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Analysing value-adding factors influencing the future viability of shopping centers

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DECLARATION

I hereby declare that this thesis analysing value-adding factors influencing the future viability of shopping centers submitted to the Doctoral School of Economic and Regional Sciences / Hungarian University of Agriculture and Life Sciences as in the fulfilment of the requirements for the award of the degree of Doctor of Philosophy in Business Administration/ is a recorded of original thesis done by me.

Thomas Stoyke **31/05/2024**

Signature and Name Date

DEDICATION

I dedicate this thesis to my wife Franziska, my daughter Elena, my son Maxim and my parents Annemarie and Hans Stoyke.

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I would like to thank Professor Dr. Tibor Tatay, Dr. Fertö Imre, Professor Dr. Zoltán Bujdosó and Professor Dr. Kerekes Sándor, for their constant support and motivating work.

Abstract

The digitization of society and the associated changes have an impact on the economic situation and the link between cities and retail. Stationary retail influences cities and real estate development through the supply of space, routes, frequencies, space productivity and rent levels. Digitization has eliminated the singular tie of the customer to brick-and-mortar shopping and enables direct interactions between consumers and wholesalers or even manufacturers through e-commerce. This has consequences such as vacancies, shorter utilization cycles of retail concepts and a lack of market acceptance in certain regions and cities. Cities and their retail landscapes such as shopping centers will therefore change (Ortegón-Cortázar, 2017). The aim of this dissertation is to analyze factors such as macro-location, micro-location, built center structure and industry mix that influence the success of shopping centers in Germany. One of the most important indicators for the success of a center is the performance rating of the tenants, which is published in the ecostra Shoppingcenter Performance Report. The performance assessment is based on the ratio of rent to sales in various centers and has been collected annually for around 400 German shopping centers since 2011. The data basis for the dissertation includes shopping centers that have achieved a defined minimum number and ratio of tenant ratings in the years 2015 to 2022. The quantitative analysis also covers the useful life, location, transport links and size of the shopping centers, and other features. The results are intended to help support shopping center management decisions and derive implications for action, also taking into account the COVID-19 pandemic.

Keywords: Real Estate, Shopping Mall, Disruptive Technology

List of acronyms and abbreviations

AMA	AMA American Marketing Association
BauNVO	German Land Use Ordinance
DEGI	German Company for Real Estate Funds Ltd.
DFG	DFG German Research Foundation
GfK	Market research institute germany
Gif	Society for Real Estate Research e. V.
GCSC	German Council of Shopping Centers e.V.
ICSC	International Council of Shopping Centers
SCPR	Shopping Center Performance Report

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Chapter One

Introduction

1.1 Research background

Digitalization has brought many changes to society that also have an impact on business. One of the changes is the impact of e-commerce on brick-and-mortar retail, especially on shopping centers (Zhang, 2021). The aim of this dissertation is to analyze the factors that influence the success of shopping centers in Germany in order to enable proactive management for retail agglomerations. One of the most important indicators for the success of a center is the performance rating of the tenants, which is published in the ecostra Shopping Center Performance Report. This rating is based on a comparison of the rent to sales ratio of stores in different centers and has been collected annually for around 400 German shopping centers since 2011. The database presented here examines systemic and non-systemic factors such as the macro location, micro location, building center structure and sector mix to identify the positive or negative development potential of shopping centers. It also analyses the impact of COVID-19 pandemic on centers and identifies implications for action.

1.2 Research problem

A number of studies in Germany, Europe and the USA have investigated the impact and influence of various factors on shopping centers, mostly from the customer's perspective (Chebat, 2010). However, of further scientific as well as practical interest are how tenants evaluate centers and which influencing factors can be analyzed for a good or bad performance

of the center (Calvo-Porral, 2019). In this context, it is important to investigate the impact and influence of various factors on shopping centers, especially from the tenant's perspective and taking into account COVID-19 pandemic and e-commerce (Hagberg, 2016). The dynamics in society, the growing product and process complexity, the constantly shortening product, market, technology and innovation cycles, as well as the high raw material prices and demographic change have an impact on stationary retail and the real estate industry (Calvo-Porral and Lévy-Mangin, 2019). Stationary retail is changing and with it the cities, nationally as well as internationally (Ferreira, 2017). Digitization is removing the singular link between the customer and stationary shopping and, through e-commerce, is enabling direct interaction between consumers and wholesalers, and in some cases even between consumers and manufacturers (Zhang, 2021). This leads to a disruptive process of concentration in stationary retail and to declining acceptance of shopping offers in medium-sized cities as well as vacant shopping centers, so-called "dead malls" (Calvo-Porral and Lévy-Mangin, 2019). Therefore, it is of great interest how a potential downtrading process can be anticipated and counteracted by a data analysis (Parlette, 2011). To answer these questions and evaluate the performance of shopping centers, a tenant survey on the economic development of their businesses in the centers has been conducted in Germany since 2011 by the consulting firm ecostra. The turnover rent ratio, the ratio of tenant turnover to center costs, enables an objective evaluation of retail properties based on performance data and allows the financial performance of a center to be derived directly from the tenant's perspective. The tenant performance rating is the most important indicator for evaluating the success of a center and is published

in the ecostra Shopping Center Performance Report. The new aggregated data basis of this work from macro-location, micro-location, building center structure and industry mix enables a quantitative analysis of the effects of the influences. In addition, the COVID-19 pandemic and its influence are evaluated separately so that management can compare environmental factors with center specifics and derive value-adding actions accordingly

1.3 Research objectives

The aim of this study is to investigate and analyze the influence of non-systemic and systemic factors on the performance evaluation of tenants in shopping centers in order to improve the performance of shopping centers in a value-adding manner. For this purpose, important success factors for shopping centers are summarized based on the existing literature and a database of performance evaluations of centers is generated, which is linked to the systemic and non-systemic influencing factors. The analysis and interpretation of this data will provide information on the future viability and value creation potential of the centers and develop action recommendations for management to optimize operations.

1.4 Research questions

The focus of this study is therefore on the questions of which systemic and non-systemic influencing variables are related to the performance evaluation of shopping centers by tenants and how these factors affect the performance evaluation of the centers in the environment 2015 to 2022.

1. To answer these questions, first the systemic influencing variables

of macro-location and micro-location that are relevant for the performance evaluation of shopping centers by tenants will be investigated. These factors cannot be influenced and include, for example purchasing power, centrality, accessibility or also the attractiveness of a city, summarized by the Prognos Rank. The research question can be derived, to what extent do macro-location and micro-location influencing factors contribute to the success of a shopping center from the tenant's point of view?

2. In addition, the non-systemic influencing variables of the building center structure and the sector mix are analysed, which are relevant for the performance evaluation of shopping centers by tenants. These factors can be influenced and include, for example, area size, number of parking places, tenant structure. The research question can be derived, to what extent does the building structure of the center and the sector mix contributes to the success of a center from the tenant's point of view?

3. Furthermore, the study examines the extent to which the Covid 19 pandemic had a impact on shopping center performance evaluations. This is of particular interest because the pandemic led to several restrictions and changes in retail and shopping center use. The research question can be derived, to what extent does COVID-19 pandemic influence the performance evaluation of the centers from the tenant's point of view?

In order to answer these questions, data from market research institutes

will be combined with information provided by shopping center operators and literature and conduct an empirical-quantitative analysis of the decisive influencing criteria. Using bivariate and multivariate analysis methods, tenant performance is analyzed as well as correlations and influences of shopping centers are interpreted.

1.5 Scope of the study

The real estate industry is an interdisciplinary science that deals with numerous interrelationships with other branches of the economy, such as economic, engineering and legal disciplines. The house of real estate economics (Schulte, 2015) provides a framework for the study of real estate as a scientific field. In this study, commercial real estate (landlord), stationary retail (tenant), and investment (performance evaluation) are considered as key aspects of investigation. The house of real estate economics provides a scientific classification for this work.

Business economics, particularly retail management, forms the fundamental research field for understanding the "factor" of real estate within a retail enterprise. Geography, especially geographic retail research, which has not yet been explicitly considered in the house of real estate economics, provides important contributions to the study of macro-location and micro-locations of retail real estate, both in terms of content and methodology. The findings of economics contribute to mapping and explaining the mechanisms of the retail real estate market.

Urban and regional planning as well as jurisprudence attempt to embed the market-driven developments of the retail real estate market in a legal-administrative framework, which, however, do not constitute an object of

study.

A key component of the quantitative analysis is the tenant survey conducted by the consulting firm ecostra for the German market, which provides an aggregation of the data base for the analysis of systemic and non-systemic influences such as macro-location, micro-location, structural center structure and industry mix over a period from 2015 to 2022. This analysis is supported, among other things, by a literature review from a national and international scientific perspective, comprising over 75 articles.

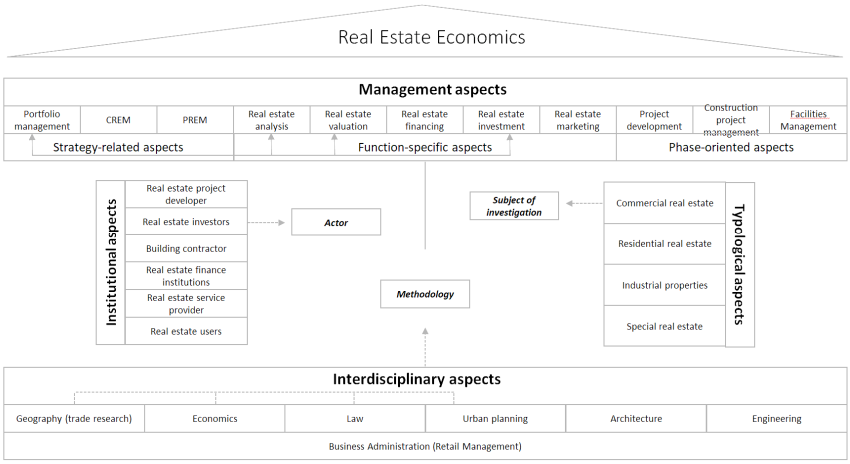


Figure 2.1 Theoretical background in real estate ecomomics (Schulte, 2004)

1.6 Contribution and significance

This study makes an important contribution to both the theoretical and practical issues in the field of retail agglomerations, especially regarding shopping centers.

Theoretical implications:

1- An overarching methodological approach that examines both systemic and non-systemic influences on tenants' performance evaluations of shopping centers.

2- The identification of value-added and non-value-added influencing factors, including macro-location, micro-location, building center structure, and sector mix.

3- To apply accepted mathematical analysis methods to validate or falsify hypotheses.

4- A contribution to national and international research in the field of shopping centers, especially under the influence of COVID-19 pandemic, and the implications.

5- The results can give further insights if the database is transferred to other countries. As an example, the ecostra survey is also conducted in Austria, so there is future research potential here, or even in Europe.

Practical implications:

1- The derivation of practical courses of action for management to enable the value-added operation of shopping centers.

2- A particular focus on the impact of COVID-19 pandemic and the related courses of action.

3- An assessment of the influencing factors that can and cannot be influenced and the derivation of actions to respond to center-specific influences.

4- An increased transparency and traceability of shopping center performance assessment through the analysis of data.

5- The possibility to derive forecasts on future performance assessments of shopping centers based on the results obtained.

1.7 Structure of the thesis

The course of the study relates to the central objective of the study, which is a value add management of shopping centers. A market-oriented analysis is conducted to investigate the impact of the COVID-19 pandemic on the value creation of retail real estate and to derive implications for management decisions for shopping centers. The research approach is multi-faceted and considers both exogenous and endogenous influences of the shopping center as the object of dissertation. In the theoretical part of the thesis, the effects of macro-location, micro-location, building center structure and industry mix on the performance of the center are examined. Finally, implications for action are derived for both science and the practical management of shopping centers. The dissertation is divided into the following chapters:

-	*- Chapter 1*	*Introduction*
-	*- Chapter 2*	*Review of Literature*
-	*- Chapter 3*	*Research Framework and Methodology*
-	*- Chapter 4*	*Data Analysis and Results*
-	*- Chapter 5*	*Discussion of Results and Conclusion*
-	*- Chapter 6*	*New Scientific Results*

Chapter One

Chapter one provides information about the scientific and practical background of the research work as well as the main research questions,

research objectives and the aim of the thesis' research contribution.

Chapter Two

In chapter two, an overview of the relevant international and national literature on the topic of shopping centers is given. The history, development and various definitions of shopping centers are presented and explained. The various scientific approaches to measuring success and success criteria from the customer, tenant and investor perspectives are also presented. On this basis, the scientific framework of the work is explained and clarified.

Chapter Three

Chapter three deals with the research framework and methodology of the thesis. The basis for this is ecostra's industry-recognized tenant survey study on shopping center performance evaluation, which has been conducted since 2011. The results of this survey are compiled and updated with current systemic and non-systemic structural data to create a new database. Research paradigms, research design, sampling, sample size, data collection, and data analysis will be developed as parametric and non-parametric mean comparisons.

Chapter Four

The fourth chapter presents an analysis of the data obtained for the sample centers (N=183) in the empirical time series from 2015 to 2022, paying special attention to the years 2020 to 2022 under the particular influence of

COVID-19 pandemic. There will be quantitative analyses in the systemic and non-systemic areas using SPSS in addition to descriptive analysis. Hypotheses on success factors of shopping centers and their positive impact are validated or falsified.

Chapter Five

Chapter five will structure first the results of the data analysis and the validity and reliability of the proposed model are discussed in terms of the hypotheses raised and the factors that positively influence the center's performance from the tenants' perspective. Then, the theoretical implications and recommended actions are presented. Likewise, the practical implications and recommended actions are discussed. Finally, the limitations of this work are highlighted and further research needs are outlined.

Chapter Six

The sixth chapter summarizes the main findings and results of this work. It also highlights the position of this work in the scientific literature and its contribution.

Chapter Two

Review of Literature

2.1 Shopping center in the real estate industrie

Already in the early history of trade, places where supply and demand met and barter transactions were conducted from person to person established themselves as marketplaces. While only 2% of the world's population lived in cities in the 18th century, this figure was about half in 2007 (Murfeld, 2010). These marketplaces, in the form of downtowns or shopping centers, are established retail facilities in many countries and cultures around the world and, according to the International Council of Shopping Centers (ICSC, 2020), currently have approximately 130,000 shopping centers in operation in 42 countries. Since the mid-1950s, consumer motivation to visit shopping centers has shifted from need-based shopping to seeking additional experiences and socialization (Falk, 2007). As a result, it is no longer just the targeted need-based shopping that is important, but also the holistic consumption experience in the various components of a shopping center (Baker, 1998). Competitive pressure among themselves and from other formats of brick-and-mortar retail such as theme centers and outlet centers slowed the growth and economic success of shopping centers in the early 2000s, first in North America and then in other countries (Meena, 2019). The formerly successful shopping centers failed to maintain their position as an essential part of consumers' shopping behavior within the retail landscape (Li et al., 2018). The life cycle of this formerly very successful stationary business model shows a tendency toward saturation, if not degression, with strong regional variations.

