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Location factors in corporate location decisions. Is the relevance of soft factors really increasing?

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Abstract

For a long time, it was assumed that hard location factors (e.g. workforce, land) were the primary influence on the location decisions of firms. In the course of the tertiarization of the economy and linked increases in the qualification of employees as well as changes in values and time models, soft location factors (e.g. image, cultural offerings) are expected to gain in importance. Therefore, this paper examines whether the importance of soft location factors has really increased in comparison to traditional, hard location factors. For this purpose, company surveys conducted by the Chamber of Commerce and Industry Mittlerer Niederrhein (Germany) in 2002 and 2017 are analysed. More than 1,000 firms took part in both surveys and evaluated more than 50 location factors in terms of their importance. The results of the study show that the importance of soft location factors related to quality of life (e.g. safety, image) and the city centre (e.g. parking) increased significantly over this time period. In comparison, the importance of the hard location factors stagnated or even decreased (without including the factor information and communication infrastructure). These results provide indications for the local authorities concerning which site conditions are important for retaining firms or attracting new companies in the future.

Keywords: Soft location factors ▪ hard location factors ▪ regional location conditions ▪ firm location ▪ location decision

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Standortfaktoren in unternehmerischen Standortentscheidungen. Nimmt die Bedeutung weicher Standortfaktoren wirklich zu?

Zusammenfassung

Lange Zeit ging man davon aus, dass harte Standortfaktoren (z.B. Arbeitskräfte, Flächen) die Standortentscheidungen von Unternehmen vorrangig beeinflussen. Im Zuge der Tertiarisierung der Wirtschaft und den damit verbundenen gestiegenen Qualifikationen der Beschäftigten sowie der Veränderung der Werte und Zeitmodelle, sollen jedoch weiche Standortfaktoren (z.B. Image, Kulturangebote) zunehmend an Bedeutung gewinnen. Der vorliegende Beitrag geht daher der Frage nach, ob die Relevanz weicher Standortfaktoren tatsächlich im Vergleich zu den traditionellen, harten Standortfaktoren zugenommen hat. Dafür wurden Unternehmensbefragungen der Industrie- und Handelskammer Mittlerer Niederrhein aus den Jahren 2002 und 2017 analysiert. An beiden Befragungen nahmen mehr als 1.000 Unternehmen teil und bewerteten über 50 Standortfaktoren hinsichtlich ihrer Wichtigkeit. Die Ergebnisse der Studie zeigen, dass insbesondere die Bedeutung von weichen Standortfaktoren, die in Zusammenhang mit der Lebensqualität (z.B. Sicherheit, Image) und der Innenstadt (z.B. Verfügbarkeit von Parkplätzen) stehen, in dem Zeitraum signifikant gestiegen sind. Im Vergleich dazu stagniert oder sinkt (ohne Einbeziehung des Faktors Informations- und Kommunikationsinfrastruktur) die Wichtigkeit der betrachteten harten Standortfaktoren. Diese Ergebnisse liefern Hinweise für die regionalen Akteure, welche Standortgegebenheiten wichtig sind, um zukünftig Unternehmen weiterhin an den Standort binden bzw. neue Unternehmen für den Standort gewinnen zu können.

Schlüsselwörter: Weiche Standortfaktoren ▪ harte Standortfaktoren ▪ regionale Standortgegebenheiten ▪ Unternehmensstandort ▪ Standortentscheidung

1 Introduction

There is an interdependent relationship between firms and the regions where they are located. On the one hand, regional location conditions influence firms' turnover, costs and profits. Thus, such factors are highly relevant in the location decisions of a profit-maximizing firm and for its further development. On the other hand, the economic situation of firms is an important determinant of regional economic success and welfare: firms stabilize regional income and employment. This determines regional tax receipts and thus possibilities to improve regional location conditions. With increasing competition between cities and regions (Begg 1999: 795; Rosenfeld 2012: 2), it is therefore important that firms are satisfied with their location and that the expectations of new firms regarding location conditions are met in order to attract new businesses (Kotler/Haider/Rein 1993).

Many different factors are involved in corporate location decisions. These include, for example, labour, land, capital and transport infrastructure. These traditional location factors – hard factors of location – have been studied for a long time. In recent decades, factors relating to quality of life – soft location factors – have attracted increasing interest in theory and practice (Diller 1991; Grabow/Henckel/Hollbach-Grömig 1995; Love/Crompton 1999; Salvesen/Renski 2003; Lambiri/Biagi/Royuela 2007; Cortrie 2009; An/Kang/Lee 2014). These include living amenities, cultural facilities, recreational and leisure facilities, and the image of a region. Theoretical considerations suggest there are several reasons (Grabow/Henckel/Hollbach-Grömig 1995: 91–98) why these soft location factors are increasingly relevant in corporate location decisions. Such reasons include, for example, structural change with a shift towards the service sector, the increasing qualification of employees and the change in working time structures (e.g. more leisure time). The enhanced importance of soft location factors could be an advantage for local authorities, because in contrast to certain hard factors, like labour or cost issues, local policy makers can influence the majority of soft factors (Love/Crompton 1999: 219). Such developments thus give local government and economic development agencies more power to make the location attractive and competitive in a time of increasing location competition.

While these theoretical approaches seem quite plausible, it is much more difficult to empirically test the presumption that the relevance of soft factors has increased over the course of time. This paper aims to shed light on this issue. The aim is thus to empirically examine whether the importance of soft location factors has really increased over time. To analyse this question, data from firm surveys regarding location factors is evaluated. The firm surveys took place in the Middle Lower Rhine Area of Germany. Data sets for the years 2002 and 2017 are used for the analysis, which makes it possible to see changes in the evaluation of the soft location factors. Descriptive and multivariate analyses are undertaken to test whether the data support the assumption of an increase in the importance of soft location factors.

The second section of this paper presents theoretical considerations on location factors, their systematization and their changing role in corporate locational choices. Section 3 describes the data and methods used to test the hypotheses and Section 4 explains the results of the analyses. The results are then evaluated and discussed in more detail in Section 5. The paper ends with a summary and conclusions, which deduce possible strategic recommendations for regional development agencies and planning authorities. In addition, the need for future research is highlighted.

2 Theoretical considerations

Beside firm-internal aspects, economic, social, political and natural framework conditions determine entrepreneurial success. Many of these conditions depend on the firm's location. According to Maier and Tödtling (2006: 20), location conditions are factors which meet two requirements. The first is that the factor is relevant for the firm's costs or sales revenue, whereby nonmonetary costs (e.g. expenditure of time) and long-term effects (e.g. innovativeness) have to be considered as well. Second, the factor must show spatial variation concerning availability, quality and/or price.

Different systematizations of factors determining a corporate location decision can be found in the academic literature. Some researchers distinguish between 'must-have' and 'would-like' factors (Schmenner 1982; Blair/Premus 1987). 'Must-have' factors must be fulfilled for a particular location to be included in the location decision-making process. 'Would-like' factors are interesting for firms, but not decisive. In contrast to these systematizations, Berlemann and Tilgner (2006: 17) differentiate location factors in terms of determinants of production conditions (input), determinants of market conditions (output) and political and legal framework conditions.

