

Location attractiveness of Münster according to soft person-related locational factors: trends during the last years.

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1. Introduction

Today's social development is affected by several megatrends which influence political activities in all fields of action. Two of these megatrends can also be seen as the groundwork for the problem this thesis deals with. On the one hand, demographical change as the first megatrend describes the shift within the age pattern. Meaning that due to lower mortality and lower rate of birth the overall population rate shrinks. Furthermore, the share of the population of older people - compared to the share of population of younger people - rises. "The demographical change influences the scope and structure of the potential of the working population"¹ (Deutscher Bundestag, 2002, p. 67). The second megatrend influencing the problem is the tertiarization meaning the process of transformation from an industrial society towards a society based on the provision of services. For the labor market, this tertiarization implies a change of employees' requirements. The Enquête-Commission of the German Federal Parliament arrives at the conclusion that "The trend shows a shift towards more ambitious activities and - as a consequence - an increase of job specifications. Therefore, the demand for university and college graduates will further increase within Germany"² (Deutscher Bundestag, 2002, p. 73).

If these two trends are combined, the core difficulty will arise: The demand for highly skilled³ workers will increase - whereas the overall quote of working people will decrease. For the main part, this is an economic problem; the link between the availability of human capital and a positive economic development has been carried out by several scholars according to Haisch and Klöpper (2007), for example by Büchel, Frick and Witte: "The continuous economic structural change towards more complex production processes leads in all relevant developed countries to a growing demand of higher qualifications [...]. It follows that the production factor "human capital" [...] gains more relevance."⁴ (Büchel, Frick, & Witte, 2002, p.207) For a single company, fewer highly skilled workers lead to a lack of innovation and creativity - core values of a service-based society. Thus, the competitiveness of that company is threatened and the company becomes less attractive for potentially new employees. Again, it is heading to a lack of human capital. A race to the bottom begins.

The effects of this lack of highly skilled do not only occur within an economical framework but also evolve a political issue. Because if the company's competitiveness and therefore economic success is threatened, this also influences the region the company is settled in. The region will be directly influenced by lower fiscal earnings but also indirectly because the lack of economic growth makes a region itself unattractive for new investors. With lower fiscal earnings, the region's possibilities to invest their money in making the region more attractive for new investors, shrink and the overall welfare of

¹ Translated by the author: „Der demographische Wandel beeinflusst Umfang und Struktur des Erwerbspersonenpotenzials.“

² Translated by the author: „Der Trend geht zu immer anspruchsvolleren Tätigkeiten mit der Folge weiter steigender Qualifikationsanforderungen. So wird der Bedarf an Hoch- und Fachhochschulabsolventen in Deutschland auch weiterhin wachsen.“

³ Within this thesis „highly skilled“ refers to people with college or university degree.

⁴ Translated by the author: „Der anhaltende wirtschaftliche Strukturwandel hin zu komplexeren Produktionsprozessen führt in allen wesentlichen Industrieländern zu einem wachsenden Bedarf an höheren Qualifikationen [...].In der Folge gewinnt der Produktionsfaktor „Humankapital“ [...] an Bedeutung.“

the region sinks. Thus, the problem's political aspect eventually deals with welfare-policy. To manage the welfare problem mentioned above, politics have to break up the vicious circle or - even better - act preventatively to minimize the risk of entering the race to the bottom.

Referring to the human capital theory, this can only succeed by attracting more highly skilled workers for the region and its companies. To find a proper way to do so, one must understand how the highly skilled make their locational choice. There must be added another element to the core difficulty resulting from the demographical change and tertiarization: the regional mobility of the highly skilled. Bötken, Bucher and Janich describe regional mobility as follows: "Regional mobility is in general a result of perceived deficits and disparity within the general living conditions and chances. A change of the place of residence will be considered if the improvement of the quality of life due to the relocation or migration is of higher estimation as the economic and social costs of it."⁵ (Böltken, Bucher, & Janich, 1997, p. 35) It is therefore important to continuously improve the living conditions in order to keep or make a region attractive. This theory derives from the assumption that the highly skilled, due to their better qualification, receive more job offers compared to non graduates. They thus have a wider range of choices where they want to live. Next to availability of work and salary requirements, they increasingly choose their location according to the local quality of life (Jochmann, 2010, p. 99). Since the second half of the 20th century, the buzzword "quality of life" occurred in this regard. Attractiveness and therefore livability especially for the individual workers is nowadays broadly measures by the level of quality of life.

The quality of life issue is not limited to a single region or country. Also the European Union considers this issue as very important: "Challenges arising from low employment rates, an ageing population, changing family structures and social exclusion have put quality of life issues at the top of the EU social policy agenda." (Eurofond, 2010). Especially in matters of being attractive for the highly skilled, improvements have been made to assure that the Union itself stays competitive within a transferring knowledge based society against the USA or Asia for example. An example for this is the introduction of the Bachelor and Master program, which was established in 1998 to give students the opportunity to study in other EU countries with barely any barriers. Also cross-border university cooperation have been established to foster the understanding for the European Union itself. This helps to higher the attractiveness European Higher Education Area and to commit the students to stay within the Union instead of studying and working outside of it. Besides strengthening the Union's competitiveness as a whole, tools in regional policy like the European Union's Structural Funds have been established to support regional growth within the Union. These European efforts emphasize the high importance of bettering the level of quality of life to attractive for the highly skilled in order to be competitive in a knowledge based society.

⁵ Translated by the author: „Räumliche Mobilität ist im allgemeinen Folge wahrgenommener Defizite und Disparitäten in den Lebensbedingungen oder -chancen. Ein Wohnungs- oder Wohnortswechsel wird erwogen, wenn die mit einem Umzug oder einer Wanderung verbundenen Verbesserungen der Lebensqualität höher eingeschätzt werden als die dabei entstehenden ökonomischen und sozialen Kosten.“

This thesis' focus should lie on one of those single regions in Europe and how certain factors, that determine its attractiveness developed during the last years. In 2004 the city of Münster (Germany) won the LivCom-Award and could therefore call itself "most livable city" within its category. This implicates that Münster holds a high quality of life. But how did the soft-person related locational factors that determine quality of life actually develop in Münster? To evaluate whether Münster's local authorities actually recognized the trend of ensuring the quality of life within the region this thesis will investigate the question:

"How did the soft person-related locational factors in Münster develop during the last years in order to be attractive for the highly skilled?"

To identify relevant soft person-related locational factors and measure their development within the last years in Münster, the work of Grabow et al. (1995) will be my starting point. According to Grabow et al. (1995), locational factors can be divided into three types: hard factors, soft enterprise-related factors and soft person-related factors. In the recent scientific debate soft locational factors gained more importance, this can most notably be attributed to the shift towards a knowledge-based economy. A key concept of the kind of economy is the importance of the highly skilled workers namely people that push technology by using their knowledge. That makes the individual a very important component of the success a company can have. Unlike companies, individuals make a locational choice based on soft person-related locational factors rather than the hard ones. Hence to attract the highly skilled companies have to settle within – according to soft-personal factors – attractive regions. So regions (and thus the local affairs) must improve their attractiveness to foster regional growth. A deeper insight how all these components build a puzzle will also be developed within chapter 2 (theoretical considerations) of my thesis. Furthermore in this part I will go on by choosing the important soft personal-related factors to measure the attractiveness of the city Münster. Due to the limited space I will not analyze all possible factors but instead but my focus on one out of two metafactors developed by Grabow et al. (1995): the metafactors housing/recreational value.