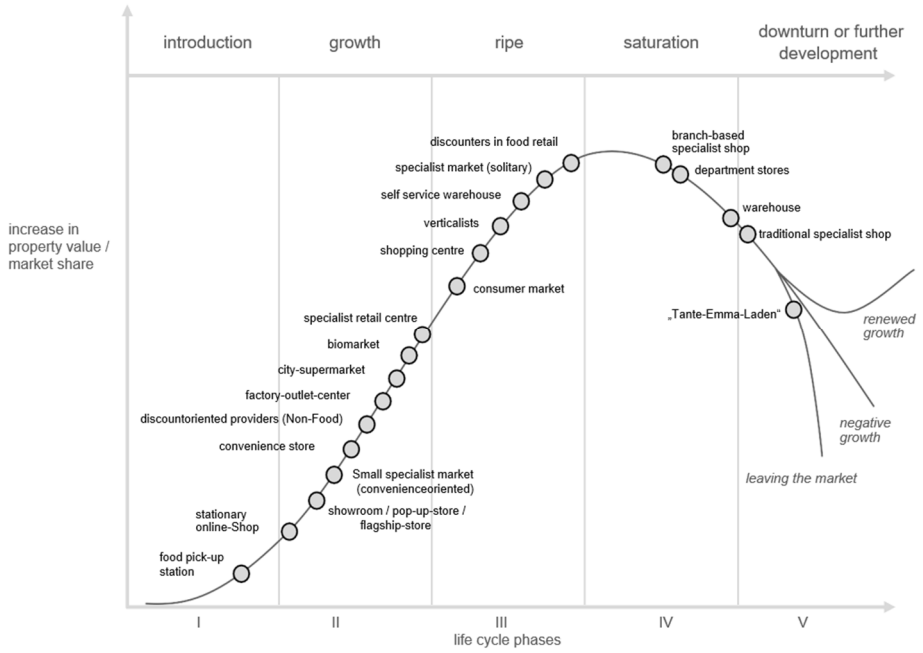


Figure 2.2 Life cycle of stationary units (Falk, 2011)

As a result, the first signs of so-called "dead malls" (Calvo-Porral and Levy-Mangin, 2019) can be observed, especially in the U.S., and this is also becoming apparent in European and German markets (Stoyke, 2020). In addition, vacancy rates, declining customer footfall, and higher savings rates tend to negatively impact the market, affecting both tenants and owners. This is not only due to changing consumer behavior and increasing competition from other retail formats such as outlet centers, but more importantly due to the disruptive development of online shopping, which is considered as an overall accepted purchasing variant, nowadays (Helm et al., 2020). With 24/7 availability, fast delivery, and infinite variety, this new internet option corresponds to the current demand of the consumer and allows customers and producers to interact directly, without the need for brick-and-mortar stores (Calvo-Porral and Levy-Mangin, 2019). COVID-19 pandemic has

accelerated these developments, creating new issues for shopping centers and other traditional stores whose business model is based on generating customer foot traffic (Pantano et al., 2020). In addition, global government closures of non-daily stores have increased the urgency for malls to reinvent themselves to remain relevant and re-energize customers to shop after the Corona pandemic (Pantano et al., 2020).

Given the increasingly complex and challenging retail environment, due to e-commerce as well as the COVID-19 pandemic, and the uncertain future of shopping centers, the question for shopping center managers is how to prevent these negative developments and impacts within the economic macro- and micro-specific environment. To this end, figure 2.3 illustrates the target-relationship structure between the players in the retail real estate market (Frishammer, 2018). On the one hand, there is a goal convergence of retail companies, project developers, investors and operators, which is oriented towards maximizing profits when supply and demand coincide. On the other hand, there is a divergence of goals between urban planning and the for-profit players who determine the location and size of retail properties. These urban planning goals, such as the integration and restriction of product ranges, are pursued in the spirit of sustainable spatial and urban development. However, it should be noted that these planning goals do not necessarily reflect consumer preferences and are merely a guiding principle pursued by urban planners.

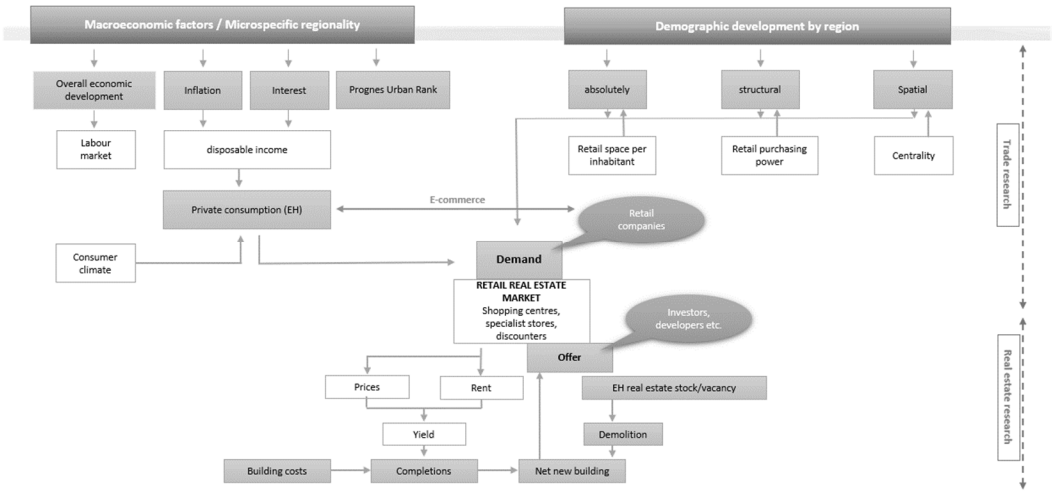


Figure 2.3 Supply and demand factors (Stoyke, 2020)

Given the complex and challenging retail environment and the uncertain future of shopping centers, the question for investors and managers is how to prevent these negative developments and impacts within the economic macro and micro environment. In doing so, it is important to examine the exact influences that arise when supply and demand collide. An analysis of important influencing factors such as centrality, purchasing power, highway accessibility, size of the center or the possibility of multichannel in the form of a digital mall can provide further insights. By examining retail practices and evaluating them, the research of this dissertation can help managers of shopping centers, especially in these challenging times, to derive value-adding actions for the design of their shopping centers with up-to-date insights.

2.2 Definition of shopping center

Shopping centers emerged as conceptually planned marketplaces whose

purpose is to bring together supply and demand. The success of this newer retail format, particularly in the U.S. in the early 20th century, created a new competitor for traditional retail stores and downtowns (Teller 2008), whether regionally, nationally, or internationally (Wong et al. 2012).

The success of shopping centers in the early part of the 20th century was particularly due to new social development trends such as growing mobility of the population, expansion of infrastructure, and improvement of the qualitative and quantitative range of goods. Entrepreneurs and architects such as Jesse Clyde Nichols and Victor Gruen thus built the first closed center concepts at the beginning and middle of the 20th century according to today's conceptual approaches. In the further development, also caused by the concentration process of centers in western countries, various adaptations of the centers followed, such as more specialized market orientation, theme and event orientation, but also the integration of originally irrelevant areas such as services in the field of health or living.

In the recent history of shopping centers, inner-city center projects have gained great popularity among developers, operators and investors since the 1990s, especially in Europe (Besemer, 2009). This is due to efforts to revitalize and strengthen downtowns, supported by increasing investment. These locations are becoming increasingly difficult to find due to both greenfield occupations and lengthy planning law procedures, while city centers offer more identification potential. From an urban planning perspective, shopping centers are intended to help revitalize cities and to assume the function of a "central marketplace with opportunities for interaction" (Besemer, 2009). The basic success factors of shopping centers, nationally as well as internationally, have always been characterized by

similar structure such as, multiple stores offering a range of products and services, coupled with entertainment offerings, located in aisles under a conveniently located, weather-protected building that provides some facilities such as restrooms and parking (Bloch, Ridgway, and Dawson 1994). Further following the International Council of Shopping Centers (ICSC), founded in 1957, the definition:

> *„A group of retail or other commercial establishments that is planned, developed, owned and managed as a single property. On-site parking is provided. The center's size and orientation are generally determined by the market characteristics of the trade area served by the center."*[81]

The Urban Land Institute's definition will be listed further (ULI):

> *„ […] a group of architecturally unified commercial establishments built on a site that is planned, developed, owned, and managed as an operating unit related by its location, size, and type of shops to the trade area that it serves. The unit provides on-site parking in definite relationship to the types and total size of the stores."*

From the aggregate consideration of these definitions, a shopping center thus exhibits the following conceptual characteristics:

- Uniform planning and development as one property or unit in a structurally enclosed complex of land and buildings
- Location on a greenfield site, in city districts or in city centers
- Establishment of parking lots on the property
- The building complex is in the hands of an owner or an owner's company and is managed by a center management
- Artificial agglomeration of cooperating but legally independent

retail and service businesses, integrating a large number of sectors (target full range depending on center size), but only a small number of businesses per sector

These characteristics are summarized in the table below, which provides a further breakdown by type, concept, space size, anchor tenants and their space allocation, travel time and catchment area.

Type	Concept	Size [GLA]	Typical anchor tenants		% share of anchor tenants	Catchment Area	Minimum population in the DCA
Neighborhood-center	Convenience	2.800-11.600	1+	Supermarket	30-50	5	3.000-40.000
Community or district center	Normal commodity, convenience	11.600 37.150	2+	Hypermarket, supermarket, Drugstore	40-60	5-10	40.000-150.000
Regional shopping centers	Normal full range, a lot of fashion, Increased gastronomy	37.150 - 74.300	2+	Department stores, clothing stores, specialty stores	50-70	8-25	From 150.000-300.000
Supraregional shopping centers	Analogous to regional center but broader and deeper offer	Over 74,300	3+	Department stores, specialty stores	50-70	15-35	From 150.000-450.000
Special and Theme Center	High-priced centers with specific Type of goods	7.400-23.250	-	Fashion	n.a:	8-25	n.a.
Lifestyle Center/ Urban Villages	High-priced specialty & retail chains, few small tenants	13.900 - 46.450	0-2	No anchor tenants in the traditional sense	0-50	14-20	n.a.
Retail/Power Center	Product range dominating Magnet businesses, few small tenants	23.200 - 55.750	3+	DIY, Off-Price	70-90	8-15	n.a.
Urban Entertainment Center/Retail Entertainment Center	Leisure and tourism oriented, trade and Services	n.a.	n.a.	Restaurants, Entertainment	n.a:	n.a:	n.a.
Factory outlet center	Price reduced Manufacturer sales	4.650-37.150	n.a.	Manufacturer	n.a.	40-125	n.a.
Passages/Galleries	Inner-city shopping centers with attractive architecture	n.a.	n.a.	n.a.	n.a.	n.a	n.a.

Table 4.1 Classification of shopping centers according to ICSC

2.3 Shopping center stakeholder

The investment in a shopping center by the owner and the resulting contractual relationships with tenants, cities and the public sphere affect many stakeholders. Specifically, many internal and external groups of people who are currently or in the future directly or indirectly affected by the entrepreneurial activities are affected. Due to current developments in the financial market, in particular the corona pandemic and the war between Russia and Ukraine (02/2022) as well as almost double-digit inflation rates, tangible assets are currently favored by investments. In this context, investments in real estate, directly or indirectly, represent a safe investment alternative to monetary assets for both private and institutional investors. Despite the increasing "threat" to brick-and-mortar retail space posed by online retail, interest in retail real estate investments remains strong, especially for core properties and food-oriented retail parks. Therefore, it is important to know the different fields of interest of the players in an increasingly complex market environment. The breakdown of the differentiated objectives of the individual players - cities also have an interest in the positive development and integration of the centers - shows that retail real estate is primarily characterized by a very close intermeshing of users - retail companies - and providers of the infrastructure - project developers, investors, municipalities and operators and ultimately tenants as well as customers, see the following figure.

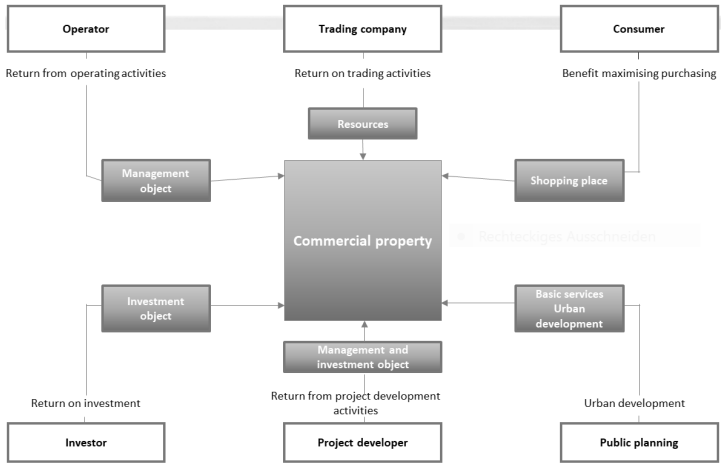


Figure 2.4 Stakeholder of shopping center (Schulte, 2015)

The attractiveness of retail real estate as an asset class is determined in both physical and financial terms by the wishes of the tenants, above all the location and market expectations of the chain retail companies. At the same time, retail companies see their role as satisfying consumer needs, which translates into a dependency of the success of the retail property on the development of consumer desires. There is a mutual dependency between landlord, tenant and customer, as shown in a diagram of the interrelationships.

