persisted almost constantly on this level, so that in 2004 21\%\textsuperscript{66} of Halle’s residents were without a job. Thus the unemployment rate was about three percentage points higher as in Gelsenkirchen in the same year. The connection between unemployment and a loss of population is not that significant in Halle as it was in Gelsenkirchen. Even though the chemical industry had a large demand for workers, the population in Halle was already decreasing in the 1970s. Whilst in 1971 there were 254.000 people living in the town, the

\textsuperscript{61} Rink, 2005
\textsuperscript{62} Stein, 2010
\textsuperscript{63} Friedrichs, 1995 (Due to a lack of information from the Statistical Office of Saxony-Anhalt, Friedrich’s data was used here)
\textsuperscript{64} Statistisches Landesamt Sachsen-Anhalt, 2009
\textsuperscript{65} Ibid.
\textsuperscript{66} Ibid.
number declined constantly to 230.800 inhabitants in 1989. Since Halle wanted to become the capital of the new founded federal state Saxony-Anhalt, it needed 300.000 inhabitants to be allowed to take part at the elections. That is why *Halle-Neustadt*, a city that was built for the workers in the chemical factories of Buna and Leuna and did not belong to Halle, was incorporated and the population rose to 309.400 inhabitants in 1990. However, in the following years the population decreased again and thus within the following ten years Halle lost 20,4% of its residents and had in 2004 a populace number of 237.000. That is a decline of 23,4% from 1990 until 2004. Thus both cities had to face a declining population since the 1970s and almost to the same extend.

### 3.4 Current situation 2005 until 2009

Currently Halle sticks to the aim to pay more attention to research and development. As it is said on their homepage, the most important branches for the city are material-, micro-, nano- and solar technologies, call- and business centres, media, IT and banks as well as insurance. It is conspicuous that all dynamic sectors are included in this listing. That could be a weakness for the city’s economic development as it is usually better to pick fewer branches to specialise in, instead of trying to be good in everything and to base on such a wide field of service branches. It is also eye-catching that the logistic branch is not mentioned here, even though Halle has the second most accumulation of logistic companies.

Nevertheless, this structural change and with it a better employment situation can be the reason for the slowdown of the population decline. Within 2005 and 2009 the population declined just by approximately 5.600 people from 236.000 to 230.400, that are 2,4%. An easing of the job market can be emphasised with investigating the unemployment numbers. They decreased from 2005 until 2009 by 21%; from 19.300 people to 15.200 persons.

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67 Stadt Halle, n.d. d
68 Amt für Bürgerservice, 2010a
69 Statistisches Landesamt Sachsen-Anhalt, 2009
in Gelsenkirchen, with its efforts to change its image of a dirty and grey industrial city into a solar city, there are still problems to offer enough jobs to the people. Even though the unemployment rate dropped from 23.4\% in 2005 to 15.2\% in 2008\textsuperscript{70}, it is still higher than the German average but lower than Halle’s quotient. However, the decline of unemployment in Gelsenkirchen and Halle shows, that both cities’ service and industry were able to absorb many of the workers who became unemployed either after the closing down of the coal and steel industry or the breakdown of the socialistic system. Nevertheless, a stoppage of Gelsenkirchen’s population decrease is not observable. It still lost 3.5\% of its population between 2005 and 2009\textsuperscript{71}, that means that the decline of population is slightly higher than in Halle. To conclude the collected data about Halle, it can be said that even though there are some industries that are attracted by the city’s location, for example the logistic firms and its effort to push the structural change of a research and development oriented city forward, it could not stop people from moving away. Halle's population in total is still decreasing (see figure 3). The city had a peak of more than 290,000 inhabitants in 1952\textsuperscript{72}. That was its highest population before the reunification of Germany. Then, as too see in figure 3, Halle lost 20\% of its residents until 1989. In this year the population number was 231,000 inhabitants. The abrupt rise of populace in 1990, after the reunification, can be explained by an administrative reform in which Halle-Neustadt became a part of the city Halle and thus the population of Halle-Neustadt was added. Due to that, the population increased up to 310,000 in that year which is the highest number of inhabitants that the city ever had. Nevertheless, this could not stop the population from declining. Ten years later, in 2000, the city had 246,000 inhabitants and therewith lost 20\% of its population. The latest number from 2009, 230,000 inhabitants, means that compared to 1990 Halle has now lost about a quarter of its population.

\textsuperscript{70} Statistikstelle Stadt Gelsenkirchen, 2009a
\textsuperscript{71} Statistikstelle Stadt Gelsenkirchen, 2010e
\textsuperscript{72} Amt für Bürgerservice, 2010a
That means that the population is apparently shrinking and that not just since the fall of the Berlin Wall and the reunification but since the 1960's. This can be explained with the dereliction of the old buildings in the city centres and in consequence an increasing shortage of housing there. The new buildings were mainly erected in the surrounding area of Halle and since that did not belong to the town, the population who moved there was not included in the census any longer. Nevertheless, it is still the largest city in Saxony-Anhalt, as measured by its population. Most of the people working in Halle are engaged in the tertiary sector; these are around 80,000 people\textsuperscript{73} and thus 87.5% of all employees. Most of them, 42.4%, are working in the public service. In Halle more people are engaged in the tertiary sector than averaged in Germany. There the quotient is 72.9%\textsuperscript{74}. Due to the higher share

\textsuperscript{73} Statistisches Landesamt Sachsen-Anhalt, 2009
\textsuperscript{74} Statistisches Bundesamt Deutschland, 2009a
of employees in the tertiary sector, the share in the secondary sector is lower. Around 11,000 persons are engaged in the manufacturing industry, that is 12,5%\textsuperscript{75} of all employees. With this it lies behind the German average in this segment, where it is 25,8%\textsuperscript{76}. When comparing the data over time, a deindustrialisation and tertiarisation is noticeable. The main economic sector in the GDR was the second sector and it produced 60% of the national income. In 1998\textsuperscript{77} there were 27,1%\textsuperscript{78} of all employees engaged in the manufacturing sector. Within the following years, the secondary sector lost in proportion. In 2005 there were 19,7%\textsuperscript{79} of all employed people working in this segment and in 2009 it declined to 12,5%\textsuperscript{80}. Whilst the secondary sector decreased, the tertiary sector increased. From 72,1%\textsuperscript{81} people engaged in the service sector in 1998 it rose by 7,7 percentage points\textsuperscript{82} until 2005. In 2009 there were 87,5%\textsuperscript{83} of the employees working in the tertiary sector. Just as Halle, Gelsenkirchen had a decline in population since 1975 (see figure 4). The number of residents declined from 330,000 in that year by 11,5% until 1989. After the reunion of Germany in 1990 a slight rise in population could be seen where the city gained 3,000 inhabitants. However, after 1992 the city lost continuously inhabitants, as it was also noticeable in Halle’s population development at this time. Their number decreased from 297,000 residents in that year to 280,000 people in 2000 and further to around 261,000 inhabitants in 2009\textsuperscript{84}.  