Grabow's theory will only be seen as a groundwork for the empirical analysis, however in the empirical part of the thesis the metafactors will be broken down into single dimension by referring to the work of Judith Jochmann (2010), who examined the general influence of several dimension on the satisfaction of highly skilled within a region in the south of Germany. This thesis' focus will therefore be an empirical one. It lies on the analysis of the development of a selection of these dimensions during the last years as. From their development an inference to the trends in locational attractiveness of the city for highly skilled can be drawn.

After elaborating the choice, which of Jochmann's dimension will be examined, I will develop indicators to operationalize them since - so far - the dimensions are only conceptual. I use others studies that have already been conducted to find proper indicators for each dimension of the metafactor. Where there's no available research, I will also generate indicators myself. Based on former developed indicators, I will analyze the empirical dataset. The data will for the most part be extracted from the annual statistical

reports the city of Münster published yearly between 2001 and 2011 and the statistical database of North Rhine-Westphalia (Landesdatenbank NRW). This measurement of the development of these dimensions will enable me to give an elaborated statement on the trends they indicate for the locational attractiveness of Münster. The focus thereby will not be to point out whether a particular soft locational factor is good or not but rather how the availability of the factors has evolved within the last years and what tendency lies within it to give a proper answer to the research question.

2. Theoretical considerations

2.1. Definition of “region of Münster”

When choosing a region as an object of statistical investigation, it is crucial to determine what areas are actually covered within the research. In case of the region Münster there are several possibilities in order to in- or exclude certain areas.

In terms of the administrative region (dt. “Regierungsbezirk”) Münster one would account an area covering about 6.900 square kilometer and a population of 2.6 million. The administrative region includes next to the independent cities (dt. “kreisfreie Städte”) Bottrop, Gelsenkirchen and Münster also the districts Borken, Coesfeld, Steinfurt, Warendorf and Recklinghausen (Bezirksregierung Münster, 2010). The administrative region Münster can be equated with the International Chamber of Commerce’s sector North-Westphalia (dt. “IHK-Bezirk Nord-Westfalen”) (IHK Nord-Westfalen, 2012). The administrative region Münster therefore could be an adequate term especially in a political and economic sense. Even if – as shown in the first part of the thesis – locational factors as a term are mostly used in economic science and the consequences of their absence gains more and more political relevance, it is still the (highly skilled) individual which is the core of the problem. Therefore, using a political or economic term to define the region would not be appropriate.

Considering the individual recognition, the investigated region I chose is the independent city of Münster itself instead. This is not just due to the individual recognition but rather out of political scope of action, because the decisions crucial in terms of soft locational factors (e.g. the use of land) fall to the municipality and not to the administrative region. The independent city of Münster covers an area of 302.9 square kilometer and a population of 288.050 (in June 2011) (Information und Technik Nordrhein-Westfalen, 2012) and includes 45 (statistical) urban districts. The relevant departments of the municipality for this thesis are the department for planning, construction, economy and marketing as well as the department for law, social affairs, integration, health, environmental and consumer protection and the department of education, family, youth, sports and culture. Those departments play the key role for the distribution of attractive soft person-related locational factors in the field of housing, leisure and environment (first metafactor according to Grabow et al., 1995, p.23) and cultural facilities, attractiveness, image (second metafactor).

2.2. Quality of life as a key concept

If regions and the companies within fail to attract highly skilled, economic growth will be threatened and the lack of highly skilled workers will eventually lead to a welfare problem. But in how far is this linked to the quality of life concept? The quality of life concept has been established in the 1960s in the USA and also gained relevance in the political discourse in Germany only a few years later. The Social Democratic Party of Germany for example used the concept as a leading topic in their 1972 election campaign. Heinz-Herbert Noll (1999), current Director of the Social Indicators Department, Centre for Survey Research and Methodology (ZUMA) in Germany, described the link between welfare and quality of life:

“Prosperity – or as well standard of living – in most cases subsumes the material dimension of welfare, the availability of income and assets as well as the possession and consumption of goods and services. [...] Quality of life instead is a multidimensional concept, which includes material as well as immaterial, objective and subjective, individual and common welfare components at the same time, and emphasizes the “better” compared to the “more”.⁶ (Noll, 1999, p. 3)

Within the empirical welfare research two main approaches of analyzing quality of life established since 1960: the Scandinavian “level of living - approach” and the American “quality of life – approach”. The American approach emphasizes the subjective perception of quality of life and derives from the social psychology. The operationalization is mainly based on subjective indicators which determine the individual well-being such as satisfaction and personal fortune. The Scandinavian “level of living – approach” in contrast emphasizes the resources available to the individual, these are for example income and assets but also education for example. General living conditions such as the environment or the labor market are seen as areas of social action which determine the value of the individual resources. The Scandinavian measurement is therefore based on objective indicators and can be seen as the more economic one (see Noll, 1999, p. 8).

A popular representative of the American quality of life approach is the American urban study theorist Richard Florida. In his publication „The Rise of the Creative Class“ (2002), he introduces the concepts of the creative class, which „can best be defined as those workers whose productive output depends on thinking rather than doing.“ (Stolarick, 2005, p. 74) The creative class (in Florida’s research seen as the human capital especially for the innovative high-tech industry) clusters at certain locations based on their attractiveness. According to Stolarick (2005) for this approach the attractiveness depends on three „soft factors”: technology, talent and tolerance. For the measurement of each factor several indices

⁶ Translated by the author: „Unter Wohlstand – oder auch Lebensstandard – werden zumeist die materiellen Dimensionen der Wohlfahrt, die Verfügung von Einkommen und Vermögen sowie der Besitz und Konsum von Gütern und Dienstleistungen, subsumiert. [...] Lebensqualität ist demgegenüber ein multidimensionales Konzept, das sowohl materielle wie auch immaterielle, objektive und subjektive, individuelle und kollektive Wohlfahrtskomponenten gleichzeitig umfaßt und das “besser” gegenüber dem “mehr” betont.“

have been established. For example the melting pot index and the gay index as indicators of diversity and thus tolerance and the bohemian index as an indicator of “a region’s high-technology base and its overall population and job growth.” (Stolarick, 2005, p. 83) Summarized, the outcome of Florida’s approach is that the success of a region depends on the interaction of the three factors technology, talent and tolerance: „A region that offers a balance of all 3 of the T’s of economic development is one that will prosper.“ (Stolarick, 2005, p. 90) This approach therefore could be a theoretical base for the measurement of the developing attractiveness of Münster in order to attract the highly skilled.

Yet, it has some weaknesses because it is strongly tailored to the American labor market. The melting pot for example is a term strongly linked to the American culture which is historically affected by migration and diversity of culture. People thus are more sensitized for these topics and assumably appreciate tolerance more than people elsewhere in the world. It therefore seems not adequate to measure a German region on this scale since the highly skilled that should be attracted are not American but mostly German instead and might thus value the soft factors elaborated in the American quality of life approach less.