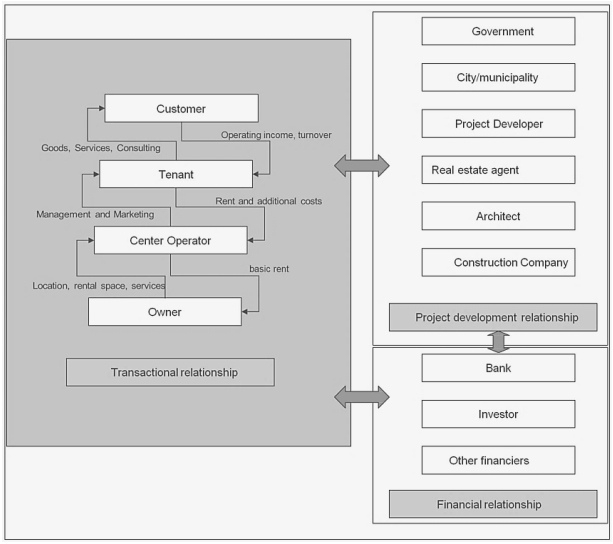


Figure 2.5 The transaction relationship of shopping center (You, 2007)

The disruptive developments already mentioned in this dissertation and the resulting stagnation of sales in the stationary retail sector as well as the continuing growth in sales area of classic shopping centers, centers with a specialist market orientation and large centers, are intensifying competition. The question remains, which influencing factors within this space-intensive and polarized competitive situation make one center concept successful over the other center concept and thus also from an attractive risk-return ratio for investors as a sustainable investment (Moccia, 2012). Despite this importance, there have been hardly any publications worth mentioning from the tenant's point of view in real estate and retail economics research to date - also due to the restrictive information policy of the shopping center industry. It is precisely this research focus that this dissertation addresses. The aim is to investigate the conceptual design of the center as well as the influences of macro- location, micro-location, building structure of the center and industry

mix. Also macroeconomic influences like the corona pandemic and its advantages for centers with a strong sector mix for goods of daily use (groceries and drugstores) will be considered.

2.4 Scientific models for shopping centers

Due to the scientific centrality research, the works of both Reilly 1931 "The Law of Retail Gravitation" for the Anglo-American area, and Christaller 1933 "Die zentralen Orte in Süddeutschland" for the German-speaking area form the first conceptual foundations of geographical retail research (Pütz, Schröder 2011). The concept of centrality of these spatial economic theories emphasized in particular the systemic connection between supply locations and catchment area. Although the concepts presented summarize the goods and services demanded by customers as elements of the tertiary sector of the economy, retail trade plays an important role in the assessment of centrality (El-Adly, 2007). All trade agglomerations like shopping centers and retail stores compete with each other for customers by offering a range of offerings such as stores, services, entertainment, and events, as well as using new sales channels and location marketing (Teller and Elms, 2012). However, most research on mall image assessment has studied only a small number of malls and considered the image dimensionality across consumers. Furthermore, key stakeholders such as tenants are often not the basis of scientific research to evaluate center attractiveness.

Shopping center attractiveness is influenced by many factors, such as location-related, tenant-related, environmental, and shopping situation-related factors (Dębek, 2015; Teller and Alexander, 2014; Teller and Reutterer, 2008; Teller and Elms, 2010). Accessibility and parking are very decisive influences in the dimension of location-related factors. Generally speaking, the attractiveness of a shopping center decreases with distance (accessibility) to the center (Dennis et al., 2002). Retail agglomerations are attractive to consumers because they offer a wider

range of choices (Yavas, 2003) and a higher probability of finding the desired product (Teller et al., 2015).

Scientific research on retail real estate is mainly concerned with shopping centers and prime locations, especially in Anglo-American and European countries. There is also research on shopping centers from the customer's perspective (Chebat, 2010). In addition to these topics, the Journal of Shopping Center Research also covers topics such as supply and demand structure, trends, investments and management (DeLisle, 2005).

Further studies on shopping center image, there were often two approaches, have also to be taken into account: Hereby some researchers focused on nonspatial factors such as store mix, environment, and retail image, others focused on spatial factors such as accessibility, geographic location, or design (Eckertet al., 2015). Shopping center image depends on both spatial and nonspatial factors (McGoldrick and Thompson, 1992). Spatial factors refer to the interpretations individuals have about the mall's spatial environment and location and how they gain access. Non-spatial factors refer to the perceptions consumers have about the brand equity of the mall (Ailawadi and Keller, 2004). To improve a mall's image, both spatial and non-spatial factors should be considered. But as already mentioned, early on it became clear that the the location and distance to the customers are important criteria for the accessibility of the shopping center (Hauser and Koppelman, 1979).

The dimensions of the shopping center presented by Hauser and Koppelman (1979) contain 16 sub-dimensions such as design of the store, readiness of return and service, prestige of the store, variety and quality of goods, which explain the image of the shopping center. Furthermore, it can

be stated that same approaches by Chebat et al. (2010) also cover these dimensions. It seems that the self-related influencing factors complete this approach of dimensions (Gomes, 2017). Therefore, the dimensions of shopping center are a combination of the dimensions introduced by Chebat et al. (2010) and El Hedhli et al. (2013). By synthesizing the findings the proposed shopping mall experience framework provides seven main components, namely:

- material elements,
- spatial elements,
- environmental elements,
- employee factors, and
- consumer factors,
- perception of the shopping center, and
- results of the shopping center.

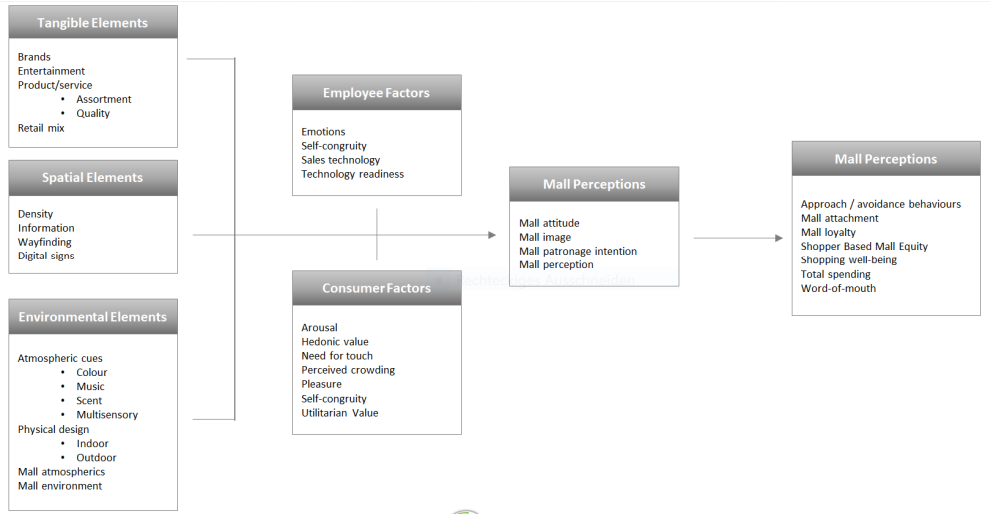


Figure 2.6 Shopping Mall Experience Framework (N. Krey et al., 2022)

The atmosphere of a shopping center can have a major impact on customer behavior and reactions (Pan, 2006). It is considered in the positivism paradigm as a stimulus (S) that influences the internal reactions of the customer (organism) and leads to a behavioral response (R). Atmospheric factors, such as arousal, dominance, and pleasantness, are examined in studies (Faarag, 2010 et al).

A mall's price and advertising are also important in shoppers' decisions. Attributes such as price variation, average prices, and advertising campaigns influence perceptions of price and play an important role in mall behavior and image (Diallo, 2018; El Hedhli, 2013)).

The cross-category assortment of a shopping center refers to customers' perceptions of the breadth and variety of services and products offered. It is a key factor in the formation of a shopping center's image, as it increases the variety of situations in which customers remember the center (Parsons, 2003). One-stop shopping, due to the shortage of time very important, and

a center with a wide range of services is the best option for this (Finn, 1996). Customers' perceptions of the depth of a store's offerings and the controllability of variables such as assortment within a category also influence the retailer's image and create experiences that make consumers reluctant to shop elsewhere (Hauser and Koppelman, 1979, Chebat et al., 2010; Wakefield and Baker, 1998).

In contrast, real estate research with a focus on shopping centers in German-speaking countries has so far been primarily characterized by its practical orientation (Falk and Bays 2009). From the perspective of scientific real estate research, the topic of shopping centers has also dominated the research field of retail real estate to date. Especially the topics of success factors in shopping center management (Bastian 1999, Besemer 2007, Sturm 2006,) are of great relevance in this context.

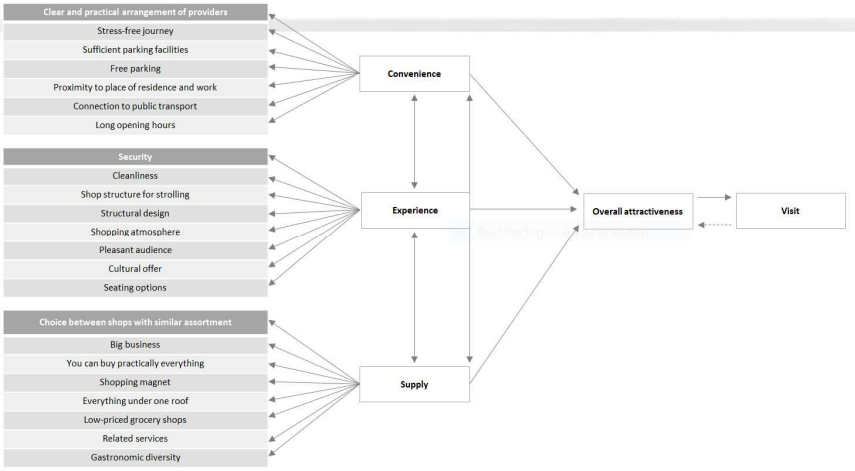


Figure 2.7 Attractiveness factors for shopping centers (Bastian, 1999)

The attractiveness of a shopping center is created by the interaction of various influences, such as convenience, experience and supply. The location plays a decisive role in this by determining the market

environment, the infrastructure and the political-legal framework conditions. In his shopping center handbook (2009), Falk names 19 success factors that are considered relevant: Location and the associated purchasing power potential, consideration of a programmed customer flow, size appropriate to the market and location, sector and tenant mix appropriate to the market and location, strong magnet tenant, active leasing management, competent advice to tenants, service, security, cleanliness, professional center management and permanent market research, market-driven positioning and profiling in the competitive environment, creation of a shopping experience, good accessibility, uniform opening hours, sufficient number of parking spaces with appropriate access, attractive architecture in line with the center concept, adequate vertical and horizontal access to the center, pleasant shopping atmosphere by creating an appropriate environment.

Given the increasingly complex and challenging retail environment and the uncertain future of shopping centers, the question for shopping center managers is how to prevent the developments and impacts, especially using the multi-faceted models and approaches of science. Thus, an assessment of previous research and the current state of the art seems timely and appropriate to advance the future of shopping center retailing. Two important contributions, already mentioned here, to the field have been Jean-Charles (J.-C.) Chebat, who examined different angles, perspectives, and constructs around customers' experiences with shopping centers, and Christoph Teller, who examined the attractiveness of retail agglomerations. Both of these research efforts have resulted in an extensive collection of articles addressing a variety of shopping center elements. In order to synthesize this collection of knowledge into a

resource for future research on retail and shopping centers in particular, it is necessary to identify the commonalities and shortcomings of the most influential articles.

Authors	Journal	TC	Title / Year / Country
Chebat, J.C., Michon R.	JBR	1199	Impact of ambient odors on mall shoppers' emotions, cognition and spending: A test of two (2003) / US & Canada
Michon, R., Chebat, J.C., Turley, L.	JBR	628	Mall atmospherics: The interaction effects of the mall environment on shopping behaviour. (2005) / US & Canada
Turley, L., Chebat, J.C.	JMM	437	Linking retail strategy, atmospheric design and shopping behaviour. (2002) / US & Canada
Teller, C., Reutterer T.	JRCS	366	The evolving concept of retail attractiveness: what makes retail agglomerations attractive when customers shop at them? (2008) / Austria
EL Adly	IJRDM	361	Shopping malls attractiveness: a segmentation approach (2006) / Arab Emirates
Teller, C.	IRRDCR	259	Shopping streets versus shopping mall-determinants of agglomerations format attractiveness from the consumer point of view (2008) / Austria
El Hedhli, K. Chebat, J.C.	JBR	248	Shopping well-being at the mall: Construct, antecedents, and consequences (2013) US & Canada
Sirgy, M. J. Dennis, C. Marsland, T.	JRCR	187	Central place practice: shopping centre attractiveness measures, hinterland boundaries and the UK retail hierarchy attractiveness from the consumer point of view / UK
Cocket, T.	IRRDCR	182	Measuring Image: Shopping Centre Case Studies (2002) / UK
DeLisle, J.R.	JCSR	12	The Evolution of Shopping Center Research: A 12-year Retrospective (2005) / US

Note: TC = total number of citations; JBR = Journal of Business Research; JMM = Journal of Marketing Management; JRCS = Journal of Retailing and Consumer Services; P&M = Psychology & Marketing; JSR = Journal of Service Research; JSM = Journal of Services Marketing; IJRDM = International Journal of Retail & Distribution Management; EB = Environment and Behavior; JFMM = Journal of Fashion Marketing & Management; JCB = Journal of Consumer Behaviour; JMcM = Journal of Macromarketing; JMTP = Journal of Marketing Theory & Practice; JMDC = Journal of Marketing Development & Competitiveness; PMS = Perceptual and Motor Skills. IRRDCR = International Review of Retail, Distribution and Consumer Research; JCSR = Journal of Shopping Center Research

Table 4.2 Summary of most influential article by citation ranking and impact for shopping center success according to Krey 2022

Shopping centers have made significant progress in applying joint management methods. However, several authors, such as Finn and Louviere (1996), Dennis et al. (2002), and Chebat et al. (2010), believe that to strengthen shopping center, managers should improve supply conditions and image by additional influences. Various studies have supported the interest in investigating centers that have implemented and developed a type of management, that facilitates the use of the retail market (Yan, 2009). Some results have focused on increasing their attractiveness and the loyalty of their customers through their image (Chebat et al., 2010), by using space for meeting, playing, relaxation and leisure (Porral and Dopico, 2013).

Further studies have highligted experiences with different sensory, emotional, and SOR-aspects to enhance the appeal of shopping malls (Kim et al., 2015). These aspects are not further elaborated here for the purpose of this dissertation. Further the literature on shopping center attraction factors has focused on the possibility of modeling to foresee demand and visitation intention (El-Adly and Eid, 2016; McGoldrick and Thompson, 1992; Finn and Louviere, 1996; Chebat et al., 2010). These approaches, based on consumers' continuous assessment of the main attributes and factors that make up the attractiveness to visit a mall, have significant impact to the development of future management concepts (Finn and Louviere, 1996), are summarized in the following updated and extended table.