Addressing determinants of production conditions means talking about regional factor endowments, i.e. workforce, private and public capital, and real estate. In the context of determinants of market conditions, the magnitude, distance and accessibility of markets internal and external to the region are relevant factors. Furthermore, political and legal framework conditions like political stability, legal stability, systems of property ownership and tax burdens play an important role for firms' location decisions (Berlemann/Tilgner 2006).

Beside these systemizations of location conditions, another classification has gained importance in recent decades: the distinction between hard and soft location factors (Diller 1991; Grabow 1994; Grabow/Henckel/Hollbach-Grömig 1995). Hard and soft location factors are complementary and together form the relevant determinants of location decisions (Grabow 1994: 148). This distinction is based on differences in the possibility of quantifying the location factors and their relevance for a company's activities. Hard factors are quantifiable conditions at a location that directly influence entrepreneurial activity. These traditional location factors are related to workforce, land, capital and prices and have been discussed in location theory for many years. Weber (1922) considered the requirements of industrial locations and distinguished general factors from special factors. General factors are factors which are relevant for all companies (e.g. taxes) while special factors are only relevant for some companies or lines of business (e.g. an inland port) (Meier 2011: 10). According to Weber, location decisions are mostly determined by general factors. These factors are labour costs, raw materials, fuel prices and transportation costs. All of them are among the hard location factors.

Grabow (1994) provides a categorization of hard and soft location factors (Table 1) which has become standard in German literature. Grabow's classification – often used in firm surveys and empirical studies analysing location decisions – is also the basis for the classification used in this paper. In addition to the classic hard location factors already mentioned, Grabow (1994: 151) also views proximity to research establishments and vocational training schools, and administrative flexibility and response time rather as hard factors. In contrast to hard location factors, soft location factors are all aspects that might determine a location decision but can hardly, if at all, be expressed in figures or monetary terms, e.g. image, cityscape and living conditions. Soft location factors can have direct effects or can be of indirect relevance for employees and/or employers. They can be divided into sub-groups. Diller (1991: 29–30) distinguishes firm- and employment-oriented factors as well as personal preferences of employees, while Grabow, Henckel and Hollbach-Grömig (1995: 29) denote the first group as comprising firm-oriented factors and the two other groups as comprising personal-oriented factors. Factors directly affecting firm activities (e.g. business-friendly administration) belong to the firm-oriented factors, while e.g. local living and working conditions are among the personal-oriented factors (Grabow/Henckel/Hollbach-Grömig 1995: 29). The division of hard and soft factors used by Grabow (1994) is not absolutely clear because some hard and soft factors (e.g. administration flexibility, response time, supply of general schools) are rather in a 'transition zone' between these two categories (Grabow 1994: 151).

Table 1 Division of hard and soft factors of location

Hard factors	Soft factors
Availability land/housing	Business-friendly administration
Taxes, dues and subsidies	Supply of general schools
Proximity to suppliers	Cultural offerings
Transportation links	Quality of life
Proximity to customers	Regional image
Availability of qualified workforce	Cityscape
Proximity to research establishments	Recreation and leisure facilities
Vocational training schools	Social climate
Administrative flexibility/ response time	Mentality and work attitude

Source: adapted from Grabow (1994: 151)

The academic literature provides several studies on the importance of different location factors in corporate location decisions (Grabow/Henckel/Hollbach-Grömig 1995; Murray/Dowell/Mayes 1999; Salvesen/Renski 2003; Landua/Wagner-Endres/Wolf 2017). In recent years, there has also been an increasing number of papers and studies that take soft location factors into account (Eickelpasch/Lejpras/Stephan 2007; Clodnițchi 2017) or even focus on them (Grabow 1994; Love/Crompton 1999; Salvesen/Renski 2003; An/Kang/Lee 2014; Clouse 2017). Usually, firm surveys are used to test the relevance of location factors at one point in time. Some studies conclude that hard factors are still of greatest importance for the majority of firms (Love/Crompton 1999; Murphy/Redmond 2008; Hamm/Wenke/Növer et al. 2013; Eickelpasch/Hirte/Stephan 2016). For example, Love and Crompton (1999: 219) find that cost and labour issues are 'must-have' factors for the majority of firms, while quality of life issues are obviously more 'would-like' factors. But if all potential locations identified in the decision-making process provide the same standard of 'must-have' factors (Decker/Crompton 1993), 'would-like' factors become relevant (Grabow 1994: 156; Love/Crompton 1999: 219). Nevertheless, some soft location factors seem to play an important role in the decision-making process of enterprises. A survey in East Germany (Eickelpasch/Hirte/Stephan 2016: 257) examined the importance of eight hard and seven soft location factors for about 6,000 firms. For 72 percent of the firms 'supply of skilled workers' is a very important location factor, and for 64.8 percent 'closeness to customers' is essential. Thus, two hard location factors are very important for most firms, but two soft location factors are also very important for more than half of the firms: support of local financial institutions (56.4 percent) and image of the region (54.6 percent). Other studies support the notion that regional image is an

important location factor for many firms (Grabow/Henckel/Hollbach-Grömig 1995: 224; Hamm/Wenke/Növer et al. 2013: 17; Clouse 2017: 127; Landua/Wagner-Endres/Wolf 2017: 12). The image of a city can be defined generally as 'the sum of beliefs, ideas, and impressions that a person has of a destination' (Crompton 1979: 18) and thus reflects an overall impression of a location (Kotler/Haider/Rein 1993: 141; Kotler/Gertner 2002: 251). This impression can have a considerable influence on firms in their location decisions. This is especially the case in the phase of pre-selection of locations, as here ideas and images of cities and regions are especially relevant (Grabow/Henckel/Hollbach-Grömig 1995: 32). For example, regions or cities with a negative image in the entrepreneurs' mind may not even be included in location decisions (Meester 2004: 4). Delgado-García, de Quevedo-Puente and Blanco-Mazagatos (2018: 1105) confirm this assumption in their study on the influence of city image on city performance. Their results show that city image has a positive effect on the establishment of new firms and can reduce the unemployment rates. The importance of this soft location factor should therefore not be underestimated.

Grabow, Henckel and Hollbach-Grömig (1995: 91–98) give some reasons for the general increase in the relevance of soft location factors over time. In recent decades, structural change has favoured the tertiary sector. For firms from this sector, traditional hard factors like raw materials or land are less relevant than many of the soft factors. Moreover, the growing importance of technology in the production process makes technical innovations necessary for firms to stay competitive. Location factors like a regional innovative climate and innovation clusters have become more interesting for firms. Finally, growing prosperity, improved qualification of the workforce, changes in the working time structures (e.g. more leisure time combined with more flexible working hours), increasing female labour force participation and the growing importance of family life have led to a change of values. It thus follows that leisure, cultural and educational offerings as well as residential quality have gained importance for company workforces and employers.