I want therefore fallback on the Scandinavian level of living approach which is, as mentioned above, a rather economic one. Among the German scholars, Busso Grabow, graduated economist of regional science currently working for the German Institute of Urbanistic (Deutsches Institut für Urbanistik, DiFU) set a milestone in 1995 when he published his book “Weiche Standortfaktoren”. Based on the industrial location theory, he examined the location decision of companies and the influence of soft locational factors on this decision. As Grabow et al. (1995, p.67) mentioned, a key characteristic of soft person-related factors is that they depend on the subjective rating of each individual person: „For example the green areas within a city can be counted by numbers, but eventually the opinion about the scope and quality of this green areas is mandatory.”⁷ Since the theory of the soft-person-related factors that Grabow conducted is closer to the subject of examination within this thesis than Florida’s approach, I chose to base the empirical considerations on Grabow’s concept. (Grabow et al., 1995, p. 66) Grabow et al. suggest to compare the results of the evaluation of objective facts with for example the results of equivalent surveys. This would be linking the objectively based Scandinavian approach to the subjectively based American approach. The soft person-related locational factors by Grabow et al. will be the basis for my thesis, however, evaluating them objectively and subjectively is not feasible due to the limited time and space given within this research. Therefor, I will concentrate on evaluating selected factors objectively on the basis of an existing empirical dataset extracted from several statistical reports the city of Münster and the state North Rhine-Westphalia publishes annually. This will lead to an objective evaluation of the given locational factors and therefore rather enables to make assumptions based on the Scandinavian approach.

⁷ Translated by the author: “So lassen sich beispielsweise die in einer Stadt vorhandenen Grünflächen zahlenmäßig ausdrücken; letztendlich sind jedoch die Meinungen über Umfang und Qualität dieser Grünflächen entscheidend.”

2.3. Grabow's theory of soft locational factors

In the past, most of the literature analyzing locational decision focused on the entrepreneurial point of view by analyzing why companies settled down in a particular region. For regional growth, it is very important to be attractive for companies since they foster economic strength. Based on the traditional approach, companies usually refer to so called "hard locational factors" to choose their best location. Accordingly a region is more successful if it can offer those hard locational factors.

Contrary to this traditional perception, the so called "soft locational factors" lately gained more and more influence. In 1995 Grabow et al. conducted a research to measure the importance of those soft locational factors. Grabow picked up the scientific debate on quality of life in 1995 by accounting that so called soft locational factors did gain significance within the last years. However, no empirical evidence has been provided thitherto. Between 1993 and 1995 the German Institute of Urbanistic therefore conducted a survey upon the significance of soft locational factors on location decision of 2000 questioned companies. Since – at least in Germany – there has been no later research covering such a wide area, Grabow's book can be seen as the basis for the debate on quality of life improving locational factors in Germany.

According to Grabow et al. (1995) parameters of location decisions can be divided into three groups: hard, soft company-related and soft person-related locational factors. Because the hard and soft locational factors can be seen as complementary an explicit definition of the one implicates the definition of the other. Although a clear distinction between hard and soft factors is hardly feasible, soft and hard factors combined represent all possible influences on location decision. As defined by Grabow soft locational factors either "a) [...] have a direct impact on company or business activity, but are characteristically difficult to measure, or fact is eclipsed or supplanted by opinion or b) they have little or no direct impact on company or business activity, but they are relevant for the employees or decision-makers." (Grabow et al., 1995, p. 29) Especially part b of the definition is taken in account to link Grabow's finding to the concept of quality of life. This is also mirrored within the distinction between the two types of soft factors:

„Soft enterprise-related factors: they directly affect business or company activity. These include the behaviour of administrative authorities or political decision-makers; soft person-related factors: they include entrepreneurs' personal preferences, in other words subjective appraisal of local living and working conditions. This applies, for example, to the quality of life and leisure, or to educational and cultural resources.“

(Grabow et al., 1995, p. 29)

The survey showed that about 20% of the decision-makers take soft locational factors in account when making a location choice. Most of them include the soft locational factors in their decision when the hard factors appear to be nearly the same for all possible choices. Also, it is possible for soft locational factors to compensate missing quality of hard factors. In 2005, Grabow reflected the findings of his

research 10 years ago with the result that soft locational factors gained even more importance which is due to the ongoing tertiarization, the growing demand on qualified workers and also the increased importance of the work-life-balance (Grabow, 2005, p. 40)..

2.4. Choice of the soft person-related locational factors to be examined

Grabow et al. (1995) carry out a division into nine different soft person-related locational factors: housing and living environment, environmental quality, schools and education, recreational value, attractiveness of the region, attractiveness of the city, high culture, cabaret and tranquility. To gain comprehensive assessment on the development of Münster's attractiveness based on soft person-related locational factors one should examine all the mentioned factors. Due to the limited space within this thesis I had to make an appropriate choice of the factors I will actually investigate. To do so, I analyzed the survey used by Grabow et al. (1995) conducted by the German Institute of Urbanistic (DIFU). The interpretation provides information about the importance and satisfaction of the people questioned. They were (among other things) questioned how important each locational factor is when choosing a concrete location for their company. It can't be abstracted away from the finding that person-related factors on general only influence the location decision by nine percent (Grabow et al., 1995, p.221) but more important is the distinction between each individual factor. To determine the importance and satisfaction each factor could be rated on a scale: 1 (very important/satisfied), 2 (rather important/satisfied), 3 (rather not important/satisfied) and 4 (not important/satisfied at all). Table 1 shows the average rating of importance and satisfaction for soft person-related locational factors.

Table 1: Average rating of importance and satisfaction for soft person-related locational factors

Factor	importance*	Satisfaction
housing and living environment	1,87 (83,4 %)	2,19
environmental quality	2,04 (72,3 %)	2,07
schools and education facilities	2,12 (70,5 %)	1,97
recreational value	2,24 (65,8 %)	2,05
attractiveness of the region	2,33 (56,7 %)	2,04
attractiveness of the city	2,48 (48,1 %)	2,04
high culture	2,70 (38,7 %)	2,11
Tranquility	2,71 (38,2 %)	2,12
Cabaret	2,74 (36,6 %)	2,15

Source: Compiled by the author after Grabow et al. (1995)

Notes: *bracketed: The percentage of people rating a factor very or rather important

As table 1 shows, the four most important factors are housing, environment, education and recreation with more than 65 % (almost 2/3) of the questioned people rating them very important or rather important. Also the factor with the highest importance (housing) is rated with the lowest satisfaction.

That makes it even more crucial to local authorities in order to attract highly skilled workers. The factor schools and educational affairs show the highest satisfaction instead. Based on the rating of importance and satisfaction it seems like to pick the most important factors with low satisfaction. Following this only three out of nine factors will be considered in my thesis: housing and living environment, recreational value and environmental quality.

3. Empirical considerations

For local authorities it is of high importance not just to foster but also to broaden the amenities of the region in order to attract and oblige the highly skilled. Based on this general finding, I will analyze the development of the chosen soft person-related locational within the region of Münster from the viewpoint of highly skilled workers in the following. Therefore it will be necessary to define which indicators will be used to evaluate the trends that evolved during the last years and where the examined data comes from.