Year	Author	Number of factors	influence factor of shopping mall and mall image
2013	El Hedhli et al.	6	Convenience, functionality, safety, leisure atmospheric, self-identification
2013	Sing & Prasher	5	Environment, access, physical environment, offer management, security
2012	Banerjee	8	Entertainment, access, convenience, physical environment, security, time-saving , architecture, commercial rewards
2012	Ahmad	5	Environment aesthetic, access and comfort, offer variety, entertainment, and service quality
2010	Chebat et al.	5	Access, atmosphere, price / promotion, cross category assortment, within category assortment
2010	Teller & Elms	6	Accessibility, parking, tenant mix, product range and sales personal, atmosphere, orientation and infrastructural facilities
2009	El Hedhli & Chebat	4	Convenience, environment, products quality, services quality
2008	Teller & Reutterer	4	Access, location, visitors, and environment perception
2007	El-Adly	6	Comfort, entertainment, diversity, mall essence, convenience, luxury
1999	Bastian & Besemer	3	Convenience, experience, supply
1998	Falk	5	Location, tenant mix, convenience, architecture, marketing
1998	Baker & Wakefield	3	Tenant variety, physical environment, involvement with shopping
1996	Finn & Louviere	6	Atmosphere, merchandise, service, accessibility, anchor tenant, trendiness
1980	Nevin & Houston	7	Quality & variety of stores, events, infrastructure, parking, comfort, catering
1979	Hauser & Koppelman	5	Varity, quality, satisfaction, value, parking
1977	Bellenger et al.	3	Supply of related services, variety of retailers, convenience

Table 4.3 Summary influence factor of shopping mall and mall image by year

In the continuing search for a model for this work, scholars encounter several different propositions that have been developed over the past years, when research on malls began in a consistent manner. Although these theories have intellectual roots in theories, mostly in US and Europe, about retail locations and store image, mall image research appears to have

followed independent paths, resulting in several context-bound studies. Some authors argue that these early theories are unable to account for shopping center agglomeration effects because they were developed from a store-specific approach. Therefore, the shopping center image models reviewed in the literature may not show sufficient validity from the external perspective. Considering this state of knowledge and the lack of a recent literature review on shopping center image models, this work focus on the aggregated information on them by Sturm. The model presented here includes the influencing factors to be analyzed from macro-location, micro-location, building center structure and industry mix. Furthermore, the important transaction process between customer, tenant and landlord is presented in this model, which provides information about the performance of the center.

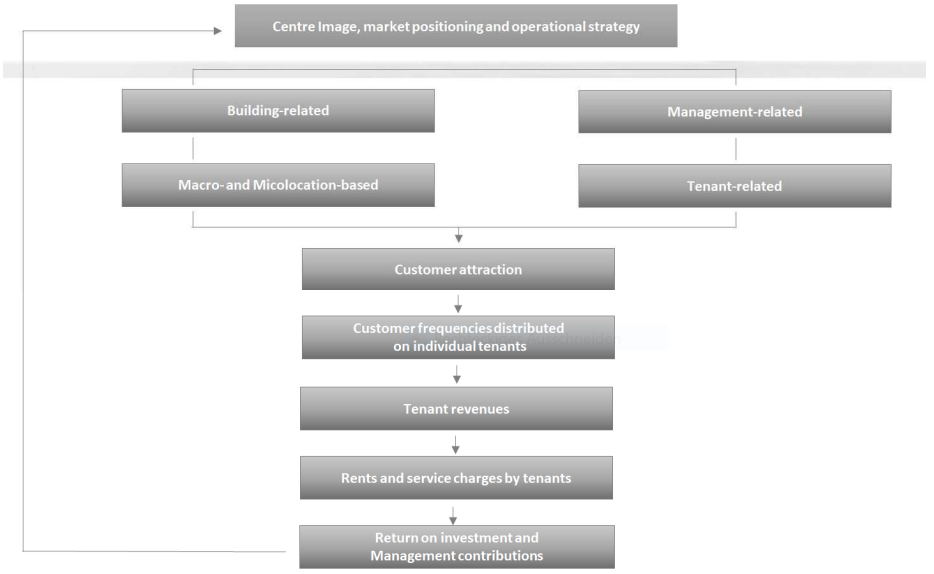


Figure 2.8 Shopping center success model (Sturm, 2006)

2.5 Systemic and non-systemic influence greens according to Markowitz

In real estate and finance, the literature makes the distinction between systemic and non-systemic risks in terms of risk classifications. This distinction is based on Markowitz's Modern Portfolio Theory and the Capital Asset Pricing Model, which builds on it. Systemic risks are risks that cannot be reduced within a portfolio through diversification, while non-systemic risks can theoretically be completely eliminated through diversification. With maximum diversification through infinite investments, the overall risk approaches systemic risk.

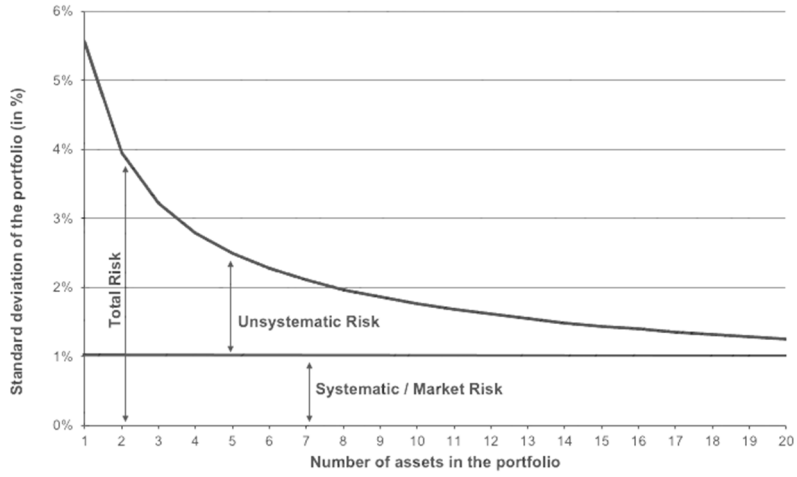


Figure 2.9 Risk decrease by diversification (Markowitz, 1952)

2.5.1 Systemic influencing variables

In the real estate industry, there are both systemic and non-systemic risks due to various factors. Systemic risks result from "overall market influencing determinants" (not influenceable) and can be defined as systemic influencing factors or influencing variables. Non-systemic risks

result from building center structure or the industry mix" (can be influenced) and can be defined as non-systemic influencing factors or influencing variables. Changes in these influencing variables usually lead to changes in the non-systemic risks. In terms of retail properties, non-systemic influencing variables can be defined as the physical property characteristics that differentiate the property from others and whose active change impacts the property itself but not others.

2.5.2 Macro-location and its influence

Due to the very different macro-locations in Germany, for example the still existing west to east gap, cities are defined as macro locations in this work, so that urban key figures are used for their location evaluation. In doing so, complex influencing factors have to be operationalized (Burkholz, 2016). For example, the TOP cities in Germany such as Munich, Berlin, Düsseldorf, Stuttgart, Frankfurt, Hamburg and Cologne have a disproportionately strong purchasing power. However, this is partly offset by a very high sales area per inhabitant, so that the respective locations require a differentiated consideration and analysis as to which positive or negative influence predominates. There are problem centers such as Mira in very good macro locations such as Munich or, conversely, very good shopping centers such as Chemnitz Center in weaker macro locations such as Chemnitz. Of course, other factors are also decisive here, but the first influencing factors - at the macro level - should be mentioned and taken into consideration here (Bühler, 2018).

Retail space per inhabitant (also known as retail space intensity, Lademann and Partner, 2020) refers to the amount of retail space available per capita in a given region. It is measured in square meters and can be

used to evaluate and compare the availability of retail space in a region. A high retail space intensity per capita may indicate that a region is well supplied with retail space, while a low retail space intensity per capita may indicate that there is a shortage of retail space in that region (Bodkin, 1997).

It can also be used as an indicator of the competitive situation in a region or the demand for retail space.

There are many other aspects to consider, such as population density, geographic location, population purchasing power and availability of retail space.

Purchasing power (GFK, 2022) refers to the ability of a population to purchase goods and services. It is often used as an indicator of a region's prosperity and can be used to assess the attractiveness of a location for retailers and businesses. Purchasing power is often calculated as the disposable income of a population and is affected by inflation and price levels in a region. The German average is calculated as 100%. A region with high purchasing power has a population that has a higher income and is able to spend more money on goods and services.

The **retail centrality index** (Michael Bauer Research, 2022) refers to the importance or significance of a particular location as a retail location. Depending on the ratio of sales to demand for goods in a particular subarea, the centrality index may be greater than or less than 100. The following section explains how to interpret these values.

Centrality index > 100

In this case, there is a positive shopping commuter balance. This means that additional people from the surrounding area come to the subarea to

shop there.

Centrality index = 100

The goods sales made in the retail trade therefore correspond exactly to the purchasing power of private households in the subarea under consideration.

Centrality index < 100

In this case, there is a negative shopping commuter balance. This means that purchasing power is flowing out of the sub-area under consideration into other areas.

The **Prognos Urban Ranking** (Prognos AG, 2022) is an index that compares and evaluates the economic performance and future prospects of cities in Germany. It takes into account various factors such as economic strength, population development, labor market situation, educational structure and infrastructure.

2.5.3 Micro-location and its influence

The micro-location is defined as the "given spatial location" within a place and distinguishes between city centers, city districts, and green field. In the literature, this classification is often used to differentiate shopping centers (GCSC, 2020). Therefore, it is expected that the requirements and factors that are critical to the success of a center will also differ. A more important consideration for the quantitative analysis of a shopping center's environment is the location of the center in relation to transportation links and synergistic shopping areas, and thus the absolute distance of the site from these (Falk, 2009). Therefore, a quantitative assessment of the spatial and temporal distance to certain shopping centers and urban areas appears

promising, which are summarized with the following location characteristics under the term micro-location in detail.

This location is an important criterion for the strategic orientation of the shopping center concept, as the accessibility requirements differ.

Greenfield centers are characterized by a location close to the edge of the city, which allows a large-scale, ground-level appearance and is geared to motorized customers. Preference is given to locations along state highways and generous parking areas. Especially at the beginning of shopping center development, centers were built on greenfield sites due to the increasing mobility of the population. A further sharp increase in new openings at these locations occurred in the new federal states after the reunification of Germany in the 1990s. As of 01.08.2018, approx. 9% of all existing German shopping centers can be assigned to the urban fringe/greenfield location (EHI Retail Institute, 2021).

District centers are characterized in the location context by their proximity to consumers due to their location in residential areas and secondary centers. They are characterized by good accessibility by public transport and an adequate supply of parking spaces, often at ground level. According to the EHI Retail Institute, 35% of German shopping centers currently fall into the "city district" location category (EHI Retail Institute, 2021).

City centers are the most common location category, accounting for 56% of classic German centers. They are intended to contribute to the preservation of city centers and the creation of new ones and are therefore

frequently used as an urban development measure to counteract the migration of retail trade to "greenfield sites" and the associated outflow of purchasing power from city centers. At the same time, however, they also compete with existing downtown retail (EHI Retail Institute, 2021).

The quality of a shopping center's location is primarily determined by its urban environment and **competition**. Inner-city centers benefit from high pedestrian frequencies in highly visible and frequented locations near the main shopping streets. This results in synergy potential with the surrounding retail landscape, which can be exploited through strategically effective positioning. These coupling effects are an important criterion for the attractiveness of a retail location, although the extent of the coupling potential varies depending on the location (Mittal, 2017).

A possible problem is the competitive situation caused by the overlapping of the catchment areas of several centers and cities, which leads to an intensification of competition.

Access to private and public transport infrastructure is an important factor in the choice of location for shopping centers. Here, the importance of the individual modes of transport varies depending on the location of the site (Falk, 2009).

For decentralized locations, connections to heavily trafficked roads such as **freeways and national highways** are of great importance. These increase the visibility of the center and enable rapid access. The access quality of the access roads also plays an important role, as regular obstructions and long waiting times can impair the center's appeal. The following times of the EHI Retail Institute provide information about a

categorization.

-	*- Travel time up to 5 minutes:*	*direct core catchment area*
-	*- Travel time up to 10 minutes:*	*large core catchment area*
-	*- Travel time up to 15 minutes:*	*Near core catchment area*
-	*- Travel time over 25 minutes:*	*Long-distance catchment area*

For inner-city locations, accessibility by **public transport** is of great importance. It enables visitors to reach the center without their own cars. A connection to local rail passenger transport and to urban subway, streetcar and bus lines increases the attractiveness of the location. A stop in the immediate vicinity of the center is particularly advantageous.

2.5.4 Non-systemic influencing variables

Both hard and soft site factors are used to evaluate a shopping center site. Hard, non-systemic factors are quantifiable and include aspects such as the building structure of the development, the age or the last revitalization, the number of parking spaces, the number of levels and the horizontal center structure comparable to the parcelling, to name some of the major influences. The management can adjust these factors, according to the circumstances. These factors are influenceable.

2.5.5 Building structure of the center

The concept of the building structure of the center is understood as both the basic guiding idea of a design and the process of creating the same. The object conception, referring to the real estate as an object, thus

designates, on the one hand, a process within the project development of a real estate and, on the other hand, the scope of services resulting from this process in the form of a physical definition, a design, of the building.

However, the **age** of a shopping center can play a role in assessing its performance. Older centers may, for example, no longer meet today's requirements in terms of old facilities and accessibility and may therefore be less attractive to customers. Newer centers, on the other hand, can score points with more modern architecture, better equipment and good digital services. However, there are also older centers that are successful due to their good location and high customer loyalty. The following development phases of shopping centers can be distinguished (EHI Retail Institute, 2021):

1964 - 1979

The first shopping centers were built in non-integrated locations. Often, a bone-like development structure was initially chosen, with many individual spaces arranged between two large department stores.

1980 - 1999

Awareness and fear of the desolation of German city centers due to the withdrawal of purchasing power from the retail sector often led to closed and smaller overall spaces, with a particular use of architecture suitable for city centers to integrate the retail spaces. The need for complementary services such as offices, apartments and medical practices also led to the first multifunctional uses of these inner-city shopping centers, whose only shortcoming was often their low parking capacity. The trend toward further revitalization of the inner cities, especially by aligning center architecture with upscale downtowns, continued. For the first time, there

was a growing awareness of the need to offer customers a shopping experience with integrated leisure facilities in addition to supplies.

2000 - 2015

The shopping centers planned from 2000 onwards are characterized by extravagant and style-defining leisure components. Here, shopping centers with extraordinary architecture, exclusive leisure offers and an upscale image were increasingly built in the western federal states and also in the greater Berlin area. One example is "Das Schloss Steglitz" in Berlin with a video projection on the second floor that can visually suggest both water and desert worlds. In the east, on the other hand, the same constructional mistakes of the first shopping center generation occurred as in the old federal states, so that here, too, a desolation of the city centers is threatening and only gradually a reversal of this settlement policy is beginning.