Other trends favouring the increasing importance of soft location factors are the development toward a knowledge economy, the growing shortage of skilled workers and the associated 'war for talents' (Lahner 2020: 451, 456, 463). Due to the change to a knowledge society, employees' knowledge and qualifications have become decisive factors for economic success (Farhauer/Kröll 2014: 230). In order to remain innovative and competitive in these fast-moving times, highly skilled and creative employees are essential for many companies. The existing literature on the location requirements of innovative and knowledge-intensive companies shows that proximity to related firms and institutions as well as to universities and research institutions is particularly important, as are good information and communications infrastructure, good soft location conditions and highly qualified personnel (e.g. Döring/Aigner 2010; Kiese 2013; Byrski/Fischer/Hamm 2019). Florida (2002) refers to highly qualified, creative employees as the 'creative class'. People in the 'creative class', he suggests, 'prefer places that are diverse, tolerant and open to new ideas' (Florida 2002: 223, 249). They are more likely to choose a location based on its attractiveness as a place to live rather than based on its employment opportunities. This also supports the theory that with the increasing development towards a knowledge society, the importance of soft location factors is increasing (Lahner 2020: 463). Demographic change and the associated competition for skilled workers are likely to reinforce this trend, as skilled workers gain more decision-making power in their job searches.

It therefore seems quite plausible that soft location factors are becoming more relevant in corporate location decisions. From the viewpoint of cities and regions this shift in relevance could open up an opportunity. With increasing competition between cities and regions for firms and qualified employees, soft location factors – especially quality of life factors – provide an opportunity to differentiate a location from others and make it more attractive and competitive (Love/Crompton 1999: 219). Furthermore, soft factors are mainly in the local governments' sphere of influence (Grabow/Henckel/Hollbach-Grömig 1995: 355). Local authorities are able to influence these factors, whereas hard factors like labour and cost issues are often difficult for them to influence (Love/Crompton 1999: 219). Thus if soft factors become more important, cities and regions have more ways to influence the location's attractiveness. The question of whether the importance of soft location factors has increased over time is therefore not only of interest from a scientific point of view, but also for political decision-makers aiming to improve the location conditions in their region or city. However, although a number of studies have dealt with the role of soft location factors (e.g. Love/Crompton 1999; Salvesen/Renski 2003; An/Kang/Lee 2014), the change in importance of soft location factors over time has not yet been analysed for a region. This paper wants to address this research gap. Building on the literature research, this paper tests the following hypotheses:

Hypothesis 1: 'Soft factors of location have become more important for the majority of firms over the course of time.'

Hypothesis 2: 'Hard factors of location have become less important for the majority of firms over the course of time.'

Figure 1 Economic sectors of firms

3 Data and methods

3.1 Data

For many years, the Niederrhein Institute for Regional and Structural Research (NIERS) has been doing survey-based research of firms on behalf of the Chamber of Industry and Commerce Mittlerer Niederrhein in the fields of regional structural change and regional location conditions (e.g. Hamm/Trappmann 2018). The aim of these surveys is to thoroughly analyse the location conditions of the Middle Lower Rhine Area – a German region located in the western part of the federal state of North Rhine-Westphalia between the River Rhine and the Dutch-German border.[1]

In these surveys, firms[2] are asked to evaluate the relevance and the specific quality of about 50 different location factors – all related to the theoretical considerations of the last section – on a four-point Likert scale. The surveys considered here took place in 2002 and 2017. They therefore offer the opportunity to consider how evaluations of location factors have changed over a period of 15 years. Both surveys addressed a largely identical group of around 6,000 companies that were members of the local chamber of industry and commerce. In detail, 1,024 firms participated in the survey in 2002 and 1,177 in 2017.

The distribution of firms by economic sectors is shown in Figure 1. Wholesale and retail trade firms were most represented in these surveys in terms of the pure numbers of companies surveyed; especially in the recent survey of 2017, these firms were particularly well represented (47.5 percent). By contrast, the share of industrial firms that took part in the survey was relatively low (nearly 20 percent). In 2002, all three economic sectors were represented by about one third. Most respondents were small firms with less than 50 employees. Compared to the companies listed in the commercial register in the Middle Lower Rhine region in 2002 (20,037 companies: 15.4 percent industry; 37.8 percent trade, 46.8 percent service) and 2017 (23,492 companies: 12.4 percent industry, 32.5 percent trade, 55.1 percent service), industrial companies tend to be disproportionately represented and service companies are underrepresented in both surveys.[3] Separate calculations for the three economic sectors were used to test whether this bias affects the results. Nevertheless, these surveys provide a suitable database that was used to analyse the relevance of different location factors at two points in time (2002 and 2017).

45 different location factors were included in both surveys and were taken into account for the analyses here. In the first step, the soft location factors were selected based on the discussion in Section 2. In a second step, these soft factors were assigned to four categories (Table 2).

The first category consists of eight quality of life factors. These factors are connected to the personal preferences of potential employees. With the exception of the image and awareness of a location, they usually do not directly affect corporate activities (Grabow/Henckel/Hollbach-Grömig 1995: 29). The factor 'image and awareness of location' is added to this category because it is a relevant criterion for employees' choice of a place of residence (Diller 1991: 9–10; Rosenfeld 2012: 6). Inner-city factors are summarized in the second category. These also have something to do with quality of life, but they especially influence the business activities of inner-city retailers. The third category includes factors regarding governmental services and the fourth category comprises consulting offerings. While the

[1] It consists of the two cities of Mönchengladbach and Krefeld, and the counties Neuss and Viersen.

[2] These firms are members of the Chamber of Industry and Commerce Mittlerer Niederrhein. The sample therefore does not include craft firms or freelancers.

[3] Firms from the first sector (agriculture, forestry, etc.) were not included in these statistics.

Table 2 Division of soft location factors

I. Category – Quality of life (8 factors)	II. Category – Inner-city factors (4 factors)
Image and awareness of location [1 2 3]	Inner-city traffic conditions [5]
Housing [5]	Parking
Cityscape [1 4]	Parking fees
Safety [5]	City marketing
Shopping facilities [5]	
Cultural offerings [1 4 5]	
Recreation and leisure facilities [1 4 5]	
Supply of general schools [1 4 5]	
III. Category – Governmental services (5 factors)	**IV. Category – Consulting offerings (3 factors)**
Duration of permit procedure [3]	Consulting in corporate succession
Smooth cooperation of local authorities [3]	Finance consulting [2 3]
Portfolio maintenance of local enterprises [3]	Funding consulting
Accessibility/Opening hours of local administration [3]	
Administrative response time [3]	

[1]Grabow (1994); [2]Eickelpasch/Lejpras/Stephan (2007); [3]Eickelpasch/Hirte/Stephan (2016); [4]Love/Crompton (1999); [5]Landua/Wagner-Endres/Wolf (2017)

first two categories belong to the person-oriented factors, the other two categories are more likely to belong to the firm-oriented factors. The assignment of the last two categories to the soft location factors is not entirely undisputed in the literature. Sometimes they are assigned to the soft location factors (Eickelpasch/Lejpras/Stephan 2007: 15), sometimes to a transitional area between soft and hard location factors (Grabow 1994: 151).

Beside these four categories of soft location factors, a fifth category – hard factors – is also considered in the following analyses. This allows a comparison of hard and soft factors of location, to see whether these groups developed differently over the course of time and to test hypothesis 2. This fifth category consists of the following location factors[4] (some factors were summarized into groups): road and highway access, properties (four factors), proximity to customers and suppliers, information and communication infrastructure, public fees and taxes (three factors), availability and qualification of workforce, energy costs, water/wastewater taxes and disposal fees.