\textsuperscript{75} Statistisches Landesamt Sachsen-Anhalt, 2009
\textsuperscript{76} Statistisches Bundesamt Deutschland, 2009a
\textsuperscript{77} Data for the time before 1998 was not available at the Statistical Office of Saxony-Anhalt
\textsuperscript{78} Statistisches Landesamt Sachsen-Anhalt, 2006a
\textsuperscript{79} Statistisches Landesamt Sachsen-Anhalt, 2006b
\textsuperscript{80} Statistisches Landesamt Sachsen-Anhalt, 2009
\textsuperscript{81} Statistisches Landesamt Sachsen-Anhalt, 2006a
\textsuperscript{82} Statistisches Landesamt Sachsen-Anhalt, 2006b
\textsuperscript{83} Statistisches Landesamt Sachsen-Anhalt, 2009
\textsuperscript{84} Statistikstelle Stadt Gelsenkirchen, 2010e
That means that also Gelsenkirchen is shrinking in its population since the 1970’s. In comparison with Halle, Gelsenkirchen lost “just” twelve percent of its population in the period between 1990 and 2009, whereas Halle lost 25% in the same time, but examined for the period since the 1970’s Gelsenkirchen lost 21% of its inhabitants. That means that both cities face the same populace loss and almost the same declining rate.

In Gelsenkirchen the secondary sector engages 21,500 people, that are 30,4% of all employers. This shows a completely different picture than Halle. Compared to Halle, which was below the German average when it comes to employment in the secondary sector, Gelsenkirchen is almost five percentage points above the German average. An explanation for the fact that Halle has a lower share in employees in the secondary sector than the German average and Gelsenkirchen has a higher share, can be given by the fact that the German average is built by counting all employees in the whole
country in the different sectors and dividing them by all workers. Since there are regions with a high density of industry and regions without such a high density, a city like Gelsenkirchen that lies in a highly compressed industrial region is likely to be above the average. However, Halle is located in former Eastern Germany and the new federal states stand usually below the average when it comes to employees in the industrial sector. Due to a lower share of employees in the second sector is the service sector, as in Halle, the largest economic sector in Gelsenkirchen. About 50,000 people have a job in the tertiary sector\(^{85}\), that are 69,6\% of all employees. This sector engages almost 17,6 percentage points less people than Halle. However, the tertiary sector in Gelsenkirchen employs just a slightly lower percentage of people as Germany with its averaged 72,9\%\(^{86}\). To explain the differences in the tertiary sector between the two cities it is important to remember the difference in their histories. Halle developed earlier and had besides its salt resources always an administrative function. Its industry was important for the development of the city, but it was not existing in such extends as in Gelsenkirchen, that grew due to the industrialisation. Thus, the history and the reason for the development can give an explanation for the current differences in their share of employees in the individual sectors. When comparing the share of the employees in the particular industrial sectors in Gelsenkirchen over time, as in Halle a trend from industry towards service is noticeable. In 1985 the secondary sector employed 44,4\% of all workers and within five years it decreased by four percentage points. Until the year 2000 a further declining of this sector could be registered, so that 25,2\% of the labour force worked there that year. Whilst the secondary sector declined, the tertiary sector gained in importance. In 1985 55\% of the workers were engaged in this sector and their share increased by nine percentage points in the following five years. In 2000 74,4\% of the labour force worked there\(^{87}\). That points out the decreasing importance of industry and the increasing

\(^{85}\) Statistikstelle Stadt Gelsenkirchen, 2010b  
\(^{86}\) Statistisches Bundesamt Deutschland, 2009a  
\(^{87}\) Statistikstelle Stadt Gelsenkirchen, 2009b
relevance of the services in the cities. In the comparison over time it can be assert that it can be thoroughly spoken of a deindustrialisation in Gelsenkirchen and Halle. As there is a connection between economy and population development, the impact of deindustrialisation on the populace numbers are investigated in the next step.

3.5 Manifestation of shrinking

3.5.1 Demographic consequences

As shown in the previous chapter, Halle and Gelsenkirchen are affected by a structural change that is accompanied by population decrease. A decline in population can set a chain reaction in motion: with a decreasing population there are less people in fertile ages and thus fewer children are born who could have families themselves in the following years. Additionally the migration of people is social selective, thus young and qualified people, especially young women, are migrating to other cities or regions, where they can find jobs more easily. This tendency has already left its mark in the current population structure and will have even more influence in the next years. For emphasising this problem, assumptions about the population development in the future can be investigated, but those predictions are based on the assumption that the existing trends will continue. If the demographic change is going on in Gelsenkirchen, a slightly declining birth rate within the next years can be expected. The number of babies until two years of age will decrease by ten percent until 2025. The group of age between 20 until 45 years of age, that was strongly represented in 2006 (see figure 5) will decline by 16,8% from 2006 until 2025. That can be emphasised with the following population pyramid. What the figure shows, too, is that people will become older in general, since especially the age group over 80 years is expected to grow by 22%. A lower share of young people and a higher share of people older than 65 years can have an impact

Häußermann, 2008
on the perception of the city. It could be experienced as an ageing city and thus be less attractive for young people to move there for their higher education, for example.