The most recently realized centers were increasingly designed with ecological sustainability concepts such as energy management systems using thermal insulation, the use of renewable energies, water conservation and the use of pollutant-free and environmentally compatible building materials.

The shortage of prime properties is now leading to acceptance of smaller projects in inner-city locations.

The conversion of distressed centers into neighborhood developments such as the Blautal Center Ulm or a specialist market orientation such as the Forum Steglitz with deconstruction of the upper floors are current trend and conversion strategies in addition to third-place use concepts (EHI Retail Institute, 2021).

In addition to the dimensioning of the leasable areas, the quantity and quality of the **parking spaces** on offer is an important factor in the attractiveness and success of shopping centers. Although shopping centers are often well connected to public transport and are located in inner-city areas, many customers still prefer to use their own cars. A limited supply of parking spaces, long waiting times for entry and exit, unclear parking areas or high parking fees can affect the perception of the entire visit. Large shopping centers require more parking spaces, especially if they are located at traffic junctions and in peripheral locations, which means that more customers arrive by car. The amount of parking required per square foot increases with the amount of space leased. A formula used from practice pays a recommendation of one parking space per 20m² of sales area (Falk, 2009). The parking areas of a shopping center can be open, ground-level parking lots, underground garages or parking garages. Open parking areas are particularly suitable for peripheral locations, while underground garages are best suited for inner-city areas, but are also cost-intensive. It is important that the parking system is simple and clearly laid out to ensure smooth traffic flow.

When it comes to **the vertical structure** of shopping centers, a distinction is made between single-story and multi-story designs. Whereas single-story centers are common in peripheral locations, multi-story centers are found primarily in inner-city locations, since large-scale horizontal structuring is not possible here due to the limited space available. Multi-story centers usually have an atrium located centrally or in the area of the main entrances, which provides an overview of the vertical layout. The horizontal guidance of customer flows and the frequently lower footfall on the upper floors compared to the first floor also pose challenges for these

centers (Falk, 2009).

The lower limit for **the dimensioning of shopping centers** is usually a defined minimum requirement of 10,000 m² of leasable space (EHI Retail Institute, 2021). However, this can vary depending on the center and its strategic orientation. A decisive but elusive parameter is the so-called critical mass. This term describes the point at which a project has sufficient momentum to sustain itself or develop further. In terms of the dimensioning of shopping centers, the critical mass thus represents an order of magnitude above which the center's own charisma is sufficient to attract a sufficient number of customers for the center to be successful. There is no upper limit to the size of leasable space, but it is well known that sales areas above a certain size quickly reach a saturation point and further increases in size are no longer accompanied by an increase in success. Where exactly this limit lies is not clearly defined, but is estimated by Ellrott and Petersen to be around 70,000 m². Studies in Germany by Falk and GfK from 2011 show that the center concept's failure is significantly lower for larger areas, e.g. 40,000 m².

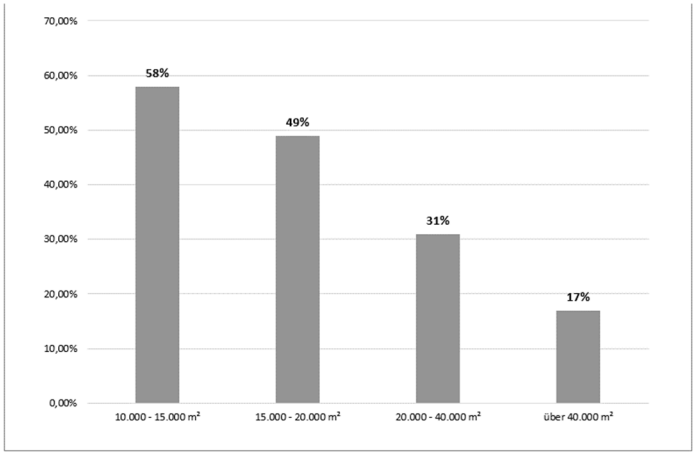


Figure 2.10 The Flop rate for shopping centres by rental space (Falk, 2009)

2.5.6 Industry mix and its influence

The attractiveness of the shopping center is a decisive criterion for consumers as to whether and how often they visit the center (Zhou, 2016). This is significantly influenced by the tenants located in the center, in particular **the number of rental units**, but also by other factors such as the depth of the product range, the price-performance ratio of the suppliers, the **variety of types of business and sectors**, the possibility of linking requirements, the existing competitive situation, **magnet businesses** and the arrangement of the businesses within the center (Falk, 2009). In contrast to grown agglomerations in traditional shopping locations of the cities, the interconnected system of the shopping center offers the possibility to actively control these influencing factors (Finn, 1996). Above all, the parcelling of the commercial space of rental units is also to be regarded as an important structural feature, whereby a balanced weighting between anchor and small tenants is to be achieved (Damian, 2011). In this context, the operator structure - chain store or regional sole proprietor - represents an opportunity to combine regional know-how with professionalized retailing and strong supra-regional brands, thus creating a industry mix tailored to the individual needs of the customer (Eckert, 2015). As a further indication for the design of a sustainable branch mix, the following structure should be chosen

40 % textiles

25 % hard goods

11 % food

10 % sports/shoes

6 % gastronomy

6 % health

2 % Service (Falk, 2009)

However, e-commerce as well as COVID-19 pandemic has reduced shares of the segments hard technology and textiles, while food and, service and gastronomy tend to grow (Stoyke, 2021).

The composition of the industry mix is closely related to the strategic concept of the shopping center and thus has a long-term influence on target groups and catchment area (Yiu, 2012). In order to achieve a broad customer base and exploit customer potential, a industry mix is generally selected that appeals to a high proportion of available customers. This applies not only to the breadth and depth of the product range, but also in particular to the pricing policy. The larger the center and thus the area-related investment costs, the larger the market segment addressed must be. In the case of shopping centers, a distinction can essentially be made between two strategies: the economization strategy of retail parks and the preference strategy of experience centers. The economization strategy aims to make shopping as fast, convenient and inexpensive as possible for the customer, while the preference strategy is aimed at a long dwell time and a certain experiential character of the center, which is represented, for example, in recent times by the considerable expansion of space for **gastronomy concepts** (Falk, 2009).

2.6 The influence of COVID-19 pandemic

The first case of COVID-19 pandemic was detected in Wuhan, 2019 in China (Spiteri et al., 2020). Initially thought to be seasonal flu and

pneumonia without further attention, it spread rapidly and took hold. Within a very short time, the disease had crossed the Eurasian continent and oceans and also reached the Americas and Australia. It caused immeasurable suffering and devastating economic damage. In March 2020, the WHO declared a pandemic (Spiteri, 2020). The retail sector was particularly affected by the Covid 19 pandemic, as social desistance rules and changes in consumer behavior severely impacted the industry. Observations show a significant decline in customer frequency and varying impacts on shopping area characteristics. **Grocery stores and drugstore** (suppy-relevant trade) saw a slight increase in customer frequency at the beginning of the closures as disconcerted customers stocked up on supplies and medications. Eventually, however, sales declined in areas such as apparel, luxury goods, personal care, and services. As the pandemic continues to worsen economically, retailers are being forced to adapt their business operations and structures to respond to growing demand for **online purchases** or on-street deliveries or pickups.

2.7 Research triangulation

The critical examination of the results of the analyses should add value by considering their content through research triangulation.

In research triangulation, multiple data sets, different methods, theories or perspectives are used to strengthen the accuracy of the research through

- *Data triangulation* — *analysis of data from different times, places, people*
- *Researcher triangulation* — *involving several researchers in data collection or analysis*
- *Theoretical triangulation* — *use of different theories in research*
- *Method triangulation* — *using different methods to work on the same topic*

the use of qualitative and quantitative research. In science, there are 4 subdivisions of triangulation (Patton, 2015)

To this end, the key findings of the most important success factors are analysed and the customer perspective is also included. This corresponds to data triangulation, as the in-depth analysis of the tenant survey is no longer considered individually, but a customer survey from 2023 is also included. In this respect, an additional quantitative database of center evaluations from qualitative customer surveys on successful centres can increase the completeness and informative value of the results. The comparison portal Testberichte.de evaluated almost 3.4 million online reviews for around 600 shopping centres in Germany and compiled a ranking. The basis for the comparison portal's evaluation are customer reviews of medium-sized and large shopping centres with at least 100 ratings. The date of data collection was 5 December 2023. However, the customer survey does not include a separate in-depth analysis of the success factors, as this would be outside the scope of the research. Nevertheless, it will be determined whether there is a correlation between high-performing centers from the customer and tenant perspective, which once again underpins the level of evidence of this dissertation (chapter 4.9).

2.8 Conceptual framework for this research

Like many types of real estate, shopping centers are purely income-producing properties whose success is mainly derived from rental income. In order to analyze the performance of a center, it is therefore necessary to consider at tenant level whether and to what extent the tenants benefit from the center performance. To this end, ecostra GmbH has been producing an

annual ranking of German shopping centers since 2011 in the ecostra Shoppingcenter Performance Report, which is based on a survey of tenants regarding their satisfaction. In this dissertation, the systemic and non-systemic influencing variables on location and building center structure in relation to the performance assessment of tenants and how they are affected will be investigated. In turn, performance is determined by the rent to sales ratio. By identifying the characteristics of shopping centers that are relevant for success, an improved forecast of center performance is to be made possible. For this purpose, a data basis from market research institutes, information from shopping center operators and own surveys will be used to conduct an empirical-quantitative analysis of the decisive influencing factors. The theoretical framework of the work is defined as the entirety of all shopping centers in Germany as the basic population, but more specific types within this totality are to be considered in order to take into account differences with regard to the requirements for location, structure and tenant and sector mix.

Chapter Three

Research framework and methodology

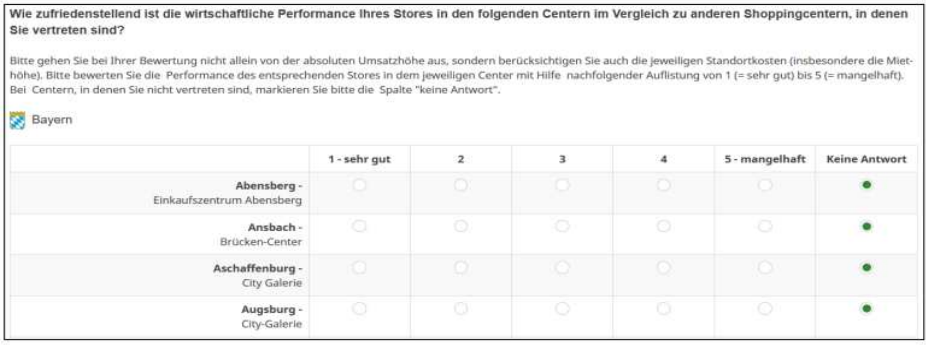
3.1 Ecostra Shopping Center Performance Report

The success of a shopping center is determined by sales and tenant satisfaction. In order to assess this, the consulting company ecostra has been publishing the annual "ecostra Shopping-Center Performance Report" since 2011, which ranks German shopping centers according to tenant satisfaction. This ranking is based on survey-based assessments by tenants of centers that are represented in at least three German shopping centers. The shopping centers are selected on the basis of the EHI Shopping Center Report and are limited to centers with at least 10,000 square meters of retail space and a specific center type. A total of 400 shopping centers are surveyed each year. The results of the report from 2015 to 2022 serve as a reference, in which 100 tenants evaluate more than 3,000 stores in 400 German shopping centers (ecostra, 2022).

3.2 Ecostra questionnaire design

The survey was conducted by means of an online questionnaire from July to August each year. The companies' contact persons, sales managers, expansion managers and managing directors were asked for an assessment of their own stores, the company's measures and developments, and a general assessment of shopping centers and retail. The questionnaire was divided into three areas, only the first of which was relevant to tenant performance. The first area asked about satisfaction with the sales performance of the stores in the center compared with other centers (ecostra, 2022). It was emphasized that the evaluation should not be based on sales levels alone, but should also take into account site-specific costs, particularly rent levels. From the individual evaluations, an average value was calculated for each center, on the basis of which the ranking of the most successful shopping centers in Germany was created. Centers for which fewer than 5 companies submitted a rating were not included in the ranking.

Fig. 2: View (excerpt) of the online survey on the topic of economic performance of stores in selected shopping centers



Wie zufriedenstellend ist die wirtschaftliche Performance Ihres Stores in den folgenden Centern im Vergleich zu anderen Shoppingcentern, in denen Sie vertreten sind?

Bitte gehen Sie bei Ihrer Bewertung nicht allein von der absoluten Umsatzhöhe aus, sondern berücksichtigen Sie auch die jeweiligen Standortkosten (insbesondere die Miethöhe). Bitte bewerten Sie die Performance des entsprechenden Stores in dem jeweiligen Center mit Hilfe nachfolgender Auflistung von 1 (= sehr gut) bis 5 (= mangelhaft). Bei Centern, in denen Sie nicht vertreten sind, markieren Sie bitte die Spalte "keine Antwort".

Bayern

	1 - sehr gut	2	3	4	5 - mangelhaft	Keine Antwort
Abensberg - Einkaufszentrum Abensberg	○	○	○	○	○	●
Ansbach - Brücken-Center	○	○	○	○	○	●
Aschaffenburg - City Galerie	○	○	○	○	○	●
Augsburg - City-Galerie	○	○	○	○	○	●

Figure 2.11 Questionnaire (Ecostra, 2022)

3.3 Methodology

The aim of the dissertation is to evaluate German shopping centers in terms of tenant satisfaction. The basis for this is the economic performance of the center, measured by the ratio of sales to location costs. Based on this evaluation, a ranking of the most successful shopping centers in Germany is created. This is based on the results of the SCPR from 2015 to 2022. Centers that have not received at least five tenant ratings over the entire period are excluded for the analysis. Train station and airport centers are also not included. The study's population comprises all classic shopping centers in Germany.

A detailed list of all shopping centers included can be found in the appendix.

3.4 Results and their relevance

The German shopping center market is opaque in terms of visitor frequencies, sales and also rent levels. A systematic overview of a larger number of properties was and is completely missing. Ecostra has remedied this situation with a methodical analytical approach. Ecostra has been conducting the tenant survey study together with Immobilienzeitung and Textilwirtschaft since 2011. The results of the study are an important step towards more transparency in the German shopping center market. The aim of the study is to provide market participants with information and utilization opportunities in a systematic and clear form. This includes the presentation of the economic performance of 400 German shopping centers from the tenants' point of view, a ranking of the ratings and the

derivation of development trends on the German shopping center market.