Though the dataset provides a sufficient basis to answer the research questions of this paper, some critical comments seem to be necessary. First, the data refer only to the Middle Lower Rhine Area in Germany. The importance of soft location factors could be quite different in other regions. This is a general problem of previous studies on the importance of location factors. They analyse location factors at different spatial levels (cities, regions, states, provinces), with different approaches (e.g. surveys, econometric studies) and apply different lists of location factors. This diversity of research designs makes reliable comparisons quite difficult (Blair/Premus 1987: 80). To reduce this problem, further comparable studies for other regions would be helpful to verify and generalize the results presented here. Second, the relevance of location factors depends, e.g., on firms' industry affiliation, size and knowledge intensity, on the type of location decision and on the characteristics of the location at hand (Grabow/Henckel/Hollbach-Grömig 1995: 47; Brouwer/Mariotti/van Ommeren 2004). The present study does not differentiate between these characteristics and it could be a task for future research to analyse location conditions in more detail, e.g. according to corporate characteristics. Third, it must be stated that the survey did not include firms that had just relocated or were willing to relocate in the near future. Instead, the survey targeted the regional stock of companies. So, it cannot be excluded that a more intensive analysis of 'relocating' firms would lead to different results. Another limitation of the study at hand is the use of a convenience sample. The Chamber of Industry and Commerce has little influence on firms' participation in the survey. This could lead to sample distortions compared to the true structure of the portfolio of regional firms in the Middle Lower Rhine region.

3.2 Methods of Analysis

In the previous section, the individual location factors were categorized into homogenous subgroups based on literature research. The internal consistency of this categorization was checked with the help of a factor analysis and Cronbach's alpha. Factor analysis is a method for identifying the relationships in a large set of variables. It identifies groups of variables that correlate strongly with each other and separates them from other groups of variables (Backhaus/Erichson/Plinke et al. 2016: 386). Cronbach's alpha measures the internal consistency and reliability of the selected groups (Döring/Bortz 2016: 468). The results of these analyses are presented in Table 3.

The factor analysis confirms the classification and the values of Cronbach's alpha make it obvious that the chosen

[4] Only the clearly hard location factors were considered here. Factors relating to universities, research institutions and continuing education were excluded.

Table 3 Results of factor analysis and Cronbach's alpha

	2002			2017		
	Factor Loading	**Cronbach's Alpha**	**Alpha if Item Deleted**	**Factor Loading**	**Cronbach's Alpha**	**Alpha if Item Deleted**
I. Category – Quality of life[a]		0,853			0,890	
Image and awareness of location	0,491		0,860	0,586		0,892
Housing	0,511		0,854	0,570		0,893
Cityscape	0,825		0,821	0,864		0,864
Safety	0,801		0,824	0,839		0,867
Shopping facilities	0,813		0,822	0,876		0,862
Cultural offerings	0,806		0,822	0,843		0,867
Recreation and leisure facilities	0,804		0,823	0,816		0,870
Supply of general schools	0,551		0,852	0,597		0,891
II. Category – Inner-city factors[b]		0,861			0,846	
Inner-city traffic conditions	0,846		0,821	0,834		0,800
Parking	0,894		0,789	0,883		0,771
Parking fees	0,872		0,804	0,854		0,789
City marketing	0,742		0,871	0,737		0,852
III. Category – Governmental services[c]		0,884			0,885	
Duration of permit procedure	0,812		0,867	0,816		0,868
Smooth cooperation of local authorities	0,879		0,842	0,878		0,843
Portfolio maintenance of local enterprises	0,738		0,884	0,748		0,882
Accessibility/Opening hours of local administration	0,820		0,862	0,824		0,864
Administrative response time	0,896		0,838	0,887		0,843
IV. Category – Consulting offerings[d]		0,858			0,841	
Consulting in corporate succession	0,824		0,886	0,802		0,876
Finance consulting	0,931		0,714	0,912		0,711
Funding consulting	0,893		0,791	0,899		0,738
V. Category – Hard factors[e]		0,815			0,864	
Road and highway access	0,361		0,813	0,464		0,860
Commercial properties	0,360		0,809	0,488		0,858
Availability of commercial space	0,464		0,804	0,573		0,855
Property prices	0,555		0,798	0,650		0,851
Rental prices	0,384		0,811	0,511		0,859
Proximity to customers	0,338		0,815	0,431		0,863
Proximity to suppliers	0,455		0,809	0,508		0,859
Information and communication infrastructure	0,149		0,822	0,300		0,865
Trade tax rate	0,618		0,802	0,617		0,856
Real estate tax	0,674		0,799	0,642		0,855
Public fees	0,676		0,800	0,678		0,853
Availability of workforce	0,481		0,806	0,597		0,854
Qualification of workforce	0,445		0,808	0,593		0,854
Energy costs	0,748		0,795	0,672		0,853
Water/Wastewater taxes	0,746		0,795	0,729		0,850
Disposal fees	0,689		0,800	0,702		0,852

[a]N (2002) = 918; N (2017) = 669; [b]N (2002) = 946; N (2017) = 955; [c]N (2002) = 894; N (2017) = 977; [d]N (2002) = 938; N (2017) = 968; [e]N (2002) = 856; N (2017) = 913

scales are characterized by high reliability. Cronbach's alpha is at least 0.841 in all four categories of soft location factors. Some location factors had a small negative influence on the internal consistency of the scale. This can be seen in the column 'Alpha if Item Deleted' in Table 3 showing how Cronbach's alpha would change if this location factor is removed from the category. The factors 'image and awareness of location', 'housing' and 'supply of general schools' have a slight negative effect on Cronbach's alpha of the first category. However, this negative effect is so small (≤ 0.01) that the factors can remain part of the category. The same applies to 'city marketing' in category two. Only the factor 'consulting in corporate succession' has a stronger negative effect (> 0.01) on the internal consistency of the fourth category. For this reason, this factor is removed from the category and excluded from further analysis. A factor analysis and Cronbach's alpha are also carried out for the hard location factors (V. Category). Cronbach's alpha shows a value of 0.815 for 2002 and 0.864 for 2017. In both cases, factor loading is lowest for the factor 'information and communication infrastructure' and has a slightly negative influence on internal consistency (2002: 0.822; 2017: 0.865). This negative influence is small, too, so that it can be neglected. The factor 'information and communications infrastructure' occupies a special position. It is not one of the traditional hard location factors, but has only emerged in the course of technological progress in recent decades. Due to this special position and the results of the factor analysis and Cronbach's alpha, the category of hard location factors is evaluated both with and without the factor 'information and communications infrastructure'.

The use of indices allows a better overview of the gains and losses in importance of the various categories. Thus, after having carried out the categorization verification, indices for the five categories of location factors were formed. The formation of indices for each category followed a formula used by Hallmann (2010: 154):

$$Index = \frac{(Var1 + Var2 + Var3....) - number\,of\ variables}{(\text{highest possible number of values} - \text{number of variables})} * 100$$

The calculated index values range from 100 (very unimportant) to 0 (very important), the lower the index value, the more important the category of location factors. Afterwards, descriptive and multivariate analysis methods are applied to test the two aforementioned hypotheses.