3.1. Operationalization of the chosen soft person-related locational factors

In chapter 2.4., I made a choice of the factors I will evaluate based on their importance and satisfaction as detected by Grabow et al. (1995). These are housing/living environment, environmental quality and recreational value. To value the development of those factors for the case of Münster they now have to be operationalized. Therefore, dimensions describing each factor must be identified and adequate indicators to measure the development of this dimension must be designed. To define adequate dimensions I will make use of an existing survey (“Standortfaktor Lebensqualität: Die subjektive Wahrnehmung Hochqualifizierter in der Region Ingolstadt”) conducted by Judith Jochmann (Jochmann, 2010). Jochmann examined the general influence of several dimensions on the satisfaction of highly skilled within a region in the south of Germany based on a two-stage evaluation conducted in 2009 and 2010. The survey has been conducted for the target group of highly skilled workers and therefore deals with the same target group as this thesis does. Furthermore it is settled within the same country as my thesis deals with (Germany). Therefore transferability of the outcome of Jochmann’s research on my thesis by all means exists. The advantage of falling back on this survey and use existing data is to base the choice on already scientifically discussed dimensions and therefore includes the know-how of other scientists. Using other methods (e.g. mind-mapping) would in contrast only include the knowledge of the author herself.

Judith Jochmann found that thitherto no commonly accepted concept regarding quality of life in conjunction with locational factors has been carried out. But quality of life as a locational factor can be seen as a construct out of factors like housing, recreational value, educational facilities (Jochmann, 2010). Jochmann thus falls back on the soft locational factors Grabow introduced in 1995. The superior aim of Jochmann’s empirical research was “[...] to capture the subjective perception and rating of the

local quality of life of the region of Ingolstadt from the viewpoint of the highly skilled.”⁸ (Jochmann, 2010, p. 91) Especially because it explicitly deals with the target group of the highly skilled, Jochmann’s survey is a capable point of contact for the identification of proper dimensions because the “[...] identification of the factors for local quality of life, which - from the highly skilled's point of view - have influence on the overall satisfaction with the quality of life at the location.”⁹ Jochmann (2010, p. 91) circumscribes the factors¹⁰ that are relevant for each constructed locational factor.

To identify the factors, Jochmann uses the importance grid method dividing them into four groups: basic factors, performance factors that are important, performance factors that are unimportant and excitement factors. To fulfill the expectations the highly skilled have considering the site-related quality of life, first of all the basic factors must be ensured to enhance the important performance factors in a further step. Only if both of these factors are on a perceived high level, the excitement factors can make an actual difference between one location and another (Jochmann, 2010, p. 103). For choosing proper dimension, I focus on the basic factors since those are the minimum requirements when highly skilled make location decisions. Basic factors were carved out for all three of soft person-related locational factors I focus my research on: housing, environment and recreation. For those basic dimensions (or factors in terms of Jochmann), indicators will have to be built. Also, it must be checked whether those indicators can be measured with the existing data set.

Some of the dimensions were easy to indicate since the dimension itself described a proper indicator. For example it seems likely to measure the availability of parking space by using data about the actual number of parking lots. Other indicators required an extensive literature review instead. All revealed indicators were then checked on their measurement feasibility. Even though several sources were included to find proper data to measure each indicator, qualified data could not be found for all of them. This circumstance led to the perception that not all basic dimensions could be indicated.

Furthermore, it should be noted that Jochmann uses a different classification of factors. Unlike Grabow et al. she builds a more sophisticated classification of person-related locational factors that could influence the location decision. Additional factors she uses are: shopping and gastronomy, labor market, social settings, range of services offered, public health sector, safety, traffic and mobility. Each of these factors has its own dimension including a variety of further basic and important performance factors. To achieve a preferably wide range of dimension, I chose to expand the locational factors in the table above by adding a few of the additional dimensions carved out by Jochmann. The conditions therefore were, first of all, that they fit with regards to the content and ,secondly, that – like I explained above for the prior dimension – indicators could be build upon them and measured with the existing data set.

⁸ Translated by the author: „[...] die subjektive Wahrnehmung und Beurteilung der standörtlichen Lebensqualität der Region Ingolstadt aus der Perspektive Hochqualifizierter zu erfassen.“

⁹ Translated by the author: „[...] Identifizierung derjenigen Faktoren standörtlicher Lebensqualität, die aus der Sicht der Hochqualifizierten Einfluss auf die Gesamtzufriedenheit mit der Lebensqualität des Standortes haben [...]“

¹⁰ The term “factor” as used by Jochman and within the importance grid is not equatable to the term “factor” used within this thesis but can be seen as what I refer to as a “dimension”.

The result of cutting of dimension due to lack of feasibility in a first step and add some new relevant dimension in the second step led to the following table of dimension, which I will finally base the evaluation of the research question on:

Table 2: Final choice of dimensions to be examined for each locational factor

locational factor	dimension
housing and living environment	attractive offer of living space
	cost-performance ratio
	availability of parking space
recreational value	access to water-based activities
environment	green areas and parks
	cleanness

Source: Compiled by the author

To answer my actual research question “How did the soft person-related locational factors in Münster develop during the last years in order to be attractive for the highly skilled?” it must now be evaluated, how each of the dimensions developed within the recent years. Therefore, indicators showing the development have to be build and examined on their progression. With reference to the considerations about dimension priority prior to this, the basic assumption is that each of the dimensions should have been changed for the better or at least should have stayed the same in order to ensure a positive trend in attracting the highly skilled. In the following, I will go into detail of each dimension regarding the indicators and their measurement as well as the analysis of the outcome.

3.2. Analysis of the soft person-related locational factors

3.2.1. Locational factor: housing and living environment

Housing and living environment has been identified by Grabow et al. as the most important person-related soft locational factor - but also the factor with the lowest satisfaction. Also they account housing as a pull-factor rather than a push-factor. This means that a poor housing situation would not necessarily lead individuals to migrate out of a certain area, but can be of high significance within considerations to relocate and immigrate into another area if the expected housing situation is better than the individual's current (Grabow et al., 1995, p.227ff). The factor itself correlates with other factors like environmental quality and recreational value; in Grabow et al.'s survey for example people tend to be more satisfied with their housing situation in smaller cities and rural areas. Also, people in East-Germany are less satisfied compared to those in West-Germany. Münster as a large city in West of Germany might lie somewhere in between. Since I do not aim to measure the actual satisfaction of Münster's population I will only examine how certain dimension that influence the satisfaction have developed within the last years.

3.2.1.1. Dimension: attractive offer of living space

To measure the evolvement of this dimension, it has to be defined what an “attractive offer of living space” actually is. “Living space” is seen as all habitable surfaces within residential and also non-residential buildings. The “Landesdatenbank NRW” (statistical database for North-Rhine Westphalia) conducts this habitable surface in square meters once a year for each city. Also data about the actual number of apartments is conducted, which can basically also be seen as an indicator for living space. For my research it is, however, more appropriate to take the surface in square meters as a reference for “living space”, since the number of apartments does not say anything about the particular size and possible number of residents. An attractive offer of square meters therefore should be projected to every single citizen of Münster. Even if “attractive” does not always imply that it has to be “more of something” in terms of living space, it can be seen as common sense that a higher amount of square meters per citizen means a better housing situation.