As one of the most important methodological approaches, the color scale of the shopping center ranking allows any interested reader a quick overview of the shopping center performance. (ecostra, Will 2020)

Similar to a traffic light system, the color scale distinguishes the following grades from 1 as green (good) to 5 as poor (red). Here, the empiricism offers the possibility to compare positive and negative trends of a center over the years on the one hand and to see the center in comparison to average values on the other hand.

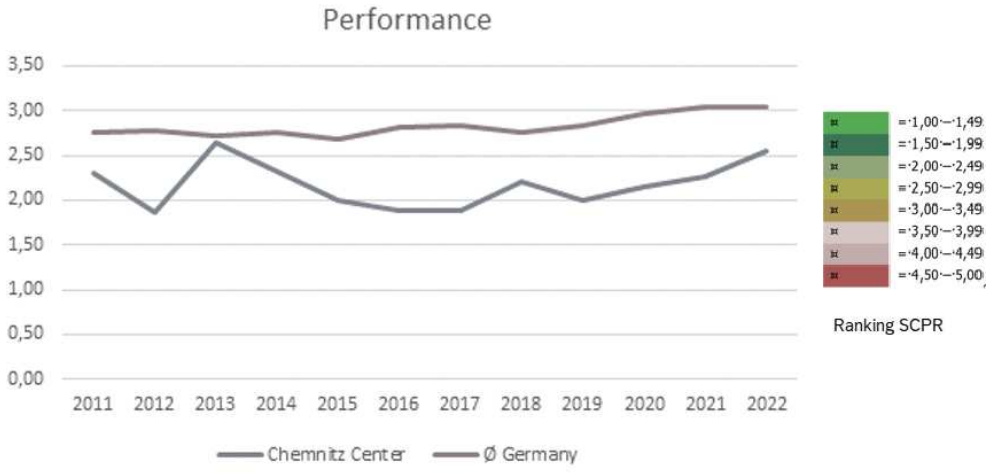


Figure 2.12 Centerperformance Chemnitz Center to the average

3.5 Deriving of the dataset 2015 - 2022

In this study, the time frame from 2015 to 2022 is taken as a basis. It is relevant in the data set that the shopping centers considered have at least five tenant valuations in each year, so that a complete time series is available for the years 2015 to 2022.

3.6 Data Analysis of the population

The mean value of the shopping center was calculated from the individual ratings of various tenants of the same shopping center. This mean value then forms the basis for the corresponding classification of a shopping center in a ranking that reflects the economic performance from the perspective of the tenants surveyed.

The mean values were given to the second decimal place in order to obtain a graded overall picture. The center with the lowest mean value and thus the highest tenant satisfaction occupies first place, while the center with the highest mean value and thus the most dissatisfied tenants occupies last place. A total of 183 shopping centers from the survey portfolio of 400 centers were included in the ranking, as at least 5 tenant ratings were available for them. Centers with fewer than 5 individual ratings are listed separately at the end of the list. To ensure transparency, the number of ratings and the total number of tenants in the respective center are given in addition to the average value of the tenant ratings (Will, 2020).

3.6.1 Quantitative parametric and non-parametric analysis methods

Quantitative research uses numerical data to test existing hypotheses or discover new effects. Exploratory studies mainly use descriptive statistics and graphical evaluations, while hypothesis-testing studies use statistical significance tests. The statistical comparison of means compares the mean values of metric characteristics from different samples and can include both the arithmetic mean and the median. A well-known example is the Wilcoxon-Mann-Whitney test, which is an alternative to the t-test. Another example is the Kruskal-Wallis test, which is an alternative to ANOVA (analysis of variance). Overall, however, non-parametric procedures are less powerful than their parametric counterparts and should therefore only be used if the prerequisites for the application of parametric procedures are not given. The appropriate statistical procedures for the analysis are outlined in red in the figure 2.16 here.

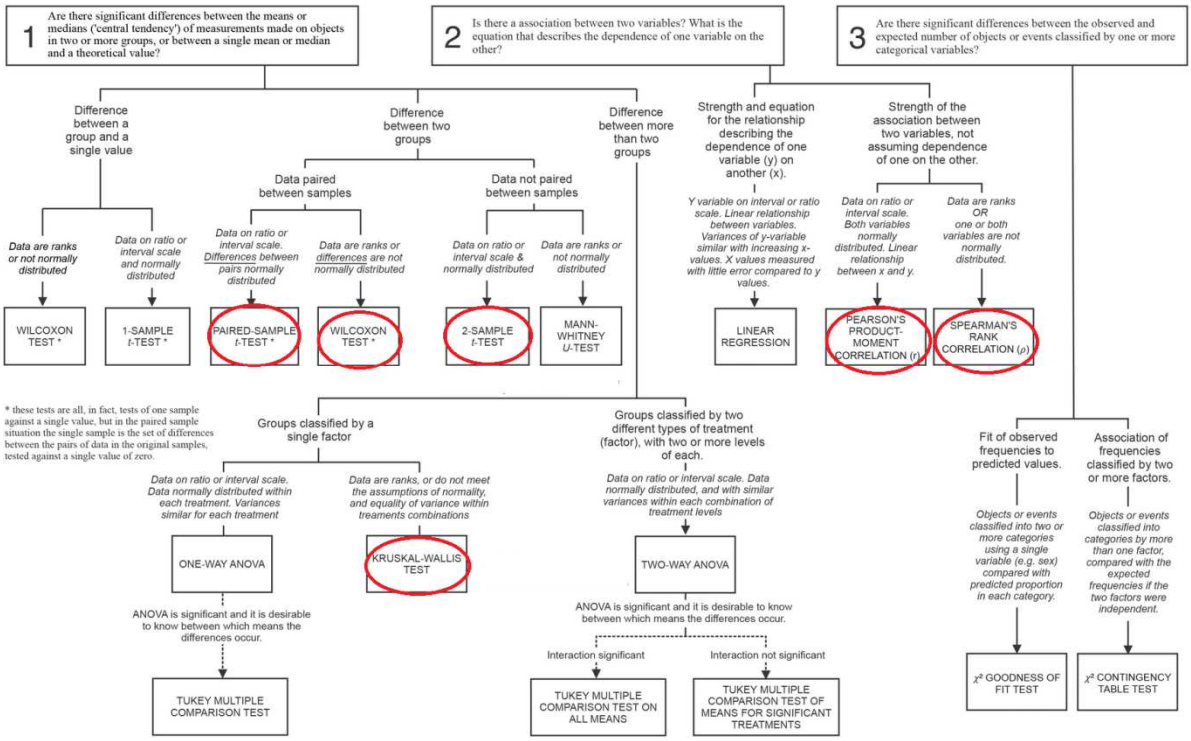


Figure 2.13 Appropriate statistical procedure

3.6.2 T-test for two independent samples

The t-test for two independent samples is an analytical procedure for examining the mean values of two independent groups. Based on the dispersion of the arithmetic mean, it provides a decision-making aid as to whether the difference between the means of two samples is purely random or whether the means differ systematically.

The null hypothesis of the t-test assumes that there is no systematic difference between the two means and thus no actual difference between the groups studied. To check this, the t-test calculates the probability for the mean difference found or greater among all theoretically possible differences. If this is below the significance level, the null hypothesis can be rejected and the alternative hypothesis that the arithmetic means of the samples actually differ can be accepted.

The t-test is a parametric procedure, so that the prerequisites described above must be fulfilled in order to obtain accurate analysis results.

3.6.3 T-test for dependent samples

The paired t-test is also called a dependent t-test, since the samples are not independent of each other. The paired test is used when there are exactly two measurements and they are dependent on each other. This is the case, for example, when the same object is examined at two different times or must pass through two different test conditions. However, the paired t-test can also be used if, for example, objects have been matched on certain properties (e.g. age, gender, personality traits, ...).

3.6.4 Bivariate correlation according to Spaerman Rho

In der hier The Spearman correlation coefficient (also known as Spearman-Rho) is used to investigate an undirected correlation between two ordinal or metric variables. It indicates either a positive correlation, a negative correlation or no correlation. In the null hypothesis, it assumes no correlation.

Pre-hypothesis test for the Spearman correlation coefficient

Ordinal scaled variables are usually variables that can be ordered in ascending or descending order, but where the distances between the expressions are not equal, not interpretable or both. Questions about agreement with a statement or satisfaction with a product or income classes ("Likert scale") fulfil this criterion. However, if one combines several such variables (e.g. via the mean), i.e. forms a score, they are often referred to as quasimetric, which allows a Pearson correlation.

3.6.5 Kruskal-Wallis H-test

The Kruskal-Wallis H-test is the non-parametric alternative for the statistical comparison of more than two sample groups. Like the Mann-Whitney U-test mentioned above, it works with assigned rank series and is therefore also referred to as a rank variance analysis. As a null hypothesis, it is therefore also assumed here that the examined sample groups do not differ from each other in their rank order distribution. As with the analysis of variance, the alternative hypothesis assumes that at least two of the groups differ from each other.

Like the Mann-Whitney U test, this procedure is used when the basic prerequisites for parametric procedures in terms of normal distribution and/or variance homogeneity are violated. As shown above, the application is particularly useful when small group sizes are also involved, which inevitably arise in the context of this work due to the division of the total sample into several groups.

3.6.6 Person correlation

The Pearson correlation coefficient and the Spearman correlation coefficient are two methods for examining the relationship between two variables. The Pearson coefficient focuses on the linear relationship between metric variables, while the Spearman coefficient is used for the relationship between ordinal variables. A positive correlation means that high values of one variable are associated with high values of the other variable, while a negative correlation associates high values of one variable with low values of the other variable. A zero correlation means that there is no relationship between the two variables.

3.6.7 The Wilcoxon test

The Wilcoxon test is a non-parametric test, the data do not have to be normally distributed. However, in order to calculate a Wilcoxon test, the samples must be dependent. In addition, the distribution shape of the differences of the two dependent samples should be approximately symmetric. If the data are not pairwise, the Mann-Whitney U test is used instead of the Wilcoxon test.

3.6.8 Exkurs Lowes regression line

The Lowe's regression line is a statistical analysis procedure with which the relationship between two variables can be explored. In contrast to parametric regression methods, it does not follow a fixed regression equation and can therefore be regarded as a non-parametric method. It is particularly suitable for analysing data where the distribution of the variables is not known or the assumptions of a parametric regression are not met. Trends and correlations in the data can be visualised quickly and easily with the help of the Lowes adjustment line

3.7 Conceptual framework of the study

The conceptual framework for this study includes the systemic influencing factors of the macro location and micro location and the non-systemic influencing factors such as the building structure of the center and the industry mix for the analysis. The derived database now offers the opportunity to validate or falsify the influencing factors and their results on the basis of hypotheses through the quantitative analyses presented in this chapter. The analyses refer to clearly quantifiable influencing factors such as age of the center, number of rental spaces, number of parking spaces. Subjective factors such as music, management, marketing events, etc. are not part of this analysis.

Chapter Four

Data analysis and results

4.1 Data information and hypothesis

The Shopping Center Performance Report is a tenant survey in which chain store operators from the retail and gastronomy sectors grade their satisfaction with the economic success of their stores in 400 German shopping centers with more than 10,000 m2 of retail space using a school grading system ranging from 1 = very good to 5 = poor. This economic success not only relates to the tenants' income, but also takes account of their expenses, i.e. the (sales-related) rent level, ancillary costs and contributions to center advertising. Only centers that have received a score from at least five tenants are included in the ranking. To participate in the SCPR, tenants themselves must be represented in at least three shopping centers. The Shopping center Performance Report has been conducted annually since 2011 by ecostra GmbH, an economic, location and strategy consultancy based in Wiesbaden. Media partners are Immobilien Zeitung and TextilWirtschaft (both dtv Mediagroup).

The evaluation is based on a five-point response format that follows the logic of the school grades described above:

One = completely true/very good/very satisfied/very high,

Two = tends to agree/highly agree/highly satisfied/highly agree,

Three = neither/nor/satisfactory,

Four = rather not true/very poor/very dissatisfied/very low,

Five = not at all true/very poor/very dissatisfied/very low.

In addition to the five-step response format, some constructs have a dichotomous gradation (for example, yes/no). Furthermore, free response formats (for example, text fields) and multiple choice answers were possible (Will, 2020).

The inferential statistical procedures on which the evaluation is based - i.e. procedures that examine, for example, differences between groups or correlations between different characteristics/items - were examined with regard to their methodological prerequisites.

Since the SCPR was carried out in 2011, more than 100 chain store operators from the stationary retail sector have taken part in the annual survey and evaluated more than 3,000 stores in around 400 shopping centers in Germany (Will, 2022).

The following hypotheses to be investigated result from this survey ranking and the data basis created from macro-location, micro-location, building structure of the center, industry mix and the excurs COVID-19 pandemic.

Trend movement of the shopping center asset class

H1 Master: It is assumed that the market environment from 2015 to 2022 within the brick-and-mortar retail sector for shopping centers has led to a weaker performance assessment of shopping centers from a tenant perspective.

Systemic influences macro-location

H2 Master: It is assumed that at least two of the four systemic influencing

variables of the macro-location (sales area per inhabitant, purchasing power, centrality rating, Prognos Rank) have a positive impact on the performance assessment of shopping centers from the tenant's perspective.

Statistical hypotheses for operationalization:

H2.1 = Shopping centers with a lower sales area per inhabitant at the macro location show a better performance rating.

H2.2 = Shopping centers with a higher purchasing power at the macro location show a better performance rating.

H2.3 = Shopping centers with a high centrality rating at the macro location show a better performance rating.

H2.4= Shopping centers with a good Prognos Rank at the location show a better performance rating.

Systemic influences micro-location

H3 Master: It is assumed that at least two of the four systemic influencing variables of the micro-location (location city-district-green meadow, competition, car accessibility, public transport) have a positive impact on the performance assessment of shopping centers from the tenant's perspective.

Statistical hypotheses for operationalization:

H3.1 = Greenfield shopping centers show a better performance rating by tenants than the rest.

H3.2 = Shopping centers with little competition (center or downtown) nearby show a better performance rating than shopping centers with more

competition.

H3.3 = Shopping centers with a shorter distance to the highway show a better performance rating than shopping centers that are further away from the highway.

H3.4 = Shopping centers with a public transport connection within walking distance show a better performance rating than shopping centers without a public transport connection within walking distance.

Non-systemic influences structural center concept

H4 Master = It is assumed that at least two of the four non-systemic influencing variables of the building center structure (age, parking spaces, levels, rental space) have a positive impact on the performance assessment of shopping centers from the tenant's perspective.