4 Results

In a first step, we examine how the evaluation of different location factor categories changed between 2002 and 2017. Figure 2 shows the development of the calculated indices for all categories of soft location factors. In addition to the four soft location factor categories, the fifth category of hard factors was also integrated into the diagram. First of all, the results demonstrate that the hard factors (V.)

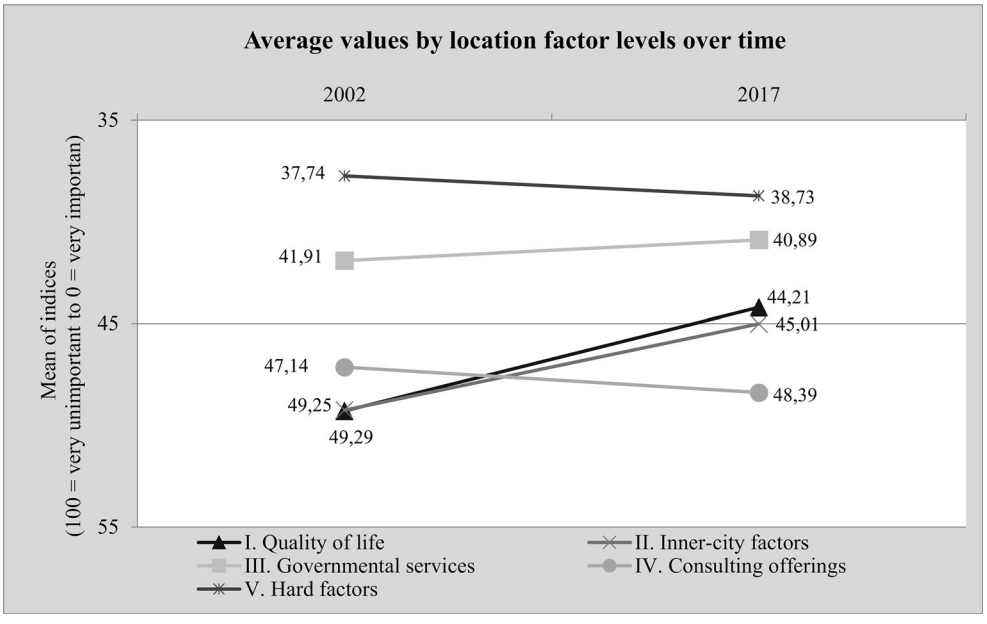

Figure 2 Average values by location factor categories over time

Table 4 Results of t-tests

	Years	Mean	Mean Difference	Significance (2-tailed)
I. Category – Quality of life	2002	49,29	5,07340**	0,000
	2017	44,21		
II. Category – Inner-city factors	2002	49,25	4,24251**	0,001
	2017	45,01		
III. Category – Governmental services	2002	41,91	1,01513	0,382
	2017	40,89		
IV. Category – Consulting offerings	2002	47,14	-1,25418	0,384
	2017	48,39		
V. Category – Hard factors	2002	37,74	-0,98654	0,193
	2017	38,73		
V. Category – Hard factors without I&C infrastructure	2002	37,93	-2,50162**	0,002
	2017	40,44		

***p*-value <1 %, * *p*-value <5 %

slightly lost importance, while most categories of soft factors show an increasing relevance. Going further into the details, it become clear that governmental services (III. Category) are the most important group of soft location factors for the firms which participated in the surveys. In 2002, consulting offerings (IV. Category) were in second place with a slight gap, followed by inner-city factors (II. Category) and quality of life factors (I. Category). The positions of these three categories changed over the years. The quality of life factors (I.) were considered more important than the inner-city factors (II.) and consulting offerings (IV.) in 2017. It is interesting to see that the hard location factors (V. Category) remained the most important category of all. This result confirms the findings of previous studies (Love/Crompton 1999; Murphy/Redmond 2008; Hamm/Wenke/Növer et al. 2013; Eickelpasch/Hirte/Stephan 2016). In general, hard factors remained of higher importance for the majority of firms, but the gap to the importance of soft location factors narrowed. Looking at trends, it is noticeable that the categories quality of life (I) and inner-city factors (II.) strongly increased their relevance over the course of time. A small positive development can be observed for governmental services (III.). Consulting offerings (IV.) were the only category of soft location factors with decreasing importance between 2002 and 2017.

In the next step, t-tests are conducted to test if the changes in the evaluations of the location factor categories observed between 2002 and 2017 are significant. The t-test for independent samples checks whether the mean values of two independent samples are different.[5] The location factor categories are used as dependent variables and the observation years as the independent variable. Table 4 shows the results of the t-tests.

The tests find significant positive changes for quality of life (I.) and the inner-city factors (II.). For the other two categories of soft location factors, no significant changes can be identified. Evaluation of the governmental services (III.) changed slightly but this change is not significant. The same applies for the small negative tendency in the relevance of the consulting offerings (IV.). Two variants of the t-test were carried out for the hard location factors – once for all hard factors (V.) and once without the factor 'information and communication infrastructure'. No significant change in the evaluation of all hard factors (V.) can be found. This result changes if the factor 'information and communication infrastructure' is omitted. The results then show a significant negative tendency between 2002 and 2017, hinting at the decreasing importance of hard location factors. This result is not surprising, since the factor 'information and communication infrastructure' was found to be the factor with the strongest increase in importance over the course of time. In contrast, most traditional hard factors are seen to be less important in comparison to 2002. This result confirms the hypotheses that the importance of soft factors increased in contrast to the relevance of hard factors, which stagnated or even decreased (without the factor 'information and communication infrastructure').

To be able to exclude structural change as a reason for the increasing importance of soft location factors, the t-test was also carried out individually for the three economic sectors (industry, wholesale and retail trade, and services). The results show that (as assumed) the trade and service companies are not responsible for the increase, but rather the industrial companies. For the industrial companies, the first two categories (quality of life (I.) and inner-city (II.)) of soft location factors significantly increased in importance. For

[5] Cf. https://www.methodenberatung.uzh.ch/de/datenanalyse_spss/unterschiede/zentral/ttestunabh.html (28.01.2022).

Table 5 Importance of soft location factors (I. and II. categories)

	2002			2017		
	Very important	Important	Mean	Very important	Important	Mean
I. Category - Quality of life						
Image and awareness of location	24.1 %	36.9 %	2.26	28.8 %	34.5 %	2.18
Housing	6.8 %	31.8 %	2.75	12.9 %	31.6 %	2.64
Cityscape	11.9 %	39.4 %	2.37	27.8 %	36.6 %	2.18
Safety	21.7 %	39.1 %	2.28	34.0 %	35.9 %	2.07
Shopping facilities	17.3 %	34.9 %	2.42	24.9 %	36.2 %	2.26
Cultural offerings	8.8 %	29.3 %	2.75	14.3 %	32.3 %	2.58
Recreation and leisure facilities	8.2 %	32.2 %	2.74	17.4 %	35.9 %	2.47
Supply of general schools	20.6 %	44.7 %	2.26	22.3 %	44.5 %	2.24
II. Category - Inner-city factors						
Inner-city traffic conditions	22.0 %	35.9 %	2.34	25.0 %	37.4 %	2.24
Parking	27.3 %	33.3 %	2.25	32.9 %	35.7 %	2.07
Parking fees	15.3 %	27.9 %	2.63	20.1 %	30.7 %	2.45
City marketing	11.6 %	24.7 %	2.72	16.5 %	27.7 %	2.61

the trading companies, none of the four categories gained significantly in importance, and for the service companies, only the first category became significantly more important. Accordingly, the reason for this trend does not seem to be linked to structural change but to a new way of thinking in industrial companies. The shortage of skilled workers could be one reason why industrial companies place greater value on good location conditions for their employees.