Fig. 5: Population pyramid of Gelsenkirchen in 2006 and 2025

Source: Wegweiser Kommune, 2006b
As for Gelsenkirchen, also for Halle assumptions about the further population development can be made, to see, what expectations there are about how the population will develop and if the shrinking will proceed. It shows a similar picture. The number of children who are born will decrease slightly between 2006 and 2025: the number of babies until two years of age will decline by 15%. The generation of the currently 20 till 45 year old people who are relatively strong represented (see figure 6), is expected to decrease by 24% from 2006 until 2025. Especially the number of people who are between 80 and 90 years of age in 2025 is expected to rise significantly due to a higher expectancy of life and better health care. According to that assumption their number will almost double (from 11,650 persons in 2006 to 21,200 in 2025). This means the same for the townscape and the public perception as for Gelsenkirchen: The city will be noticed as ageing city and companies as well as entrepreneurs will have problems to find a qualified labour force and apprentices. If this development goes on, the population pyramid could develop like this:
Fig. 6: Population pyramid of Halle in 2006 and 2025

Source: Wegweiser Kommune, 2006c
To present it even clearer, the expected change in the age groups between 2006 and 2025 can be consulted. Especially two age groups are eye-catching. On the one hand is the assumption, that the age group 16 until 24 years of age will be declining by 83,2% (see figure 7). That means a loss of those who are either in their education or starting a traineeship. If those do not stay, it could have an impact on the job market. When young people are leaving for studying, they will be missing later as qualified personnel in the companies. On the other hand the populace over 65 years of age increases by 78,4%. Since all the other age groups are decreasing, Halle will grow older and will overage in the future.

![Fig. 7: Groups of age 2006-2025 in Halle (in %)](image)

The quotient of residents in fertile ages between 25 and 44 years will decrease by 17,8% and this could have an impact on the future population structure. With fewer people in that age, fewer children will be born who can be parents themselves in the future. It is eye-catching that the group of age until 15 years will just slightly decrease by 2,7%. Since this is the group of age that usually lives with their parents, it could mean that the birth rate will
remain almost stable. However, when the young people reach the age of starting an apprenticeship or going to further education, they are leaving Halle. Some of the loss of population in the group of age 16-24 can be explained by the low birth rate in 2006, as it was visible in figure 6, but the rest must be explained by a moving away of young people. Since there is a university in Halle and thus a location for further education, it could be that young people are leaving Halle because they do not find an attractive enough labour market. Additionally, there is also the normal wish to experience other cities and places than the familiar ones. The group of working people, who are in the two age groups of 25 until 44 years and 45 until 64 years will decline by 36,8%. That means that the labour force will decrease and that could have an impact on the attractiveness on Halle as a business location. With a lack of (qualified) workers it is more difficult to attract further investments and additionally since the group 16-24 is decreasing the most, the basis for the future labour force is eroding. This problematic development is also noticeable in Gelsenkirchen. The share of young people and those who are in the working age decreases but the share of older people in the whole population is increasing. In contrast to Halle, which shows the smallest decline in the age group until 15 years, for Gelsenkirchen the assumed development of this age group can cause big problems. It is expected that this group will decline by 61,2% from 2006 until 2025 (see figure 8). That can be explained by a decline in the birth rate and additionally by the fact that a lot of young people between 20 and 30 years of age are migrating to other cities when they want to go to university or to find a job. That means that there are also fewer people who are in the age to start a family. That can be emphasised when investigating the loss of people between 16 and 24 years of age, who are usually in education. They are assumed to decline by more than the half (51,2%) due to a decreasing birth rate and due to their wish or need to migrate to a more attractive labour market. That limits Gelsenkirchen’s attractiveness as business location.
The age group in fertile ages (25 until 44 years) will decline by 16.8% and thus almost by the same quotient as Halle. That means that fewer women could bear fewer children who will have children them themselves in the future. In the long term the city will have a negative natural population growth and in order to stop a further population decline, a growing net migration to the city is necessary. That means that the longer a population decline is going on, the more difficult it will be to break the trend. The two groups of 25-44 years and 45-64 years of age, who are the labour force of the city, are expected to decline by 19.3%. This development would result in a lack of employable population and a higher share of the non-employable population on the employable inhabitants of the city. In general, the people who are migrating out of shrinking cities and who are more mobile are those with a higher education. Thus, in both cities lower educated people could become the dominant force in the remaining labour force and that could have impacts on the economic development in the future. A process of cumulative causation comes into being, which makes it even more difficult to break the...
pattern over time. Companies will have problems to find a young and qualified labour force as well as trainees and at the same time many jobs will get lost due to a declining demand of services by the decreasing population. That could also hinder new investments, as firms want to have a qualified labour force close to their company, when they think about locating in a new place or city\textsuperscript{89}. If they do not find enough workers or if they doubt that the human capital is sufficient, they will think twice whether moving to Gelsenkirchen or locating in another city with better human capital. The assumption that the group of age older than 65 will increase by 28,2\% (see figure 8) emphasises the results that were gained with the population pyramid. On the one hand the city picture will be branded by a high number of old and a lack of young people, on the other hand the demographic change has an impact on the pension scheme of the country. It means that in a society like Germany, where workers pay the pension of the retired people, fewer and fewer working people have to pay for a growing number of old people, when shrinking takes place in many towns. This development is enforced in cities like Halle and Gelsenkirchen.

To sum up, both cities have a declining population in the age groups from zero until 64 years. The only age group that is growing is this over 65 years of age. However, the way of shrinking is different. Whereas in Gelsenkirchen the group of children and teenagers until 15 years is shrinking the most, it is the age group that shrinks the least in Halle. That could lead to a better future population development in Halle than in Gelsenkirchen. A loss of more than 60\% in that group of age means for Gelsenkirchen, that there is a reduced number of people who will start families in the future and to handle the shrinking process will then be even more complicated. Both cities face a loss in the age group of people in education from 16 until 24 years and have almost the same decline of people in fertile ages (25 until 44 years). Both cities are expected to register growth in the age group older than 65 years, but Gelsenkirchen has an increase of almost 30\% whereas in Halle it is expected to rise by 80\%, what will lead to an overageing of the city.