Statistical hypotheses for operationalization:

H4.1 = Younger shopping centers show a better performance rating than older shopping centers.

H4.2 = The higher the number of parking spaces in a shopping center, the better the performance rating of the tenants.

H4.3 = The fewer levels the shopping center has (for example, only one floor), the better the performance assessment of the tenants.

H4.4 = The larger a shopping center is, the better the performance rating of the tenants.

Non-systemic influences Industry mix

H5 Master = It is assumed that at least two of the four non-systemic influencing variables of the industry mix (number of supply-relevant rental units, number of industries, number of restaurants, number of anchor tenants) have a positive impact on the performance assessment of shopping centers from the tenant's perspective.

Statistical hypotheses for operationalization:

H5.1 = The higher the number of supply-relevant rental units (food and drugstore) in a shopping center, the better the performance assessment.

H5.2 = There is a correlation between tenant performance ratings and the number of industries represented in the shopping center.

H5.3 = Centers with a higher number of food service operations have better performance ratings.

H5.4 = Centers with more magnet operations have better performance ratings.

Exkurs COVID-19 pandemic

H6 Master = It is assumed that the Corona pandemic had a greater impact on tenant satisfaction in shopping centers without utility-related units than on tenant satisfaction in shopping centers with utility-related units.

H7 Master = It is assumed that there is a difference in performance assessment between the group of shopping centers that have a digital mall and the group of shopping centers that do not have a digital mall.

4.2 Descriptive statistics

Descriptive statistics were used to examine the evolution of the performance ratings of the 183 shopping centers for which results are available for this period. Looking at the most extreme characteristics of the performance ratings, the minima and maxima, a heterogeneous picture emerges overall, although a trend is discernible: In 2016, for example, there is a sharp deterioration compared to 2015, while in 2017 the ratings are better again, but the trend is not reversed. In 2020 and 2022, the ratings are again slightly better than in the previous year, but again there is no reversal of the trend.

As table 4.4 and, even more so, diagramm3.1 show, the development of the averages is clearer: The mean values of the performance rating increase with an almost constant dispersion (standard deviation) over the period under consideration, i.e. the performance is constantly getting worse and dissatisfaction is increasing. Although there is a certain stagnation between 2016 and 2018 and also between 2021 and 2022, the general trend is still discernible.

	Minimum	Maximum	**Mean value**	Std. deviation
2015	1,33	4,71	**2,72**	0,62
2016	1,44	4,86	**2,85**	0,61
2017	1,38	4,74	**2,84**	0,60
2018	1,56	4,56	**2,81**	0,59
2019	1,56	5,00	**2,88**	0,65
2020	1,40	4,80	**2,97**	0,60
2021	1,50	5,00	**3,08**	0,54
2022	1,47	5,00	**3,09**	0,58

Table 4.4 The Development of mean values of performance rating 2015 to 2022

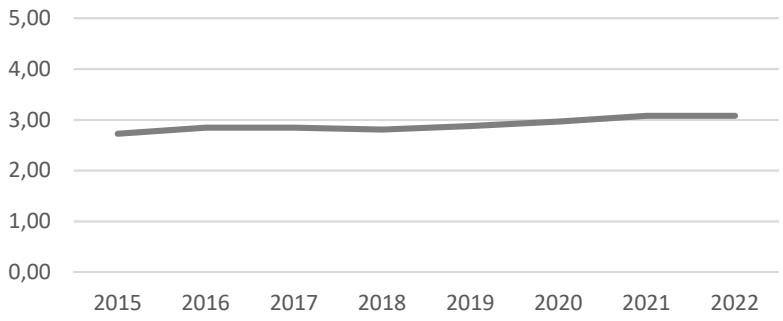


Diagramm 3.1 Decreasing Shopping Center Performance 2015 – 2022

The hypothesis that the market environment from 2015 to 2022 within the brick-and-mortar retail sector for shopping centers has led to a weaker performance rating of shopping centers from a tenant perspective can therefore be agreed with.

4.3 Systemic influences macro-location

The competition forces a professionalization of the decision-making process for the respective location in the case of new shopping center settlements in order to be able to make risk-minimized location decisions for major investments. Particularly due to the immobility of the shopping center, a very high relevance is to be attached to the location decision. The decision for the right location enables the development of the other success factors. The focus must be on the proximity of the location to the demand potential, because in today's competition between uniform centers, the customer tends to prefer the retail offering that is more quickly accessible. An attractiveness overhang, which can be created by other factors, is often no longer possible with poor stock.

Macro-specific location selection is then usually based on factors such as retail space per inhabitant, retail purchasing power, centrality or even city rankings such as those from Prognos, in order to achieve the best possible purchasing power potential at the location for retail demand.

4.3.1 Retail space per inhabitant

Shopping centers with a lower sales area per inhabitant at the macro location show a better performance rating.

To test the hypothesis, the correlation of the item performance rating with the item retail space per inhabitant (Lademann & Partner) was first visually tested using a scatter diagram and a Lowess fit line was drawn in for exploratory analysis of a possible correlation (diagram 3.2). This does not

reveal a clear linear relationship

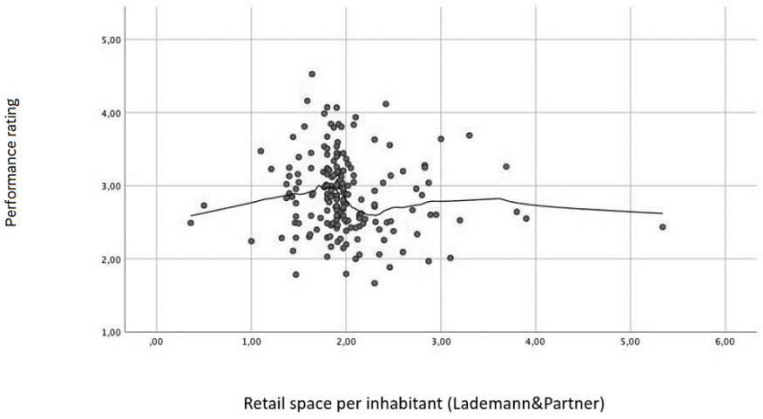


Diagram 3.2 Relationships between performance rating and retail space (Lademann & Partner, 2022)

To test this initial observation, a Spearman-Rho bivariate correlation was performed. Since the hypothesis is directional, one-sided significance was tested.

Null hypothesis:

H0 = There is no correlation between tenant performance ratings and retail space per capita at the macro location.

Alternative hypothesis:

H1 = There is a correlation between tenant performance ratings and retail space per capita at the macro location.

Correlations				
			Performance rating	Retail space per inhabitant (Lademann& Partner)
Spearman-Rho	Performance rating	Correlation coefficient	1	-0,17*
		Sig. (1-sided)		0,01
		N	183	183
	Retail space per inhabitant (Lademann&Partner)	Correlation coefficient	-0,17*	1
		Sig. (1-sided)	0,01	
		N	183	183
*. The correlation is significant at the 0.05 level (one-sided).				

Table 4.5 Correlation between performance assessment and retail space (Lademann & Partner, 2022)

It can be seen from the result that there is a weak negative correlation between the studied items, which is significant at p = 0.05: the larger the sales area per inhabitant at the macro-location, the better the performance assessment of the tenants. Thus, the null hypothesis is rejected and the alternative hypothesis is accepted: There is a (weakly negative) correlation between the size of the sales area at the macro location and the performance assessment of the tenants: a larger sales area per inhabitant at the macro location is associated with a better performance assessment or vice versa: a better performance assessment is associated with a larger sales area per inhabitant at the macro-location.

4.3.2 Retail purchasing power

Shopping centers with a higher purchasing power at the macro-location

show a better performance rating.

In order to test this hypothesis, the correlation between the performance rating item and the retail purchasing power item was first visually tested using a scatter plot, and a Lowess fit line was plotted for exploratory analysis of a possible correlation (diagram 3.3). This shows that there could be a linear relationship between the two items, but one that points in the opposite direction: shopping centers with higher purchasing power at the macro location show a poorer performance rating.

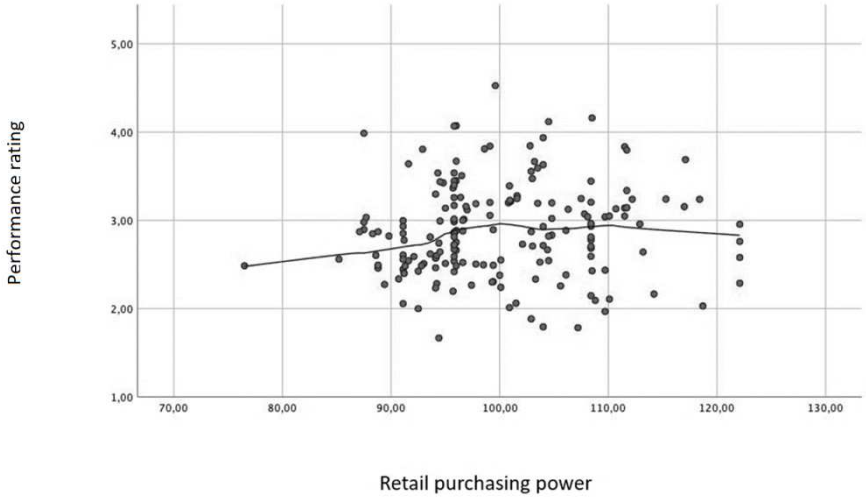


Diagram 3.3 Relationships between performance rating and retail purchasing power

To test this visual impression, a Spearman-Rho bivariate correlation was performed. Since the hypothesis is directional, one-sided significance was tested.

Null hypothesis:

H0 = There is no relationship between tenant performance ratings and macro-location purchasing power.

Alternative hypothesis:

Correlations

			Overall ranking	Retail purchasing power
Spearman-Rho	Performance rating	Correlation coefficient	1	0,14*
		Sig. (1-sided)		0,03
		N	183	181
	Retail purchasing power	Correlation coefficient	0,14*	1
		Sig. (1-sided)	0,03	
		N	181	181

*. The correlation is significant at the 0.05 level (one-sided).

Table 4.6 Correlation between performance rating and purchasing power

H1 = There is a relationship between tenant performance ratings and macro-location purchasing power.

The result shows that there is a weak correlation between the two items, which is significant at p = 0.03: the greater the purchasing power at the macro-location, the worse the tenants' performance assessment. Therefore, the null hypothesis is rejected and the alternative hypothesis is accepted: There is a (weak) correlation between the purchasing power at the macro-location and the performance assessment of the tenants. A higher purchasing power at the macro-location is associated with a rather poorer performance rating, or vice versa: a better performance rating is associated with a rather lower purchasing power at the macro-location.

4.3.3 Centrality rating

Shopping centers with a high centrality rating at the macro-location show a better performance rating.

To test the hypothesis, the correlation of the Overall Ranking item with the Centrality Index item was first visually examined using a scatterplot, and a Lowess fit line was plotted for exploratory analysis of a possible correlation. This shows that there could be a linear relationship between the two items.

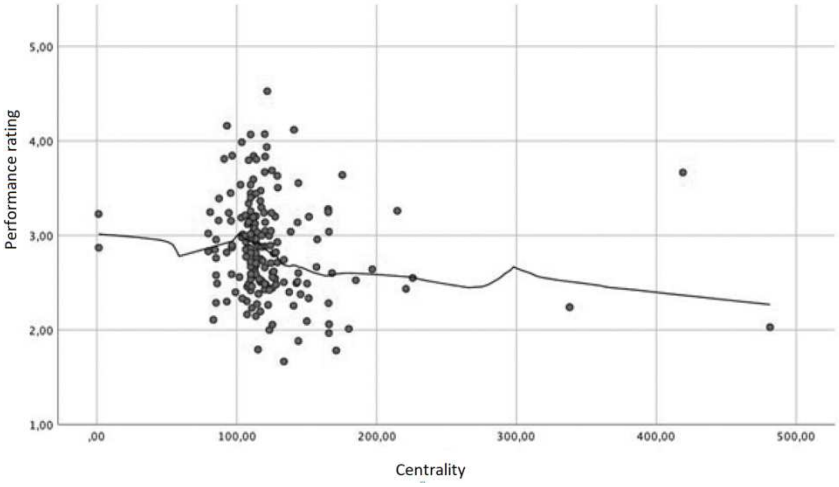


Diagram 3.4 Relationships between performance rating and retail centrality

To test this visual impression, a Spearman-Rho bivariate correlation was performed. Since the hypothesis is directional, one-sided significance was tested.

Null hypothesis:

H0 = There is no relationship between tenant performance ratings and centrality at the macro-location.

Alternative hypothesis:

H1 = There is a correlation between tenant performance ratings and centrality at the macro location.

Correlations				
			Overall ranking	Centrality index
Spearman-Rho	Performance rating	Correlation coefficient	1	-0,20**
		Sig. (1-sided)		0,00
		N	183	182
	Centrality index	Correlation coefficient	-0,20**	1
		Sig. (1-sided)	0,00	
		N	182	182
**. The correlation is significant at the 0.01 level (one-sided).				

Table 4.7 Relationship between performance rating and retail centrality

The result shows that there is a weak negative correlation between the two items with a significance of $p < 0.01$. That is, the higher the centrality, the better the tenant's performance rating. Therefore, the null hypothesis is rejected and the alternative hypothesis is accepted: There is a (weak negative) correlation between the centrality at the macro-location and the performance rating of the tenants: a higher centrality at the macro-location is associated with a better performance rating or vice versa: a better performance evaluation is associated with a higher centrality at the macro-location.

4.3.4 Prognos city rank

Shopping centers with a good Prognos Rank at the location show a better performance rating.

To test the hypothesis, the correlation between the items "Overall ranking" and "Prognos City Rank" was tested using a bivariate correlation according to Spearman-Rho. Due to the directionality of the hypothesis, one-sided significance was tested.

Null hypothesis:

H0 = There is no correlation between tenant performance ratings and Prognos Rank at the site.

Alternative hypothesis:

H1 = There is a correlation between tenant performance ratings and Prognos Rank at the site.

Correlations

			Overall ranking	Prognos Atlas Rank
Spearman-Rho	Performance rating	Correlation coefficient	1	-0,03
		Sig. (1-sided)		0,33
		N	183	183
	Prognos City Rank	Correlation coefficient	-0,03	1
		Sig. (1-sided)	0,33	
		N	183	183

Table 4.8 Performance rating and Prognos Rank

The result shows that there is no correlation between the two items. Therefore, the null hypothesis is accepted and the alternative hypothesis is rejected: There is no correlation between the Prognos Rank at the location and the performance rating of the tenants.