The categories of quality of life (I.) and inner-city factors (II.) clearly comprise soft location factors and show significant changes between 2002 and 2017. The question arises as to whether the increase in importance of these two categories is based only on a few soft location factors or whether all or most soft location factors belonging to these categories are affected by this tendency. On the one hand, answering this question is of scientific interest for better understanding of the interaction of individual location factors. On the other hand, it is also of practical interest for the design of a municipal or regional location policy.

To find out which individual location factors of these two categories increased their relevance for the firms between 2002 and 2017, we take a closer look at their evaluations (Table 5). A look at the mean values shows that in the 2002 survey, 'image and awareness' as well as 'supply of general schools' were the most important quality of life factors (I.). These two factors were followed by 'safety', 'cityscape' and 'shopping facilities'. By 2017, on the other hand, 'safety' had become the most important factor. 'Image and awareness' was in second place, along with 'cityscape'. 'Supply of general schools' and 'shopping facilities' were in places four and five. The other three quality of life factors (I.) were less relevant in 2002 and in 2017. A clear ranking of inner-city factors (II.) is identifiable over the observation years. 'Parking' was most important in both years, followed by 'inner-city traffic conditions', 'parking fees' and 'city marketing'.

The empirical analysis also shows that (nearly) all of these factors gained importance from the point of view of the companies in the Middle Lower Rhine Area. The mean values in Table 5 demonstrate this result, while the percentages of the answers 'important' and 'very important' underline it. About one third of the companies even rated 'safety' and 'parking' as very important. With the exception of the factors 'cultural offerings', 'housing' and 'city marketing', more than half of the companies from the Middle Lower Rhine Area considered all soft location factors in these two categories to be important or very important in 2017.

As in other studies (Grabow/Henckel/Hollbach-Grömig 1995: 224; Eickelpasch/Hirte/Stephan 2016: 257; Landua/Wagner-Endres/Wolf 2017: 12), regional image was considered to be a very important location factor by the majority of firms. We find that in 2002, 36.9 percent of the firms considered 'image and awareness' as important; an additional nearly 25 percent even think it is very important. Even if image was no longer the most important quality of life factor (I.) in 2017, it was still important for the majority of firms (63.3 percent including 28.8. percent very important) and its relevance increased significantly over the analysis period.

Table 6 presents the results of the Mann-Whitney-U tests. This test is used to show which individual location factors became significantly more important over the course of time. Due to the ordinal scaling of the location factors variables, the Mann-Whitney-U test was used here. This test

Table 6 Mann-Whitney-U test

	N		Mean rank	Sum of ranks	U	Z	p
Image and awareness of location	2002	1003	1076.88	1080114.50	523682.500	-1.994	0.046*
	2017	1097	1026.38	1125935.50			
Housing	2002	1002	1076.67	1078821.50	512855.500	-2.421	0.015*
	2017	1087	1015.81	1104183.50			
Cityscape	2002	988	1106.65	1093369.00	415801.000	-7.570	0.000**
	2017	1055	919.52	949862.00			
Safety	2002	985	1081.53	1065311.00	440754.000	-5.551	0.000**
	2017	1036	943.94	977920.00			
Shopping facilities	2002	990	1064.85	1054199.50	461985.500	-4.042	0.000**
	2017	1036	964.43	999151.50			
Cultural offerings	2002	981	881.86	865104.00	315039.000	-3.613	0.000**
	2017	712	798.97	568867.00			
Recreation and leisure facilities	2002	979	897.80	878947.00	290958.000	-5.758	0.000**
	2017	705	765.71	539823.00			
Supply of general schools	2002	982	858.73	843276.50	349362.500	-0.594	0.552
	2017	723	845.21	611088.50			
Inner-city traffic conditions	2002	990	1043.45	1033016.00	483169.000	-2.354	0.019*
	2017	1036	984.88	1020335.00			
Parking	2002	993	1069.38	1061892.00	465342.000	-4.066	0.000**
	2017	1041	968.01	1007703.00			
Parking fees	2002	982	1039.76	1021040.00	440667.000	-4.005	0.000**
	2017	997	940.99	938170.00			
City marketing	2002	964	1018.84	982161.00	458537.000	-2.416	0.016*
	2017	1012	959.60	971115.00			

**p-value <1 %, * p-value <5 %

is the nonparametric equivalent of the t-Test.[6] The results of the Mann-Whitney-U test make it obvious that all factors – except 'supply of general schools' – were significantly more relevant in 2017 than 15 years earlier.[7]

Summarizing the results of the analyses, it can be said that quality of life (I.) and the inner-city categories (II.) became more important over time. Nearly all the factors of these two more closely analysed categories significantly increased in relevance for the surveyed firms over the course of time. The relevance of other soft factors in the transition zone between hard and soft factors, like governmental services (III.) and consulting offerings (IV.), did not change significantly. Despite the latter addition, hypothesis 1 'Soft factors of location have become more important over the course of time' can be confirmed. This especially holds true in relation to the importance of hard factors (V.), which stagnated or were even of decreasing importance (without the factor 'information and communication infrastructure') over the course of time. Hypothesis 2 'Hard factors of location have become less important for the majority of firms over the course of time' can be confirmed if the location factor 'information and communication infrastructure' is disregarded. Only the enormous increase in importance of this one factor otherwise ensures that the importance of this category has not decreased but stagnated.

5 Discussion

The results of this investigation provide additional insights into the relevance of hard and soft location factors from the companies' point of view and require more detailed discussion. It could be shown that the quality of life (I.) and

[6] Cf. https://www.methodenberatung.uzh.ch/de/datenanalyse_spss/unterschiede/zentral/mann.html (28.01.2022).

[7] Again, the Mann-Whitney-U test was performed separately for the three economic sectors to rule out structural change as a reason. Six factors became significantly more important in the assessment of industrial companies. The factor 'image and awareness', for example, became strongly more important only for the industrial companies. No significant differences in the evaluation of this factor between 2002 and 2017 could be identified for the other two economic sectors. A significant increase in importance for all three economic sectors could be identified for the factors 'safety' and 'local recreation and leisure facilities'.

the inner-city categories (II.) of location factors became significantly more important between 2002 and 2017. Therefore, the theoretical assumption that soft location factors have gained importance (Grabow 1994; Grabow/Henckel/Hollbach-Grömig 1995) could be confirmed. It can be supposed that the increase in importance of quality of life factors (I.) is particularly related to the higher levels of qualification of employees. Higher qualifications can result in a higher level of education and income. As a consequence, employees place greater demands on their place of work and residence and on local leisure and cultural facilities (Grabow/Henckel/Hollbach-Grömig 1995: 92). This is reflected in the evaluation of the individual quality of life factors (I.), too. Nearly all factors in this category became significantly more important.