\textsuperscript{89} Gabler, 2001
3.5.2 Physical consequences: infrastructure and vacancy

The decline of population and the longer life experience has also impacts on the physical side of the city. That is especially related to its infrastructure, the vacancy of buildings and the urban structure. The under-utilisation of technical and social infrastructure leads to several problems since all infrastructural facilities need a certain capacity utilisation for an optimal use. Water and sewer pipes cannot easily be narrowed or cut back when they are not used to full capacity or have to supply only sparsely populated areas. Through a decline in population and thus less consumption, there is, for example, not enough water pressure so it flows slower or even stays in the pipes. To guarantee the quality of the water and to prevent a growing of germs, it must be kept in constant motion by mechanical methods. This is creating high costs for the municipality: 80% of the running costs of water and sewer pipes are fixed costs and only 20% are usage-bound costs. In contrast to that, the social infrastructure can be dismantled and schools, hospitals and kindergartens can be closed. This leads to longer ways to school for the pupils, but at the same time the public transport is cut back because it is not profitable anymore. If less people are using it the public transport becomes more expansive per resident and thus the demand shrinks even more. So out of it the immobile residents like children and older people have disadvantages. Additionally, an ageing population requests other services than young families and thus for example more doctors are required. Problematic in this case is that the rural areas in Germany already have an insufficient medical care. Additionally to the problems caused by an oversized infrastructure there are high vacancy rates in shrinking cities. Empty houses and idle industrial real estates can mean an easing of the residential market and lower housing prices for the inhabitants but the value of the unoccupied real estates can also abate. Thus the owner

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90 Häußermann, 2008
91 Kocks, 2007
92 Häußermann, 2008
93 Kocks, 2007
94 Häußermann, 2008
cannot invest money for an appreciation of the property\textsuperscript{95}. That means a further decline in the attractiveness of these areas, what can lead to a moving-away of the mobile and better situated people and families. Thus, vacancy creates vacancy, since the social mixture within the area dissolves. Those who stay back are mostly old people, who were living there since a long time and do not want to move and, due to the lower rents in those areas, unemployed and poor people\textsuperscript{96}. So shrinking has also social consequences. The city structure dissolves, because of the coexistence of idle spaces, occupied houses and unoccupied buildings and a fragmented city or area comes into being. When people migrate from a city in such high numbers as it happened in Halle and Gelsenkirchen, the number of vacant apartments will increase and eventually certain buildings will remain unoccupied. A big influence on the current high vacancy rates, however, had the building and modernisation boom in the early 1990s in the New Laender. Derelicted dwellings were renovated in the cities whereas coevally the government substituted the building of one-family homes on the greenfield site and therewith suburbanisation (see chapter 2.2). “[E]conomic decline and population losses were accompanied by a massive expansion of the total housing stock in the 1990s”\textsuperscript{97}. Leipzig is a good example for the problematic construction planning in the New Laender: in 2000 the city had 60,000 vacant dwellings. That are just as much apartments as that have been newly built (50,000 flats) and have been renovated (10,000 flats) in the region Leipzig after the reunification\textsuperscript{98}. Also in Halle the two effects appeared simultaneously. With the reunification in 1990 a building boom in the new federal states took place, assuming that they will face an economic upturn. When this economic upturn did not happen and additionally the movement into the suburbs was subsidised and brought many families to move outside of the towns, the surplus of flats led to high vacancy rates. As a result of that,

\textsuperscript{95} Bürkner, 2001
\textsuperscript{96} Häußermann, 2008
\textsuperscript{97} Bernt, 2009
\textsuperscript{98} Häußermann, 2008
the vacancy rate in Halle was 13.6%\textsuperscript{99} in 2008 and thus the second highest in Germany\textsuperscript{100}. The average German vacancy rate is 3.7% and that means that 780,000 flats are uninhabited. There is clearly a difference between the vacancy rates in Western and Eastern Germany. In Western Germany the vacancy rate is 2.7%, in Eastern Germany 6.6%. That means that Gelsenkirchen’s vacancy rate of five percent\textsuperscript{101} is rather high compared to the Western and to the national average. The same can be said for Halle, as it lies above both the Eastern Germany and the national average. Unoccupied flats concern especially areas with a high amount of buildings made of prefabricated concrete slabs, due to their unattractiveness for inhabitants. These accommodated thousands of people during GDR times and offered a high comfort of living since they had, for example, electric heating and every flat had its own toilet. As a result of an on-going shrinking process some of these housing areas are now left empty and have a bad reputation. In shrinking cities those buildings are the first ones to be demolished because they usually have the highest vacancy rates\textsuperscript{102}. Many of the buildings in the GDR that were destroyed during the Second World War were not rebuilt or renovated after the end of the war. They were left to their own devices and even if they were tenanted, there were no restorations done. One reason were the low rents that left no room for investments, another is the fact that the city centres were neglected intentionally for tearing them down and erecting socialistic residential complexes. That is why a lot of money was invested into new housing areas outside the cities. To face the housing shortage huge areas of prefabricated concrete slab buildings were erected, which bear now the rather negative connoted name “Platte”. These huge building complexes were located outside of the city centres, in the case of \textit{Halle-Neustadt} it was even an independent city that was eventually united with Halle in 1990. \textit{Halle-Neustadt} was the showcase of a socialistic city. A

\textsuperscript{99} Schwaldt, 2010
\textsuperscript{100} The highest vacancy rate had the former East German city Schwerin in Mecklenburg-Vorpommern with 15.4% vacancy.
\textsuperscript{101} Von der Mühlen, 2004
\textsuperscript{102} Rößler, 2010
few years later another building complex, *Halle-Silberhöhe*, followed. Since the living conditions in the city centres were so bad, due to the lack of modernisation or restoration in general, the housing shortage in the GDR could not be prevented with new constructions because these new buildings had such a strong demand. When in the 1970s the vacancy of the city centres in the GDR reached 15% till 20% it was decided to redevelop the city centres. Redevelopment in this case meant the demolition of the remained infrastructure and new constructions of prefabricated concrete slab buildings. In Halle this happened to the medieval southern central area, the rest of the city was unaffected by it when the Berlin Wall fell in 1989. With the unattractiveness of the city centre and the new constructions outside the city, Halle lost a lot of its population to its surrounding area already before the reunification. The rehabilitation of the derelict city centres after 1990 took some time and the prices of newly built houses in the city centres could not compete against the subsidisation of privately owned homes and prices outside the cities in general, which were usually lower. Due to that even more people decided to move to the suburb and out of Halle. This process peaked in 1996 and currently the migration to the suburbs is declining again\(^\text{103}\). Due to the fact that *Halle-Neustadt* was originally built up as an independent city and was consolidated with Halle in 1990, the town consists currently of two poles. As to see in figure 9, Halle and *Halle-Neustadt* are separated by the *Saale-channel* and have a connection through the main street. The spatial division of the city entails several problems for its urban planning.