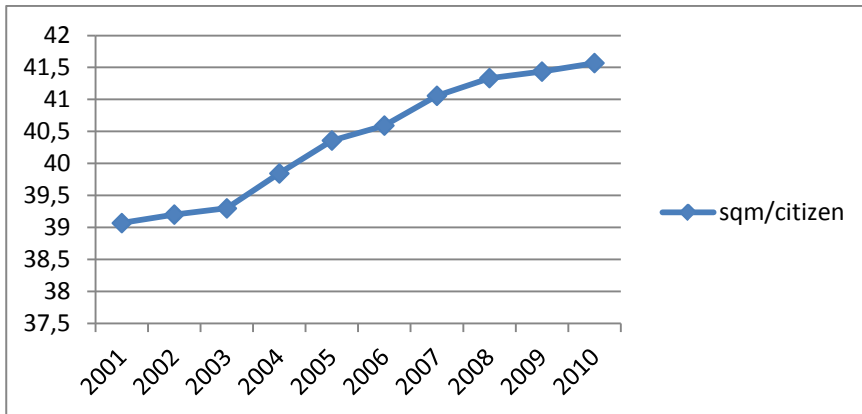
The last concern within this definition now, is what will be seen as a citizen. Official statistics usually just count those people as citizens who have their first residence registered within the target city. This is in so far comprehensible as if one would count also non-first registered residents, the total number of population of a country would be lower than the added up number from each city within a country. However I will stretch out my considerations also to non-first registered residents. This is due to the special characteristic of Münster being a city with a significant percentage of collegiate inhabitants (about 45.000 students) and about a quarter of them do not have a registered first-residence within the city of Münster¹¹ in 2010. This is however not due to the fact that they don’t actually live in the city most time of the year but due to fiscal reasons – because it appeals more worthwhile to keep the first residence at their parents home. Since this circumstance must be taken into account the living space must be put in relation to the number of “wohnberechtigte Bevölkerung” (as the annual statistical report of Münster accumulates citizens from with main and also further residence in Münster). The indicator for the dimension “attractive offer of living space” thus is the number of square meters per citizen (referred to as “wohnberechtigte Bevölkerung”). Table 3 shows the data. Data concerning the living space was extracted from the Landesdatenbank NRW, data about the “wohnberechtigte Bevölkerung” was extracted from annual statistical report of the city of Münster 2010. The number of square meters per citizen has been projected out of both data sets.

Figure 1 shows that between 2001 and 2010 the square meter per citizen increased continuously. Based on the assumption made above, the offer of living space has been enlarged not just in relation to the increased number of citizens but also in actual size (see second column in table 3). For the dimension “attractive offer of living space” therefore generally a positive trend can be derived. Due to the high importance of the factor living, this can be counted as a plus for Münster regarding the attractiveness for highly skilled workers. The indicator still might be questioned since it only takes the quantitative viewpoint in account by asking about the size of living space and not the quality. Besides the fact that

¹¹ Own projection out of data received from annual statistical report of Münster 2010 and <http://www.wn.de/Muenster/2010/03/Hochschule-Muenster-Zweitwohnsitzsteuer-11.000-Studenten-muessen-sich-entscheiden>.

quality is hard to measure because it depends on the subjective opinion of the individual using the space. Dipl.-Ing. in regional planning (University of Dortmund) Andreas Montz showed that the highly skilled workers in Düsseldorf and Neuss he examined showed an above-average demand for large amounts of square meters for their apartments. Therefore, the quantitative size itself can be seen as a very important factor for the attractiveness of living space (see Montz, 2008, p.92ff).

Figure 1



Source: Compiled by the author

Table 3: Living space per citizen

year	living space (in sq.m)	„wohnberechtigte Bevölkerung“ (number of citizens)	sq.m per citizen
2010	11.854.900	285.180	41,56989
2009	11.714.800	282.718	41,43634
2008	11.617.100	281.050	41,33464
2007	11.504.500	280.199	41,05832
2006	11.367.000	280.023	40,59309
2005	11.257.200	278.925	40,35924
2004	11.164.600	280.201	39,84497
2003	11.054.300	281.285	39,29929
2002	10.956.600	279.489	39,20226
2001	10.890.200	278.740	39,06938

Source: Compiled by the author

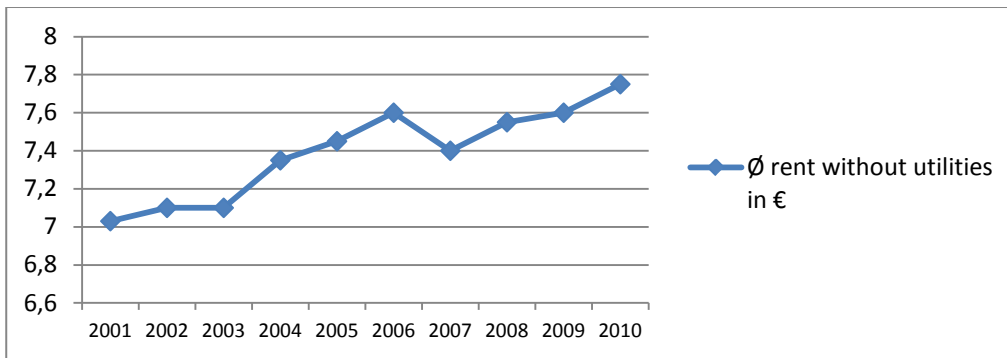
3.2.1.2. Dimension: cost-performance-ratio

By cost-performance-ratio in terms of housing one must see performance as the usage of a square meter of living space and cost as the rent that must be paid for the usage. As we have seen in the former dimension the living space is an important part of the factor housing. If the highly skilled prefer larger apartments it is great if the square meter per citizen rate grows. Still the living space must not just be available but also citizens must be willing and able to pay for it. According to the LEG Housing Market Report NRW 2011 for Münster there is barely a vacancy of living space in the city. Only 2.0% of living space was vacant in 2004 and the percentage has even decreased to 1.7% in 2009 (LEG, 2011, p.34) whereas in Düsseldorf as a reference within the same time the vacancy has increased from 2.7% in 2004 to 3.0% in 2009 and the vacancy in North Rhine-Westphalia even holds 3,6% (LEG, 2011, p.27).

The vacancy rate could be a proper indicator to measure the cost-performance-ratio, one could assume that lower vacancy shows a higher affinity of the population to rent apartments and therefore it could be expected living-space got more affordable. But on the other hand if individuals have to rent because they need a place to live it might not necessarily mean that they are actually willing to pay that much but just that they need to pay a certain amount to find proper housing without actually regarding the cost-performance-ratio. The rent index instead can be seen as a more significant indicator since it mirrors the objectively measurable prices per square meter and doesn't have any subjective influences. The rent index indicates the average rent without utilities per square meter and month. Figure 2 shows the development. It has to be acknowledge that the figures itself can't be found as 100% precise. Since the city itself does not conduct the actual rent this is done by different research institutes. Depending on the exact way of measurement the figures differ. The data used for the compilation in figure 2 is drawn from the research institute BulwienGesa AG and used by the Wirtschaftsförderung Münster GmbH (Wirtschaftsförderung Münster GmbH, 2012). Other institutes are for example the Inwis research institute which conducted a study for the Verband der Wohnungs- und Immobilienwirtschaft (VdW). The actual figures of the average rent differ between both studys. For example the average rent for newly build apartments in 2010 according to Inwis is at 7,85€ per square meter (Kalitschke, 2012) whereas BulwienGesa AG numbers it at 8,5€ per square meter (Wirtschaftsförderung Münster GmbH, 2012). Nevertheless both surveys show the same trend, namely that the average rent significantly increased within the last decade. Translated into the cost-performance-ratio that means for the same performance (rent of a square meter per month) a higher price has to be paid. The cost-performance-ratio therefore deteriorated. This development also takes effect for Münster's position on the North Rhine-Westphalian housing market: "In the statewide comparison Münster therewith for the first time lies on the third place behind the cities of Cologne [...] and Düsseldorf [...],whereas before the city of Bonn was on third place." (Kalitschke, 2012)¹²

¹² Translated by the author: " Im landesweiten Vergleich liegt Münster damit erstmalig hinter Köln [...] und Düsseldorf [...] auf Platz drei, auf dem sich bislang Bonn befunden hatte."