As other papers also stress the importance of 'image and awareness' this location factor deserves special attention. Despite its good rating in 2002, the factor has significantly gained importance. This supports the results of previous studies, which show that image is one of the most relevant soft factors in firms' location decisions (e.g. Eickelpasch/Hirte/Stephan 2016: 257). For real location decisions, it can be assumed that image is probably not consciously included in the decision-making process. Subconsciously, however, it may be a factor in the pre-selection of locations (Grabow/Henckel/Hollbach-Grömig 1995: 32). If the overall impression of a city or region is poor, it may not even be considered as a possible location (Meester 2004: 4).

The increasing importance of the inner-city factors (II.) might be related to current inner-city problems. Online retail has increased rapidly in recent years (Battermann/Neiberger 2018: 164). Many inner-city centres and retailers are struggling to survive. It is therefore not surprising that firms and employees attach greater importance to good accessibility and convenient parking, as these factors are often perceived as disadvantages of stationary retail by consumers (Heinemann 2017: 5). Good city marketing concepts could help to revitalize the inner-city centres.

In contrast to the quality of life factors (I.) and the inner-city factors (II.), the governmental services (III.) and consulting offerings (IV.) do not show significant changes in their importance between 2002 and 2017. Governmental services (III.) were the most important category of soft location factors in 2002 and they still were in 2017. This underlines that good cooperation with and support from the local administration and authorities remained important for the majority of firms.

A further result of this study is that the importance of hard factors stagnated or even decreased, depending on whether the factor 'information and communication infrastructure' was included. Nevertheless, the category of hard factors is still evaluated as being more important than all categories of soft factors. Even nowadays this supports the statements of Grabow (1994: 156) and Love and Crompton (1999: 219) that hard factors are in general more important, and it is only if locations provide a similar quality of hard location factors that soft factors become relevant. The increasing relevance of soft location factors elaborated in the study might be a result of converging location conditions regarding hard location factors among cities and regions. This may be all the more true as only companies in the Middle Lower Rhine Area were surveyed. The districts and cities of this region are relatively close to each other, and the quality of hard location conditions will hardly differ greatly between them.

6 Conclusions

The current paper focuses on the relevance of soft location factors for firms. According to the literature, there are several reasons that these soft location factors have gained relevance in corporate location decisions. Such reasons include the tertiarization of the economy, the higher level of qualification of employees and changed working time structures (e.g. more leisure time) (Grabow/Henckel/Hollbach-Grömig 1995). The paper at hand tested the hypotheses that over the course of time soft location factors have become more important and hard factors have become less important, specifically using surveys of firms in the Middle Lower Rhine Area from two observation years (2002 and 2017) to do so.

The hypothesis that soft location factors have gained importance can be seen as confirmed, at least partially. The results show that among the soft location factors, especially quality of life and inner-city factors gained relevance. The importance of both categories increased significantly from 2002 to 2017. Nearly all individual location factors in these categories also showed significant increases in importance in this time period. In contrast to these results, the two other categories of soft location factors – governmental services and consulting offerings – could not be shown to have increased in relevance. However, it should be mentioned that these two latter categories are not among the 'classical' soft location factors but are rather in a transitional zone between soft and hard factors (Grabow 1994: 151).

As postulated by the second hypothesis of this paper, hard location factors displayed constant or even decreasing importance (without the factor 'information and communication infrastructure') over time. This result also implies that the soft location factors also gained importance in relation to the hard location factors.

The increasing importance of soft location factors is in any case an opportunity for the local decision-makers, who

are able to influence soft location factors like image or recreation and leisure facilities to a relatively great extent (Blair/Premus 1987: 82). Such actors therefore have the chance to directly affect the attractiveness and competitiveness of 'their' location in a situation of increasing competition between cities and regions. Political decision-makers on the local and regional levels should therefore pay special attention to the quality of life and inner-city factors to attract qualified workforce and firms. A positive image in particular appears to be an important requirement for playing a role in the location decision-making process of companies (Grabow/Henckel/Hollbach-Grömig 1995: 32; Meester 2004: 4).

Further research is needed to understand in more detail if and how location requirements depend on company characteristics (e.g. industry branch, size of enterprise, knowledge intensity, type of location decision) and regional attributes (e.g. size of location, population density) (Grabow/Henckel/Hollbach-Grömig 1995: 47; Brouwer/Mariotti/van Ommeren 2004). Analysing similar research questions in other regional contexts would also be helpful to dispel any remaining doubts about the generalizability of the results derived here from a relatively narrow spatial database.

References

An, Y.; Kang, Y.; Lee, S. (2014): A study on the impact of soft location factors in the relocation of service and manufacturing firms. In: International Journal of Urban Sciences 18, 3, 327–339. https://doi.org/10.1080/12265934.2014.893834

Backhaus, K.; Erichson, B.; Plinke, W.; Weiber, R. (2016): Multivariate Analysemethoden. Eine anwendungsorientierte Einführung. Berlin.

Battermann, J.; Neiberger, C. (2018): Kommunale Strategien zur Unterstützung des stationären Einzelhandels. In: Standort – Zeitschrift für Angewandte Geographie 42, 3, 164–170. https://doi.org/10.1007/s00548-018-0543-z

Begg, I. (1999): Cities and Competitiveness. In: Urban Studies 36, 5-6, 795–809. https://doi.org/10.1080/0042098993222

Berlemann, M.; Tilgner, J. (2006): Determinanten der Standortwahl von Unternehmen – ein Literaturüberblick. In: ifo Dresden berichtet 13, 6, 14–24.

Blair, J.P.; Premus, R. (1987): Major Factors in Industrial Location. A Review. In: Economic Development Quarterly 1, 1, 72–85. https://doi.org/10.1177/089124248700100109

Brouwer, A.E.; Mariotti, I.; van Ommeren, J.N. (2004): The firm relocation decision: An empirical investigation. In: The Annals of Regional Science 38, 2, 335–347. https://doi.org/10.1007/s00168-004-0198-5

Byrski, K.; Fischer, C.; Hamm, R. (2019): Spezifische Standortanforderungen innovativer und wissensintensiver Unternehmen – empirische Befunde für den Mittleren Niederrhein. In: Standort – Zeitschrift für Angewandte Geographie 43, 4, 288–293. https://doi.org/10.1007/s00548-019-00621-1

Clodnițchi, R. (2017): Systems competing for mobile factors. Decision making based on hard vs. soft locational factors. In: Management and Marketing 12, 4, 633–651. https://doi.org/10.1515/mmcks-2017-0037

Clouse, C.M. (2017): The Role of Place Image in Business Location Decisions. Dissertation, Cleveland State University.

Cortrie, S. (2009): Weiche Standortfaktoren als Angelegenheit der kommunalen Wirtschaftsförderung. Hamburg.