\(^{103}\) Franz, 1999
After the reconstruction in the 1990s the “old” city of Halle (the historic centre) is more attractive again and some researchers even find evidences for gentrification there\textsuperscript{104} but the “new” city (Halle-Neustadt) has high vacancy rates. This district lost more than 50\% of its inhabitants since 1990, it declined from 100,000 people in 1990 to 49,000 people\textsuperscript{105} in 2006. That means that a big part of the shrinking in Halle took place in Halle-Neustadt. In 1990 there were 210,000 people living in Halle and 100,000 in Halle-Neustadt. In 2006, the original town Halle had lost 26,000 inhabitants since 1990, but the new part Halle-Neustadt declined by 51,000 persons. Thus, it is noticeable that the large housing estates could not get back their attractiveness of earlier times and due to their high vacancy rate they are the first ones that were demolished by urban consolidation.

Besides the demographic, physical and social consequences there are also economic consequences. Municipalities that are affected by a shrinking population figure have to deal with a reduced income of local taxes. They can charge taxes for real estates, for trade and excise taxes, as for example second residence property taxes. When the population is declining, there are

\textsuperscript{104} See Friedrich, 2000
\textsuperscript{105} Stadt Halle, 2007
less people who are paying these taxes what has an impact on the budget of the cities and that narrows their possible scope of action\textsuperscript{106}. As a compensation cities would be able to raise the duties, but with higher taxes the location could lose its attractiveness for companies as well as private persons. Within the economic sector shrinking leads to a lower demand of services and that has an impact on the tertiary sector. With a decreasing request of services, shops could have to close down and that could lead to an increasing unemployment and thus even worsen the situation.

4 Handling shrinking cities

This chapter explores the policy reaction respective the shrinking process in Halle and Gelsenkirchen. In both cities urban consolidation was accomplished, which outcome is shown. At the end criticism about this form of handling shrinking cities is pointed out.

4.1 Urban consolidation

The vacancy of buildings was an economic problem in the New Laender. In 2002 almost 15\% of the housing stock (more than one million apartments) were vacant\textsuperscript{107}. To protect the “commodity” dwelling and to sustain the rents the programme “\textit{Stadtumbau Ost}” (“Urban Consolidation East”) came into being in 2002. Especially municipalities benefited from it, since the bulk of the vacant dwellings belonged to them\textsuperscript{108}. “\textit{Stadtumbau Ost}” aims to strengthen the residential market and to face the loss of function of cities that appeared due to the decline in population. To do so, there are two strategies included in the programme: on the one hand deconstruction and on the other hand enhancement of existing housing, especially in the city centres. Those measures ought to revitalise the city centres, to control and prevent urban

\textsuperscript{106} Häußermann, 2008\textsuperscript{107} Liebmann, 2009\textsuperscript{108} Häußermann, 2008
sprawl and to renew the empathy of the citizens with their city\textsuperscript{109}. To do so, the governments on the federal, state and local level allocated 2.5 billion Euro, one billion was distributed on the federal level only. To get money from the programme \textit{Stadtumbau Ost}, the cities have to develop an Integrated urban development concept (“\textit{Integriertes Stadtentwicklungskonzept}”)\textsuperscript{110}. In this the concepts of the municipalities for valorisation and deconstruction are set down. The concept is ought to be a strategy for a conceptual realignment of the whole city. Thus, it must be agreed upon by the functional departments and by the stakeholder that are involved in the process of urban restructuring. However, the practice has shown that the integrated urban development concepts are usually no overall concept for the whole city, as it is ought to be\textsuperscript{111}. Until 2009 the programme financed the urban consolidation of 75\% of all cities in the New Laender with more than 10.000 inhabitants and of 80\% of the cities with more than 20.000 inhabitants. After the establishment of \textit{Stadtumbau Ost}, that was extended in 2009 until 2016, also the Old Federal States thought about such a programme as an intervention against their shrinking problem and \textit{Stadtumbau West} (“Urban Consolidation West”) came into being in 2004. As for \textit{Stadtumbau Ost} also within \textit{Stadtumbau West} an “Integrated urban development concept” of the municipalities is requested. From 2004 until 2011 1,5 billion Euro were allocated on the federal, state and local level and thereof 500 million Euro by the federal government. Until 2011 there were almost 400 municipalities and cities involved in the programme\textsuperscript{112}. The biggest difference between both programmes is that the demolition of dwellings in the New Laender can be done without a financial involvement of the municipalities, whereas in the old Laender they have to take a share in the costs\textsuperscript{113}. Other differences can be found more in the details. Firstly, the quantitative dimensions are different in both parts of Germany. The vacancy rates in former Eastern Germany are in

\begin{thebibliography}{9}
\item BMVBS, 2006
\item Selig, 2007
\item Liebmann, 2009
\item BMVBS, 2012
\item Liebmann; Karsten, 2009
\end{thebibliography}
average higher than in the former Western part, so the demolition and reconstruction in Western Germany takes places to a lower extend. Secondly, the municipalities are usually in a better financial situation and can therefore accomplish more things by their own strength and are less dependent on the federal money. Thirdly, the city centres in West Germany have never experienced such a systematically negligence as it happened in East Germany.

4.1.1 “Stadtumbau Ost” in Halle

In Halle a research was made regarding the prognosis of the residential market and, as to see in figure 10, six districts with a high priority for urban consolidation were discovered: Heide-Nord, Neustadt, Silberhöhe, Südstadt and the Nördliche and Südliche Altstadt (Northern and Southern city centre). All these areas were affected by a high loss of population and have high vacancy rates within their existing building stock.\textsuperscript{114}

\textsuperscript{114} All mentioned numbers and social data about the six consolidation areas is taken from the Integrated Urban Development Concept of Halle (2007).
Fig. 10: Districts of Urban Consolidation in Halle