Figure 2



Source: Compiled by the author

3.2.1.3. Dimension: Availability of parking space

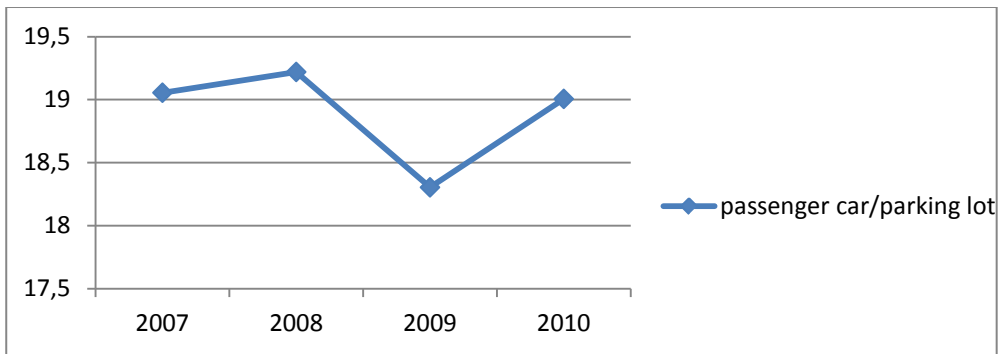
Out of all examined dimensions within this thesis, the dimension “availability of parking space” is the one for which finding an adequate indicator is comparatively “easy”. This is due to the fact that it is commonly comprehensible that the availability of parking space can be measured by the number of public parking lots within the city. Additionally the number must also be put in relation to the number of passenger cars. With regard to the feasibility passenger cars in this case are all passenger cars licensed for the city of Münster (license plate beginning with “MS”). Even if the numbers for both – passenger cars and parking lots – are available for the last decade (and longer ago) only the data since 2007 can be used. This is due to a change in the way passenger cars are counted (until 2006 also cars that have been partially shut down were counted which accounting for about 12% of the number of passenger cars as a whole). Table 4 and figure 3 show the development between 2007 and 2010. The data shows that the available parking space does not show a consistent trend but between 2007 and 2010 the overall availability of parking space has slightly bettered. But even in 2010 still 19 cars would have to share one parking lot in theory. Of course this number doesn’t take in account that there are also passenger cars not licensed within Münster that occupy the parking lots if for example people living in other regions visit Münster for recreational purpose.

Table 4: Passenger car per parking lot

year	number of passenger cars	number of parking lots	passenger car per parking lot
2007	142931	7501	19,05492601
2008	143225	7452	19,21967257
2009	145204	7933	18,30379428
2010	147962	7785	19,00603725

Source: Compiled by the author

Figure 3



Source: Compiled by the author

According to Montz (2008) the highly skilled living in Düsseldorf and Neuss spend most of their spare time within the city they live in instead of visiting other cities to use the recreational facilities (see Montz, 2008, p.96ff). Assumably this applies also for the highly skilled within Münster. The recreational facilities within Münster are more important than those out of town and consequently also the possibility to reach these facilities is important. The availability of parking space plays an important role within this consideration. Nevertheless also in this case the special characteristics of Münster must be taken into account.

According to the citizen's survey from 2006 (Stadt Münster, 2007a, p. 13) the number of roadworthy bicycles doubles the number of citizens. Only 1% of households do not own a bicycle. Münster is therefore not for nothing seen as the main capital for bicyclist. According to ADFC in 2007 36,3% of the population uses the passenger car as main transportation means whereas 37,6% take their bikes. In comparison to 2001 (40,5% using passenger cars and 35,2% using bicycles) the bicycles gained more importance (ADFC, 2010). Bearing this fact in mind one must take a slightly differentiated point of view on the development of parking space and the fact that it hasn't gone worse but rather stayed the same.

3.2.2. Locational factor: recreational value

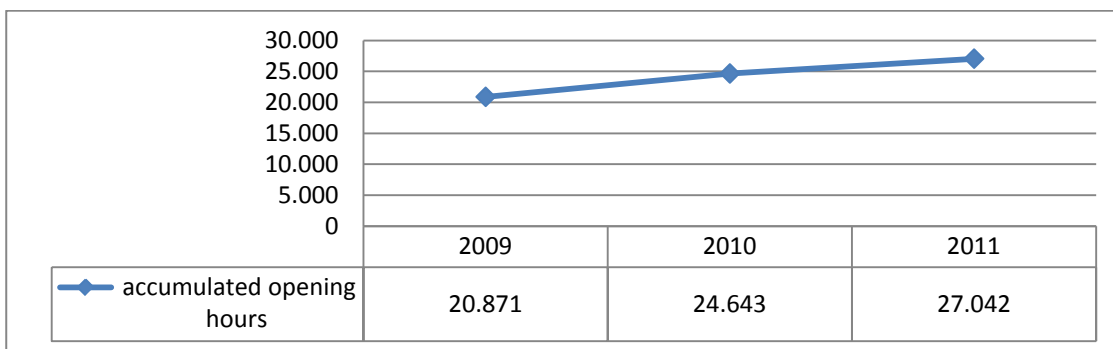
3.2.2.1. Dimension: Access to water based activities

Recreational value according to Grabow et al. (1995) is not the most important soft person-related locational factor still since it correlates with factor housing (see chapter 3.2.1.1.). In Jochmann's survey however also one dimension accounted to this factor has been rated as a basic factor and must therefore be given to ensure the satisfaction of the highly skilled with the region of living. This dimension regards the accessibility to water based activities. To measure this dimension it must be clear what a water based activity actually is. No common definition for this could be found but due to common sense one could account every activity that either is done in, on or near an expanse of water to its definition. Most of these activities are sportive nature like swimming, canoeing, sailing, water polo and so on. Some have a more cultural background like trick fountains or special events held near the

water (in Münster for example the “AaSeerenaden”, a number of concerts played before the coulisse of the Aasee, started for the second time in July 2012). In fact Münster has some expanse of water to offer. First of all the lake “Aasee” which is Münster’s biggest stretch of water located right in the city center. It includes 39.5 ha of water expanse and a capacity of 790.000m³. People use the Aasee to sail, riding the paddleboat or take a walk around the waterside, due to the water quality swimming is not aloud. For this purpose people rather use the Dortmund-Ems-Channel that crosses Münster for several kilometers on its course. Both of these water expanses could be a proper starting points to measure the accessibility of water based activities, however, since the local authorities neither have an influence on the course of the Dortmund-Ems-Channel nor the size or accessibility of the Aasee considering both of them won’t be eligible to measure the dimension regarding the political extent of the research question.

The only place for executing water based activities that is influenced mainly by the local authorities are the urban baths. Local authorities have multiple ways to influence the access to water based activities in public baths. They can either shape them in size or open new public baths to give actually more bathing space or they can change the opening hours of existing baths to better the accessibility. Since expanding or building a new bath is rather a long-term attempt I will take a look on the opening hours of Münster’s public baths because this is a most appropriate way for local authorities to influence the accessibility with the proper input of time and money. Figure 4 shows the development between 2009 and 2011. According to the data derived from the annual financial statement of the local authorities of Münster the eight public baths (two of them outdoor and six indoor) opened about 6200 hours longer in 2011 than in 2009, which is about 2 hours more per bath per day. This can be seen as a very positive trend. Obviously the local authorities saw a potential lying within the access to public baths and took an appropriate step to enhance it. The basic factor “access to water based activities” therefore emerged in a positive way giving the city a good basis to satisfy the needs of the highly skilled in regard of recreational value.