Crompton, J.L. (1979): An Assessment of the Image of Mexico as a Vacation Destination and the Influence of Geographical Location Upon That Image. In: Journal of Travel Research 17, 4, 18–23. https://doi.org/10.1177/004728757901700404

Decker, J.M.; Crompton, J.L. (1993): Attracting Footloose Companies. In: Journal of Professional Services Marketing 9, 1, 69–94. https://doi.org/10.1300/J090v09n01_07

Delgado-García, J.B.; de Quevedo-Puente, E.; Blanco-Mazagatos, V. (2018): The impact of city reputation on city performance. In: Regional Studies 52, 8, 1098–1110. https://doi.org/10.1080/00343404.2017.1364358

Diller, C. (1991): Weiche Standortfaktoren. Zur Entwicklung eines kommunalen Handlungsfeldes. Das Beispiel Nürnberg. Berlin. = Arbeitshefte des Instituts für Stadt- und Regionalplanung der Technischen Universität Berlin 43.

Döring, N.; Bortz, J. (2016): Forschungsmethoden und Evaluation in den Sozial- und Humanwissenschaften. Berlin. https://doi.org/10.1007/978-3-642-41089-5

Döring, T.; Aigner, B. (2010): Standortwettbewerb, unternehmerische Standortentscheidungen und lokale Wirtschaftsförderung – Zum Stand der theoretischen und empirischen Forschung aus ökonomischer Sicht. In: Korn, T.; van der Beek, G.; Fischer, E.; (eds.): Aktuelle Herausforderungen in der Wirtschaftsförderung. Chancen und Perspektiven in einer sich wandelnden Welt. Lohmar, 13–49.

Eickelpasch, A.; Hirte, G.; Stephan, A. (2016): Firms' Evaluation of Location Quality. Evidence from East Germany. In: Jahrbücher für Nationalökonomie und Statistik 236, 2, 241–273. https://doi.org/10.1515/jbnst-2015-1014

Eickelpasch, A.; Lejpras, A.; Stephan, A. (2007): Hard and Soft Locational Factors, Innovativeness and Firm Performance: An Empirical Test of Porter's Diamond Model at the Micro-Level. Berlin. = DIW Discussion Papers 723.

Farhauer, O.; Kröll, A. (2014): Standorttheorien. Regional- und Stadtökonomik in Theorie und Praxis. Wiesbaden. https://doi.org/10.1007/978-3-658-05681-0

Florida, R. (2002): The rise of the creative class. New York.

Grabow, B. (1994): Weiche Standortfaktoren. In: Dieckmann, J.; König, E.M. (eds.): Kommunale Wirtschaftsförderung. Handbuch für Standortsicherung und -entwicklung in Stadt, Gemeinde und Kreis. Köln, 147–163.

Grabow, B.; Henckel, D.; Hollbach-Grömig, B. (1995): Weiche Standortfaktoren. Stuttgart. = Schriften des Deutschen Instituts für Urbanistik 89.

Hallmann, K. (2010): Zur Funktionsweise von Sportevents. Eine theoretisch-empirische Analyse der Entstehung und Rolle von Images sowie deren Interdependenzen zwischen Events und Destinationen. Dissertation, Deutsche Sporthochschule Köln.

Hamm, R.; Trappmann, C. (2018): Mittlerer Niederrhein. Wirtschaftliche Strukturen und Standortqualität. Krefeld. = IHK Schriftenreihe 162.

Hamm, R.; Wenke, M.; Növer, R.; Werkle, G. (2013): Wirtschaftliche Strukturen und Entwicklungen im IHK-Bezirk Mittlerer Niederrhein. Krefeld. = IHK Schriftenreihe 135.

Heinemann, G. (2017): Die Neuerfindung des stationären Einzelhandels. Kundenzentralität und ultimative Usability für Stadt und Handel der Zukunft. Wiesbaden. https://doi.org/10.1007/978-3-658-15862-0

Kiese, M. (2013): Standortfaktoren in der Wissensökonomie: Theorie, empirische Befunde und Gestaltungsmöglichkeiten für Städte und Regionen. In: Zwicker-Schwarm, D. (ed.): Wirtschaftsflächen der Zukunft. Flächenentwicklung für wissensintensive Unternehmen. Berlin, 13–26. = Difu-Impulse 5/2013.

Kotler, P.; Gertner, D. (2002): Country as brand, product, and beyond: A place marketing and brand management perspective. In: Journal of Brand Management 9, 4, 249–261. https://doi.org/10.1057/palgrave.bm.2540076

Kotler, P.; Haider, D.H.; Rein, I.J. (1993): Marketing places. Attracting investment, industry, and tourism to cities, states, and nations. New York.

Lahner, J. (2020): Regionalökonomie und Standortfaktoren in der Wirtschaftsförderung. In: Stember, J.; Vogelgesang, M.; Pongratz, P.; Fink, A. (eds.): Handbuch Innovative Wirtschaftsförderung. Wiesbaden, 445–465. https://doi.org/10.1007/978-3-658-21404-3_31

Lambiri, D.; Biagi, B.; Royuela, V. (2007): Quality of Life in the Economic and Urban Economic Literature. In: Social Indicators Research 84, 1. https://doi.org/10.1007/s11205-006-9071-5

Landua, D.; Wagner-Endres, S.; Wolf, U. (2017): Kurzstudie zu kommunalen Standortfaktoren. Ergebnisse auf Grundlage der Daten des Difu-Projekts „Koordinierte Unternehmensbefragung“. Berlin.

Love, L.L.; Crompton, J.L. (1999): The Role of Quality of Life in Business (Re)Location Decisions. In: Journal of Business Research 44, 3, 211–222. https://doi.org/10.1016/S0148-2963(97)00202-6

Maier, G.; Tödtling, F. (2006): Regional- und Stadtökonomik I. Standorttheorie und Raumstruktur. Wien.

Meester, W.J. (2004): Locational Preferences of Entrepreneurs. Stated Preferences in The Netherlands and Germany. Heidelberg. https://doi.org/10.1007/978-3-7908-2687-6

Meier, J. (2011): Standortfaktoren im Wandel. Erkenntnisse aus der Forschung zu Standortfaktoren und Standortwahl von Unternehmen. Berlin. = Difu-Impulse 1/2011.

Murphy, E.; Redmond, D. (2008): Location factors of creative knowledge companies in the Dublin region. Amsterdam. = ACRE Report 6.13.

Murray, M.N.; Dowell, P.; Mayes, D.T. (1999): The Location Decision of Automotive Suppliers in Tennessee and the Southeast. Knoxville.

Rosenfeld, M.T.W. (2012): Wie wirkt der verschärfte Standortwettbewerb auf die Stadt- und Regionalentwicklung? Einführung in die Thematik und Erläuterungen zum Aufbau des Sammelbandes. In: Kauffmann, A.; Rosenfeld, M.T.W. (eds.): Städte und Regionen im Standortwettbewerb. Neue Tendenzen, Auswirkungen und Folgerungen für die Politik. Hannover, 2–11. = Forschungs- und Sitzungsberichte der ARL 238.

Salvesen, D.; Renski, H. (2003): The Importance of Quality of Life in the Location Decisions of New Economy Firms. Chapel Hill.

Schmenner, R.W. (1982): Making business location decisions. Englewood Cliffs.

Weber, A. (1922): Über den Standort der Industrien. 1. Teil: Reine Theorie des Standortes. Tübingen.