Nördliche Altstadt (Northern city centre) is characterised by its Whilhelminian style (see figure 11) and has above-average vacancy rates. It shelters all
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urban functions, for example habitation, business and recreation and also the university is located here. The problems in this district are the narrow house buildings with lacking green areas and parking. Especially in the former shopping streets many business dwellings but also flats are unoccupied due to these problems and to noise pollution. The northern city centre had a declining population between 1992 and 1997. In those five years their number was shrinking by 22%: from 13.300 inhabitants to 10.500 people. An explanation for the population decline in the city centre is that the building stock was in a bad condition due to the negligence during the GDR times and thus very unattractive for the residents. After an urban enhancement, the declining turned into a moving-in of inhabitants and by 2005 the previous populace level of 1992 was restored. In the long-term the population is supposed to increase by a further eight percent up to 14.500 people. The quotient of immigrants in Nördliche Altstadt was 7,2% in 2004 and thus above Halle’s average of four percent, whereas the percentage of unemployed is 2,4 percentage points below Halle’s average of ten percent. The citizens who are getting social welfare are corresponding with the average of the entire city and this was 6,7% in 2004. The focus in this area within Stadtumbau Ost is a further renovation of old buildings for raising the attractiveness. Deconstruction usually takes only place as a selective demolition of individual buildings and the occurring waste land is used as public space or parking place afterwards.

\[^{115}\] Stadt Halle, 2007c
\[^{116}\] Ibid.
\[^{117}\] Ibid.
\[^{118}\] Ibid.
Südliche Altstadt (southern city centre) has a heterogeneous construction and population structure. It was also built in Wilhelminian style with a high stock of old buildings and a low stock of prefabricated concrete slab buildings and has a lot of vacant industrial areas. As the northern city centre also the southern city centre has lost inhabitants between 1992 and 1996, due to a bad living-standard in the buildings. In this period of time 14% of the people moved away\(^\text{119}\). However, in the following years with a progressing renovation of old buildings and thus a qualitative offer of dwellings, the

\(^{119}\) Stadt Halle, 2007e
population increased again and got back to the 1992 level in 2005 with 27,400 inhabitants. For the future it is assumed that the population will remain on that constant level\textsuperscript{120}. The proportion of immigrants was 1,3 percentage points higher as in Halle, but is still not high compared to the German average of nine percent\textsuperscript{121}. The quotient of unemployed citizens in the southern city centre was corresponding with Halle’s average of ten percent and the proportion of residents who got financial help was three percentage points higher than in whole Halle in 2007\textsuperscript{122}. The vacancy rate is especially high in not renovated buildings and through the closing down of companies many industrial real estates are untenanted, too. The vacancy rate in the southern city centre did not change towards the 1980s and mounted up to 23,7\% in 2005\textsuperscript{123}, but the buildings that are unoccupied are currently the prefabricated slab buildings whereas old buildings have attracted more residents after the renovations. As in the northern city centre the demolishing of buildings is just punctual and an upgrading of living space is always preferred.

\textit{Südstadt} is predominated by prefabricated concrete slab buildings but has also a smaller amount of buildings from the 1960s and 1970s as well as one family houses. The financial help of “\textit{Stadtumbau Ost}” is especially invested in the prefabricated concrete slab buildings, since these are showing the highest vacancy rates. Between 1992 and 2005 the city lost 30\% of its dwellers and thus had 17,300 inhabitants in 2005. It is assumed to lose another 19\% until 2015, mainly amongst the prefabricated concrete slab dwellings\textsuperscript{124}. The rate of foreigners living there is with 2,8\% lower as the cities’ average but the quotient of people who are unemployed and also the quotient of those who are getting social welfare corresponds almost with the average of the town in 2004. In 2005 about 680 flats were unoccupied, what are 6,3\% of the Halle’s dwellings. Thus it lies below the cities’ average and

\textsuperscript{120} Sadt Halle, 2007e
\textsuperscript{121} Ibid.
\textsuperscript{122} Ibid.
\textsuperscript{123} Ibid.
\textsuperscript{124} Stadt Halle, 2007f
has the lowest vacancy rate within the consolidation areas. The vacancy is not spread equal throughout the whole consolidation area but mainly concentrated within the prefabricated concrete slab buildings. That is why 1,800 of these flats are supposed to be demolished in total (780 flats were already deconstructed until February 2006), especially through the removal of the empty 11-storey buildings\textsuperscript{125}.

The area \textit{Silberhöhe} is characterised by its function as a former living area for the workers of the chemical industries of Buna and Leuna. It was built before 1989 and consists of prefabricated concrete slab buildings. This area had to register the biggest loss of citizens of all districts in Halle. After the closing down of many chemical companies, the former young population moved away and thus \textit{Silberhöhe} lost 60\% of its inhabitants between 1992 and 2005. In 2005 there were 15,600 occupants left\textsuperscript{126}. Compared to Germany the quotient of foreigners living there is, as in the whole town, rather low with 3.3\%. However, unemployment is a problem in this area. The proportion of unemployed and people who are getting financial support from the state in 2004 was 11.6 percentage points higher than in Halle\textsuperscript{127}. If the concentration of unemployed people and welfare recipients rises, social problems could occur. So it is really important for the town to work against a social degradation. In 2002 37\% of the building stock was unoccupied (5,000 flats) but due to demolition (see figure 12), that took place since 2002, that quotient decreased to 27.2\% in 2005. In that year, out of 15,300 flats there were 11,700 left after the destruction\textsuperscript{128}. It is planned to remove 7,000 flats in total until 2010, since a further population decline is assumed. The deconstruction concerns especially the 11-storey buildings, which are the most unattractive dwellings for tenants within this area.

\textsuperscript{125} Stadt Halle, 2007f
\textsuperscript{126} Stadt Halle, 2007d
\textsuperscript{127} Ibid.
\textsuperscript{128} Ibid.
As in Silberhöhe, also in Neustadt (see figure 13) is an area that was erected for the workers of the chemical industry and was the symbol of an ideal socialistic city. Between 1990 and 2005 39,300 inhabitants moved away, that are 44% of the former population. The remaining 50,300 inhabitants in 2005 are supposed to decline by further twelve percent until 2015. The quotient of people who are unemployed and who are getting financial support from the state in 2004 was 8.6 percentage points higher than in Halle. At the moment, the quotient of immigrants living there is rather low with 6.6%, even though it is 2.6 percentage points above Halle’s average. A concentration of immigrants is just to find on a small scale, but a further concentration of immigrants and unemployed people within the next years in this area is expected. Thus, actions must take place to prevent it from becoming an area for those who are excluded from the society. In 2002 the vacancy rate was 20%. That means 7,300 out of the 35,500 dwellings were unoccupied and until 2010 around 5,500 flats are planned to be demolished. When the population is developing into the expected direction, the vacancy rate in 2015 will then be settling down by the high level of 18%.