Figure 4



Source: Compiled by the author

3.2.3. Locational factor: environmental quality

3.2.3.1. Dimension: green areas and parks

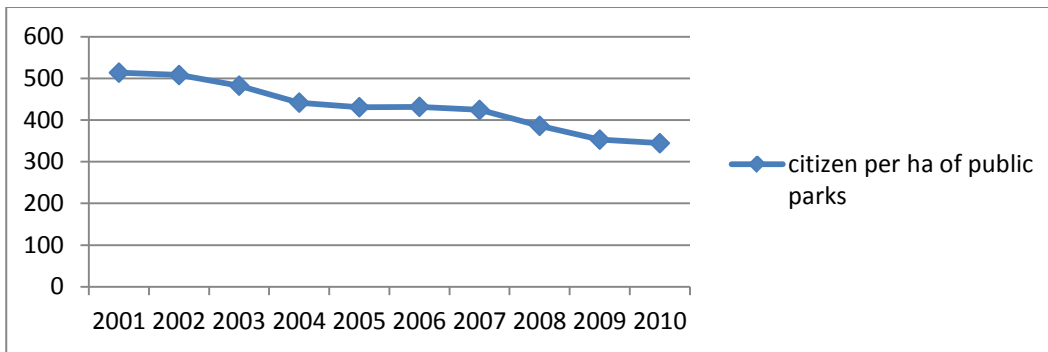
Nearly three-fourths (72,3%) of the questioned people in Grabow et al.'s survey found a liveable environment very or rather important. Whereas most of the dimensions (for example air quality) accounted to this soft-person-related locational factor can only be captured passively by the citizens the existence of public green areas can be actively consumed. Especially in urban surroundings public parks build a key factor for experiencing nature's amenities right outside the door. The German Council of Economic Experts (2010) asserted that: "[...] good environmental conditions are a prerequisite for recreation purposes. Access to natural space as parks, woods or lakes can enhance the variety of potential leisure-time pursuits and is thus one driver of quality of life." (German Council of Economic Experts, 2010, p.90) As already mentioned in the previous chapter Montz (2008) found that people rather stay within their city to use recreational facilities. By investing in public parks local authorities can visibly better the environmental quality and even make it visible to the citizens. The indicator to evaluate the development of this dimension must therefore include the number of citizens itself to show how many expanse of green areas is actually available for each citizen. The expanse can be found within the statistical reports of the Landesdatenbank NRW it does neither include forest areas nor camping facilities. For the number of citizen I will again refer to the number of "wohnberechtigte Bevölkerung" for the same reason as explained earlier (see 3.2.1.1.). Table 5 and figure 5 show the outcome measuring the number of citizens that have to share one hectar of public parks. The development here shows a very positive trend with special positive steps between 2003 and 2004 as well as between 2007 and 2008. In 2010 the number of citizens sharing a hectar decreased to 344 meaning that in theory about 170 fewer people have to share a hectare of green areas compared to 2001.

Table 5: Citizen per ha of public parks

year	public parks in ha	"wohnberechtigte Bevölkerung"	citizen per ha of public parks
2010	828,2	285.180	344,3371166
2009	800,96	282.718	352,9739313
2008	727,97	281.050	386,0736019
2007	660,52	280.199	424,2097136
2006	648,9	280.023	431,5349052
2005	647,64	278.925	430,679081
2004	634,34	280.201	441,7205284
2003	583,11	281.285	482,3875427
2002	550,29	279.489	507,8940195
2001	542,71	278.740	513,6076358

Source: Compiled by the author

Figure 5



Source: Compiled by the author

3.2.3.2. Dimension: cleanness

The measurement of cleanness first of all needs some consideration about what cleanness should actually be measured. One could think of the cleanness of the streets which could probably be measured by the amount of waste recycled by the local authorities. But that would actually only give a hint about how the working performance of the garbage disposal and not how clean the streets actually are. Air pollution instead is a commonly used point of reference to measure a clean environment. Furthermore early researches declare air quality is seen as a disturbance for life quality and thus for the reputation of a region (Bullinger & Hasford, 1992, p. 79). Air quality can be measured using several indicators of pollution like the amount of CO₂, SO₂ or NO_x. For my evaluation however I choose to put the focus on PM₁₀ as an indicator for the cleanness of air (and therefore the environment). The reason for choosing this particular indicator lies within the joint report published by The German council of Economic Experts in 2010 “Monitoring economic performance, quality of life and sustainability” saying that:

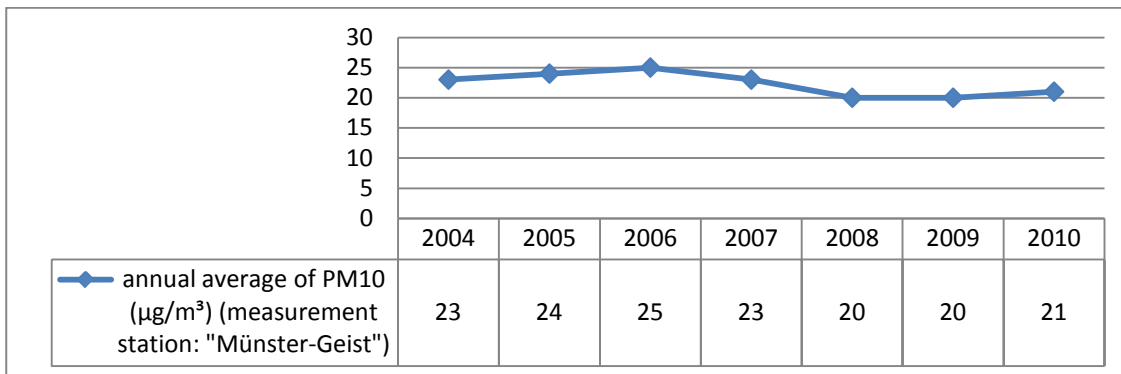
“General environmental conditions indicators of quality of life are rare, with the notable exemption of air quality. Given our focus on output measures and the lack of existing composite indicators, we select the “urban population exposure to air pollution by particulate matter” of diameter less than 10 micrometers (PM₁₀) as the headline indicator. PM₁₀ can be carried deep into the lungs where they can cause inflammation and a worsening of the condition of people with heart and lung diseases.”

(The German Council of Economic Experts, 2010, p.75f)

The Landesamt für Natur, Umwelt und Verbraucherschutz NRW monitors the development of PM₁₀. The indicator shows the annual average of PM₁₀-pollution within the urban neighborhood. It is only taken at measurement stations with no direct influence of emissions from cars or industries. It is therefore of good use to show the average exposition of the citizens. The critical value set by the European Union is 40µg/m³ (Landesamt für Natur, Umwelt und Verbraucherschutz NRW, 2008a). For

the chosen period of observations this results in the measured value illustrated in figure 6. An overall improvement of the pollution by particulate matter can be deduced. Also the measured value is far away from reaching the critical value of $40\mu\text{g}/\text{m}^3$. According to Jochmann (2010) for the highly skilled cleanness is a basic factor for their satisfaction with the region. A less polluted air can be seen as a major improvement for the overall cleanness and therefore a positive development of the attractiveness of the region of Münster for the highly skilled.