\footnote{Stadt Halle, 2007b}
\footnote{Ibid.}
The remaining area of urban consolidation, *Heide Nord*, is characterised by a colony of concrete slab buildings and single-family-houses. From 1992 until 2005 it lost 40% of its inhabitants and thus 7,000 residents were left in the area in 2005. The assumption is that there will be a further decline in population by 29% until 2015\(^{131}\). The quotient of foreign people is with 2,1% below the average but the proportion of unemployed people and those who are getting financial support from the state is 6,2 percentage points higher than in the whole city\(^{132}\). The vacancy rates are not that high compared to the other development areas. In 2005 540 flats were unoccupied (12,4%), especially in the concrete slab buildings but at that point of time 250 flats were demolished already\(^{133}\). All in all 20,000\(^{134}\) flats are planned to be demolished in Halle by 2015, thereof 14,000 flats alone in the areas with multi-storey buildings in the periphery of the city. However, besides this there

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\(^{131}\) Stadt Halle, 2007a
\(^{132}\) Ibid.
\(^{133}\) Ibid.
\(^{134}\) Stadt Halle, n.d. c
is also the aim to adapt the infrastructure to the new situation, for example the local traffic but also the water and long-distance-heating pipes, to grass idle areas and to renovate buildings.

4.1.2 “Stadtumbau West” in Gelsenkirchen

In Gelsenkirchen there is no “Integrated urban development concept” yet, but a guiding plan that will be the basis for a development of the concept. This plan registers three main goals that should be achieved: To secure the city as an urban place of residence, to strengthen it as a location for retail and service and to adopt and reconstruct the city’s infrastructure to a declining population\textsuperscript{135}. In the map (see figure 14) the black circles show where the urban consolidation should take place in Gelsenkirchen. In Gelsenkirchen there are three areas involved in \textit{Stadtumbau West}: Zentrum Buer, Gelsenkirchen-City and the settlement Tossehof\textsuperscript{136}.

\textsuperscript{135} Bundestransferstelle Stadtumbau West, n.d.
\textsuperscript{136} Social data about the consolidation areas could not be provided by the city of Gelsenkirchen, but since a short explanation of the districts is necessary for the further research, the description is made with all available information
4. Handling shrinking cities

Fig. 14: Districts of Urban Consolidation in Gelsenkirchen

Source: Stadt Gelsenkirchen, n.d. a

**Zentrum Buer**, the city centre of the district Buer, accommodates trade, culture and administration on 13 hectares. There are 36,000 inhabitants living in the whole district Buer\(^{137}\). The area has to face above-average unemployment and a loss of retail\(^{138}\). Due to that, vacancy occurs especially in commercial properties. With the urban consolidation it is aimed to attract a mixture of different branches to the city centre Buer, to enhance the existing building stock and to deconstruct individual buildings punctually\(^{139}\).

*Tossehof* is a settlement that was built in the early 1970s. The erected high-rise buildings (see figure 15) have up to 17 storeys with 1,400 flats in total,

\(^{137}\) Numbers for Zentrum Buer were not available
\(^{138}\) Numbers were not named by the BBSR
\(^{139}\) BBSR, n.d.
but the area has also 100 single-family-houses. There are 3,300 residents\textsuperscript{140} living in in the 15 hectares of Tossehof with slightly declining numbers and the average of people who get social welfare is higher\textsuperscript{141} than the city’s average. The social data corresponds with the city's average, just in small scale a concentration of socially deprived people is noticeable\textsuperscript{142}. The concept in Tossehof is about deconstruction of particular storeys in high rise buildings, to renew the public spaces, for example playgrounds and parks and to attract retail to move into the unoccupied shops. In total 100 flats are planned to be demolished and the rest will be enhanced. Since the area Tossehof has a bad image, there is also a need to change that image and to work against the bad reputation.

![Fig. 15: “Kopernikusstraße” in “Tossehof”](source: Stadt Gelsenkirchen, n.d. b)

\textit{Gelsenkirchen City} is an area with both habitation and business. It has a size of 90 hectares with 9,000 residents living there\textsuperscript{143}. The main problems are the vacancy of retail stores (as to see in figure 16 with a former location of the “Sinn-Leffers” company) and the missing green areas as well as public spaces, since the courtyards are sealed or used by garages. That is why the

\textsuperscript{140} Referat Stadtplanung Gelsenkirchen, 2007  
\textsuperscript{141} Number is not named by the Referat Stadtplanung  
\textsuperscript{142} Stadt Gelsenkirchen, n.d. c  
\textsuperscript{143} Bundestransferstelle Stadtumbau West, 2009
money of Stadtumbau West is invested there above all for the redevelopment of public space, for greening and for increasing the attraction for retail to make it settle down and thus to strengthen the city as a location for habitation and retail.

Fig. 16: Empty commercial premise in “Gelsenkirchen-City”

It is obvious that both cities have a different concept of handling their shrinking problem. Whereas in Halle the money is apparently mainly used for reconstruction and demolition of empty houses and unattractive accommodations, as for example of prefabricated concrete slab and tower buildings, Gelsenkirchen seems to focus more on urban enhancement and punctual demolition of individual buildings. In Halle demolition on a bigger scale is no uncommonness. The reason for that is on the one hand a significant difference in the vacancy rates. The average vacancy rate in all of the six consolidation areas in Halle is 21% and in the entire town 13,6%. In Gelsenkirchen the vacancy rate is above the average of West Germany and also above the national average but it is mainly punctual and not evenly spread in the city. In Halle the areas with the highest shrinking rates are
located at the periphery, in contrast to that the problematic areas in Gelsenkirchen are located within the inner city. Two of them are even city centres, whereas Halle’s city centres can partly register an increasing population. In general, the demolition of large housing areas on the periphery of a city is easier to accomplish than in city centres. Not only that the overall concept of the compact city can be followed by doing that but a reuse within the city core is much more complicated to manage. Idle spaces at the periphery of the city can rather be accepted than in the inner city. On the other hand, the reason for demolition on a bigger scale in Halle is that the housing societies in Halle, which own the large housing stock in the periphery, were highly involved in the consolidation process. Thereby, the extensive demolition of housing areas was much easier to assert as if individual house owners must have been involved in the demolition. This is also one of the criticism about Urban Consolidation, that should be highlighted in the following.