Figure 6



Source: Compiled by the author

3.3. Closing soft person-related factor assessment

The prior chapters showed how the single dimension developed within the last decade. Not all of them were measured during this whole period but since for every indicator more than two measurements were available a trend for each dimension could be deduced taken into account the point of view of the highly skilled. The following compilation in table 6 summarizes the findings in order to answer the research question: "How did the soft person-related locational factors in Münster develop during the last years in order to be attractive for the highly skilled?"

Table 6: Trends for each examined dimension

Factor	dimension	dimension trend	factor trend
housing and living environment	attractive offer of living space	+	o
	cost-performance-ratio	-	
	availability of parking space	o	
recreational value	access to water based activities	+	+
environmental quality	green areas and parks	+	+
	cleanness	+	

Source: Compiled by the author

Notes: +: positive trend | o: neither positive nor negative trend | -: negative trend

For the factors recreational value and environmental quality in all examined dimensions the trends appear to be positive. The access to water based activities was positively influenced by the local authorities by enhancing the opening hours of the public baths. In 2011 the citizens were able to enjoy the public baths as a recreational facility for over 6500 hours more compared to 2009. Since the accessibility of water based activities was the only basic factor determined by Jochmann (2010) for the soft person-related locational factor of recreational value it can be assumed that the municipality of Münster took a good step forward to ensure an essential satisfaction for the highly skilled and by this promoting the attractiveness of the region.

An equal conclusion can be found for the factor environmental quality. Both examined dimensions (green areas / parks and cleanness) developed in a positive way. The annual average of PM10 pollution shrunk down to a measured value of $21\mu\text{g}/\text{m}^3$. According to the European Union's guideline this is only half of the critical value of $40\mu\text{g}/\text{m}^3$. Not just the risk for public health coming from high pollution has been lowered also the overall satisfaction with the cleanness of the region - according to the highly skilled questioned by Jochmann (2010) a basic factor - could be risen. Also the possibility for citizens to recreate right outside their door could be broadened by increasing the hectare of green areas by almost 300 within the last decade.

Whereas the factors environment and recreation show a clearly positive development for the factor housing and living environment a more sophisticated view must be taken. The three dimensions in each case show different trends. Whereas the attractiveness of the offered living space improved the cost-performance ratio changed for the worse. Since both are basic factors they have the same influence on the satisfaction of the highly skilled in theory and therefore the negative trend in cost-performance-ratio compensates the positive trend of the offered living space. Additionally the last observed dimension within this factor doesn't show a clear trend since the availability of parking space didn't significantly change. The three dimensions subsumed therefore neither show a positive nor a negative trend meaning that the attractiveness of Münster could not be improved within the factor housing and living environment.

It is not possible to give a general answer to the question how Münster's attractiveness development within the last years. As the prior considerations showed one must evaluate each factor separately. Referring to the importance of each factor as evaluated by Grabow the city of Münster took a big step forward to enhance the attractiveness of the region for the highly skilled in terms of recreational value and environmental quality. Still the most important factor which moreover bears the lowest satisfaction could not be improved significantly. Even if the offer of living space itself increased which is an improvement there is still the high costs of living because the rent also increased. The housing situation did not become better in contrast one could even assume it got worse because the expenses for living rose leading to the situation that people of lesser income can no longer afford to live in the city (center) and therefore the larger offer of living space cannot be taken into account.

4. Conclusion

Quality of life as a key concept for making a region livable can be measured in two ways. Either based on the subjective view of the population which would refer to the American approach or based on the objective evaluation of (given) empirical data which would refer to the Scandinavian approach of quality of life measurement. As the elaboration showed for this thesis the objective evaluation of given data is more feasible to measure the quality of life which is clearly linked to the attractiveness of a region. To describe the attractiveness for Münster Busso Grabow et al.'s considerations on soft locational factors have been taken into account. A weak point here can be seen in the comparatively "old" data set from 1995. But on the one hand the data set of Grabow has been enhanced by the findings of Jochmann which are up-to-date findings from 2010 and furthermore no other research comparable to Grabow's has been conducted for Germany for the last 15 years. The consequential background of the combination of Grabow et al. and Jochmann on which the data later was examined therefore is valid, but one must keep the fact on the back of one's mind that only the objective side of the area attractiveness is evaluated.

For the empirical part a process of filtering the proper indicators and dimension turned out to be a multilayer process. Since the research depended on existing data not all indicators could be measured and thus not all dimensions could be indicated. Furthermore the limited space of this thesis required a reduction of the factors that were examined in general. This thesis therefore only can only give verifiable statements to the development of three of the nine soft person-related locational factors developed by Grabow et al. that actually determine attractiveness. All statements also rely on objective data assessment. To give a more general evaluation a follow-up research including a survey that also takes the subjective perception of the individuals would be the best choice. Also since - according to Jochmann - only the basic factors, which must be ensured to satisfy the highly skilled were evolved within the observations the important performance factors and excitement factors should be further examined.

So in how far were the measured soft person-related locational factors improved during the last years?

For the factor recreational value the local authorities did major improvements in access to water based activities giving the factor an overall positive trend. And also for the environmental quality one can take in account that the surface of green areas and the cleanness have both been enhanced. Thus one can conclude that they recognized the current developments on the labor market and the need for qualified workers and also the importance of enhancing the attractiveness of the city to allure the highly skilled, which is very affirmative.

But it also showed that the dimensions attractive offer of living space, cost-performance-ratio and availability of parking space are the most feasible for describing the factor housing. All three dimensions showed different trends. Whereas living space itself showed a positive trend, cost-performance-ratio got worse and the availability of parking space showed no change. The overall factor trend therefore is

neither positive nor negative. But if the rating concerning the satisfaction and importance of the single factors Grabow elaborated is taken into account, one must conclude that the local authorities were not able to improve the factor housing although it is according to Grabow et al. the soft person-related factor with the lowest satisfaction and the highest importance.

In my personal view the housing situation plays such an important key role that the development of the attractiveness according to the examined soft person-related factors could not be seen as positive until cost-performance-ratio could be lowered. As mentioned earlier regional growth could only be fostered if people support regional companies with their knowledge to drive economic success. This leads to an overall regional growth. If people can't afford to rent an apartment they would rather choose to accept a job offer in another city with a better housing situation no matter how positive recreational value or the environment is, because housing is the most important factor according to Grabow. Thus if the cost-performance-ratio can be lowered a major step forward would be achieved and an overall positive result could be drawn. In the future therefore the local authorities should sharply focus on the improvement of the housing situation especially in terms of cost-performance-ratio.

The LivCom-Award has been awarded to the city of Münster in 2004 thitherto and also within the last years the local authorities took significant investments in the fields, which – by several scholars like Jochmann and Montz – were found to be crucial in attracting the highly skilled. Yet not all soft person-related factors could be significantly bettered. If this challenge is faced and carried out in a positive way within the near future the city is on a proper way not just to become but also to stay attractive for the highly skilled. These investments will eventually foster the economic growth and the welfare within and thus, make it competitive not just within Germany but also within the European Union in order to ensure the availability for highly skilled within the region.

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