4.2 Criticism on urban consolidation

There are positive and negative aspects about urban consolidation. It is often criticised that the urban consolidation programme is noticed as a demolition programme by the public. One reason for that is that the subsidies are not called in equal parts for demolition and valorisation. Even though the intention of the programme is that both measures should be accomplished half-and-half, it is possible to defer means for valorisation in favour of demolition. Thus, for example in 2004 Saxony and Saxony-Anhalt used 80% of the allocated financial means for demolition and only 20% for upgrading the environment\textsuperscript{144}. Closely related to this point is the critique that the programme is used as a short-term solution of housing market problems and that the improvement of the quality of life is not paid enough attention. This could be due to the fact that the decision for or against demolition is usually done on the basis of economic or infrastructural criteria but seldom by

\textsuperscript{144} Rößler, 2010
means of free space planning or urbanistic matters. This can be emphasised by the fact that urban consolidation was especially used for prefabricated concrete slab buildings. This is due to the high vacancy rates in and the low approval of this kind of housing stock. Additionally, the prefabricated concrete slab buildings are usually owned by bigger housing societies. Thus, the ownership structure is much more simple than in the inner city, where often every house and sometimes even the dwellings belong to someone else. However, even though the massive demolition in the housing estates is criticised as a success of the lobby of the big housing societies, it is positive that thereby the general principle of the compact city is followed. Since one of the aims of the urban consolidation programme is the strengthening of the inner cities, the proceeding of taking housing areas at the periphery of the cities away, which usually belong to large housing societies, is comprehensible. However, it is must be taken into consideration, that the measures of reconstruction and urban enhancement used in Stadtumbau Ost and Stadtumbau West do not fight the causes of shrinking but just the results, as for example vacancy. Thus, demolition and valorisation are possibilities to improve the living with the shrinking but they are no means for breaking the trend.

5. A process with several faces

The thesis showed that deindustrialisation can explain big parts of the shrinking process in Halle and Gelsenkirchen. However, it is not the only reason and cannot be contemplated alone. It seems that HÄUßERMANN and SIEBEL's theory can explain more of the shrinking process in Gelsenkirchen than in Halle. With the industrialisation in Gelsenkirchen, a population growth came into being. This process was followed by the closing down of pits over a long period of time. As it was shown in the analysis of the

\[\text{Rößler, 2010}\]
\[\text{Häußermann, 2008}\]
\[\text{Rößler, 2010}\]
\[\text{For the general principles of urban development see e.g. Heineberg, 2008}\]
people working in the different economic sectors in comparison of time, a change from industry and manufacturing towards service was noticeable. Thereby a loss of jobs took place and thus the unemployment rate increased, since the missing industrial jobs could not be fully compensated with more jobs in the service sector. With the beginning of this process the population started to decrease. In Halle the picture is, due to its history as a city in a socialistic country, more complex. Its deindustrialisation started with the transformation of the political system. With the breakdown of the socialistic system in 1989, the deindustrialisation was boosted and happened within a few years like a shock. The former national owned firms and agricultural production cooperatives were privatised and most of the firms were either not able to adapt to this change and became bankrupt or they were bought up by West German corporations and then mostly closed down or dislocated. Whereas the deindustrialisation in Halle happened almost from one day to the other, this change towards a service-oriented industry in Gelsenkirchen was a gradual process that took a long time. Additionally to deindustrialisation, the demographic change caused a population loss in Halle and Gelsenkirchen. After the reunification, Eastern Germany recorded the lowest birth rates in the world’s history what led to a breaking down of the natural population growth. Also in Western Germany the demographic change went on and less and less children are born with every generation. However, the impact of deindustrialisation and the demographic change on the shrinking process have been intensified by long distance and internal migration out of the shrinking cities. In West Germany suburbanisation was a slow process that was going on for years, in contrast to that it happened in East Germany within a short period of time in the 1990s, supported by subsidies from the government. Additionally to the subsidies, the condition of the inner city areas, especially in the New Laender, had an impact on internal migration. Due to its negligence and as a result of a lack of renovation during the socialist period, their state was bad. Therefore many residents had moved out from the inner city during the past years to raise their living
condition in other parts of the town or in other cities. This flow of people is visible when looking at the population decrease after the reunification in Nördliche and Südliche Altstadt, the city centres of Halle. Additionally, there was the new possibility for persons in the GDR to move to West Germany. Many people took their chances for better jobs and left for better living conditions as well. All these factors led to a shrinking population in Halle and Gelsenkirchen, but the deindustrialisation can primarily explain the speeding up of the shrinking process in the 1990s in Halle. Furthermore, this research showed that the extend of shrinkage can vary. In Halle almost all peripheral districts are affected by a shrinking population, however the scale is different. The inner city, on the contrary, can register a growing population. In Gelsenkirchen there are individual areas even in the city centres that are shrinking and it is not only happening in the periphery. That means that for future action of the municipalities there is not one solution or framework but the measures must be adapted to the different needs and problems of the individual city. From this point of view the distinction in Stadtumbau Ost and West was right, as both parts of Germany have different problems due to their diverse history. However, it must be said that in the end the actions and used measures are not that different in both programmes. Due to the lack of theoretical approaches and systematic analysis there is still a lot of work to do in the future research of shrinking cities. There is, for example, still no common definition of what is shrinking. For further case studies and general research on that topic, it would be good to ascertain a common definition and indicators. It would also be conducive to do a monitoring in Halle and Gelsenkirchen, to see the outcome of the urban consolidation programme. An interesting point of view would be the position of the residents: how do they feel about the changes in the city and are they involved in the consolidation process, as it is them who need to live in the city? An approach for future research would be to find ways to fight not only the outcome but also the causes of shrinking. This would be helpful for cities that are going to face shrinking within the next years. However, shrinking does not have to be
seen only problematic. For some cities it represents an opportunity for experimentation and for designing the city in a way to make it more attractive. The transformation that is going on in shrinking cities provides the opportunity to play with visions and to go new ways. It is important for affected cities to change their negative point of view, to consider shrinking as their new type of urban development and to find individual ways to handle the process.
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