4.4 Systemic influences micro-location

The micro-location of a shopping center describes its direct surroundings. Among other things the location of the competition, connection to highways or public transport are to be named. The integration of the center into the district, the city center or the greenfield site can also be listed here. Qualitative evaluation factors can also be used.

4.4.1 Location

Greenfield shopping centers show a better performance rating by tenants than the rest.

Of the 183 shopping centers assessed in the survey, 103 are located downtown, 66 in a district and 14 on greenfield sites.

Null hypothesis:

H0 = There is no difference in the performance ratings of tenants in the different locations.

Alternative hypothesis:

H1 = There is a difference in the performance ratings of tenants in different locations.

A Kruskal-Wallis test was conducted to calculate whether location had an impact on tenant performance ratings:

Ranks

Location coded		N	Middle rank
Performance rating	Greenfield	14	49,36
	Downtown	103	102,17
	District	66	85,18
	Total	183	

Statistics for test[a,b]

	Overall ranking
Kruskal-Wallis H	13,959
df	2
Asymptotic significance	0,001

a. Kruskal-Wallis test
b. Group variable: Location coded

Table 4.9 Performance rating by location

The Kruskal-Wallis test revealed that there is a significant difference in performance rating between the different locations ($p < 0.01$). Thus, the null hypothesis is rejected and the alternative hypothesis is accepted. Since the Kruskal-Wallis test can only determine whether differences exist, but not between which of the groups the differences occur, a post-hoc test is required:

Pairwise comparisons from site coded

Sample 1-Sample 2	Test statistics	Std. error	Standard test statistics	Sig.	Corr. sig.[a]
Greenfield district	-35,825	15,587	-2,298	0,022	0,065
Green meadow downtown	-52,808	15,089	-3,500	0,000	0,001
City district downtown	16,983	8,352	2,033	0,042	0,126

Each row tests the null hypothesis that the distributions in sample 1 and sample 2 are the same.
Asymptotic significances (two-sided tests) are displayed. The significance level is 0.05.
a. Significance values are adjusted by the Bonferroni correction for multiple testing.

Table 4.10 Performance rating by location (pairwise)

The pairwise comparisons showed that the differences in the performance rating between the greenfield and downtown shopping centers are significant ($p < 0.01$). The differences in the performance rating between the shopping centers in the city center location and on the greenfield site or those in the city district and in the city center location, on the other hand, are not significant ($p = 0.07$ and $p = 0.13$, respectively).

The performance rating ("overall ranking") thus differs in any case between the greenfield shopping centers and the shopping centers in inner-city locations, as can also be seen visually (diagram 3.5).

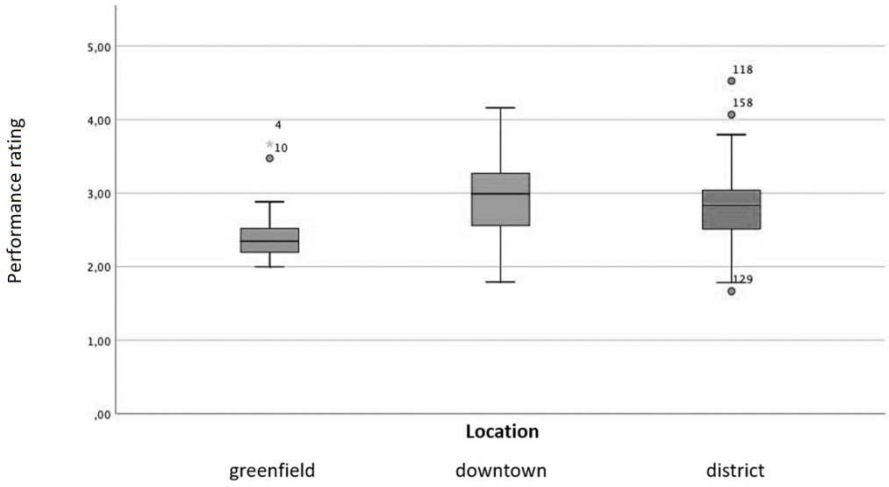


Diagram 3.5 Performance rating by location (blogspot)

The development of the performance rating of the tenants in the individual locations over the years is as follows (taking into account the scaling with 1 = very good and 5 = very poor):

	Greenfield	Downtown	District
Ranking 2015	2,36	2,83	2,64
Ranking 2016	2,53	2,93	2,79
Ranking 2017	2,43	2,94	2,78
Ranking 2018	2,44	2,92	2,71
Ranking 2019	2,51	3,00	2,78
Ranking 2020	2,61	3,07	2,88
Ranking 2021	2,64	3,19	2,99
Ranking 2022	2,63	3,20	2,99

Table 4.11 Performance rating by location and year

Here, too, it is evident from the development of the mean values that the performance assessment of tenants in greenfield shopping centers is always better than that of tenants in urban locations. In addition, it can be seen that the performance rating is getting worse.

4.4.2 Densitiy of competition

Shopping centers with little competition (center or downtown) in the vicinity show a better performance rating than shopping centers with more competition

First, the question of whether competition generally has an impact on tenants' performance ratings was explored. Of the 183 shopping centers assessed in the survey, 47 have no competitors within a ten-minute drive, and 136 have competitors within a ten-minute drive.

The bar chart (diagram 3.6) shows only a very slight difference in performance ratings between the two groups:

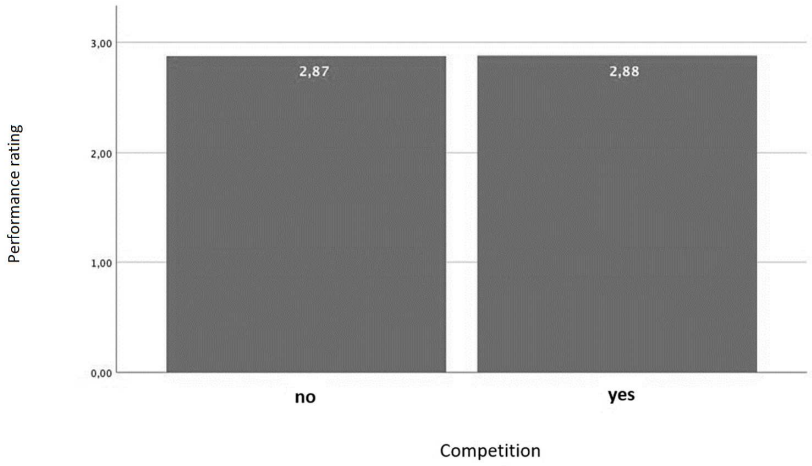


Diagram 3.6 Performance rating by competitive situation

Using a t-test for independent samples, the first step was to test whether these differences in performance assessments were significant.

Null hypothesis:

H0 = There is no difference in performance ratings among tenants between the group with competition and the group without competition.

Alternative hypothesis:

H1 = There is a difference in performance ratings among tenants between the group with competition and the group without competition.

Independent samples test										
		Levene test of variance equality		T-test for equality of means						
		F	Signifi-kanz	T	df	Sig. (2-sided)	Mean difference	Standard error of the difference	95% confidence interval of the difference	
									At	Upper
Performance rating	Variances are equal	0,47	0,49	-0,06	181,00	0,96	0,00	0,09	-0,18	0,17
	Variances are not equal			-0,05	72,91	0,96	0,00	0,09	-0,19	0,18

Table 4.12 Performance rating by competitive situation

The t-test showed that the competitive situation has no effect on the performance rating of the shopping centers from the tenant's perspective. The null hypothesis must therefore be retained and the alternative hypothesis rejected: There is no difference in the performance rating of the tenants between the group with competition in the immediate vicinity and the group without competition.

As this result is surprising, it was examined in more detail whether the number of competitors in the vicinity could have an impact on the performance rating: To test the hypothesis in more detail, the correlation between the items "performance rating" and "number of shopping centers within a 10 min drive" was therefore tested using a bivariate correlation according to Spearman-Rho.

Null hypothesis:

H0 = There is no relationship between tenant performance ratings and the number of nearby competitors.

Alternative hypothesis:

H1 = There is a relationship between tenant performance ratings and the number of nearby competitors.

Correlations

			Overall ranking	Number of shopping centers within 10 min drive
Spearman-Rho	Performance rating	Correlation coefficient	1	0,07
		Sig. (1-sided)		0,18
		N	183	183
	Number of shopping centers within 10 min drive	Correlation coefficient	0,07	1
		Sig. (1-sided)	0,18	
		N	183	183

Table 4.13 Performance rating by competitive situation with 10 min drive

The result shows that there is no correlation between the two items. Thus, the null hypothesis must be accepted and the alternative hypothesis rejected: There is no correlation between the number of competitors in the vicinity (center or downtown) and the performance rating of the tenants.

In summary, it can be stated that the performance rating is completely independent of the competitive situation in the immediate vicinity: Neither the number of competitors nor the mere presence of competition at the macro-location is related to tenant satisfaction

4.4.3 Car accessibility

Shopping centers with a shorter distance to the highway show a better performance rating than shopping centers that are further away from the highway.

To test the hypothesis, the relationship between the items "overall ranking" and "distance to highway in minutes" was tested using a Spearman-Rho bivariate correlation.

Null hypothesis:

H0 = There is no relationship between tenant performance ratings and distance from the freeway.

Alternative hypothesis:

H1 = There is a relationship between tenant performance ratings and distance from the freeway.

Correlations				
			Overall ranking	Distance to the highway in min
Spearman-Rho	Performance rating	Correlation coefficient	1	0,08
		Sig. (1-sided)		0,15
		N	183	183
	Distance to the highway in min	Correlation coefficient	0,08	1
		Sig. (1-sided)	0,15	
		N	183	183

Table 4.14 Performance rating by distance to the highway

The result shows that there is no correlation between the two items. Thus, the null hypothesis must be accepted and the alternative hypothesis rejected: There is no correlation between the distance to the highway and the performance rating of the tenants.

In addition, it was investigated whether this could be observed for a connection to private transport as a whole by testing the correlation between the items "performance rating" and "distance to federal highway in minutes" also using a bivariate correlation according to Spearman-Rho.

Null hypothesis:

H0 = There is no relationship between tenant performance ratings and distance from the state highway.

Alternative hypothesis:

H1 = There is a relationship between tenant performance ratings and distance from the state highway.

Correlations				
			Overall ranking	Distance to the main road in min
Spearman-Rho	Performance rating	Correlation coefficient	1	0,228**
		Sig. (1-sided)		0,00
		N	183	183
	Distance to the main road in min	Correlation coefficient	0,228**	1
		Sig. (1-sided)	0,00	
		N	183	183
**. The correlation is significant at the 0.01 level (one-sided).				

Table 4.15 Performance rating by distance to the main road

Interestingly, the test comes to a different conclusion with regard to the connection to a federal highway: There is a correlation - albeit a weak one - between the two items with a significance of $p < 0.01$. This means that the shorter the distance to the federal highway, the better the tenants' performance rating. There is thus a correlation between access to a federal highway and the performance rating of the tenants: A shorter distance to the main road is associated with a better performance rating, or vice versa: a better performance rating is associated with a shorter distance to the main road.

4.4.4 Public transport connection

Shopping centers with a public transport connection within walking distance show a better performance rating than shopping centers without a public transport connection within walking distance.

Of the 183 shopping centers evaluated, 45 are not connected to public transit, while 138 have public transit connections.

To test the hypothesis, the correlation between the presence of a public transport connection within walking distance and the performance rating of the tenants was first visualized with a bar chart (see diagram 3.7).

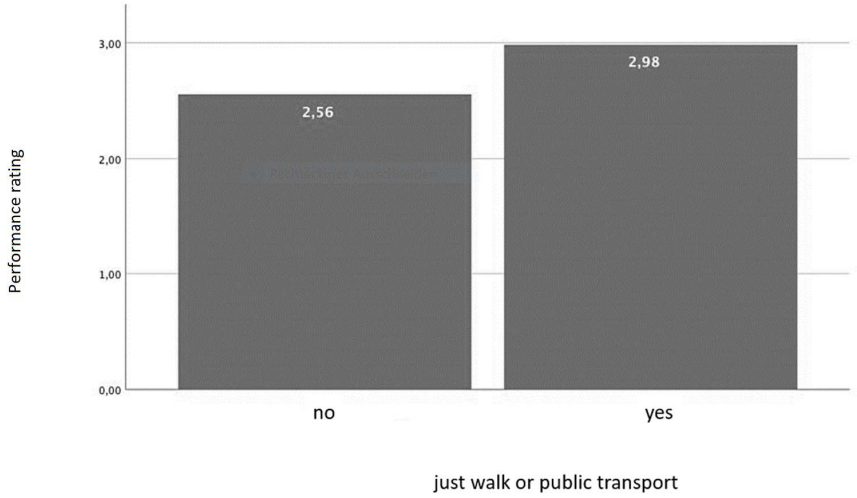


Diagram 3.7 Correlation between public transport within walking distance and tenants' performance rating

Surprisingly, this visualization suggests that the opposite of the hypothesis is true: if a public transit connection is within walking distance, tenants' performance ratings appear to be worse.

Using a t-test for independent samples, the first step was to test whether these differences in performance rating were significant.

Null hypothesis:

H0 = There is no difference in tenant performance ratings between the

group with a public transit connection within walking distance and the group without a public transit connection within walking distance.

Alternative hypothesis:

H1 = There is a difference in tenant performance ratings between the group with a public transit connection within walking distance and the group without a public transit connection within walking distance.

Independent samples test										
		Levene test of variance equality		T-test for equality of means						
		F	Significant	T	df	Sig. (2-sided)	Mean difference	Standard error of the difference	95% confidence interval of the difference	
									At	Upper
Performance rating	Variances are equal	3,36	0,07	-5,07	181,00	0,00	-0,43	0,08	-0,59	-0,26
	Variances are not equal			-5,84	98,65	0,00	-0,43	0,07	-0,57	-0,28

Table 4.16 Correlation between public transport within walking distance and tenants' performance rating

The test showed that pedestrian accessibility has an impact on the performance rating of the shopping centers from the tenant's perspective with a significance of $p < 0.01$. Thus, the null hypothesis can be rejected

and the alternative hypothesis retained: There is a significant difference between the group of tenants without and the group of tenants with public transport accessibility, to the extent that the tenants with public transport accessibility give a worse performance rating.

To get to the bottom of this, the interaction of the items "performance ranking" and "distance to public transport in minutes" was tested using a bivariate correlation according to Spearman-Rho.

Null hypothesis:

H0 = There is no relationship between tenant performance ratings and distance to public transit.

Alternative hypothesis:

H1 = There is a relationship between tenant performance ratings and distance to public transit.

Correlations

			Overall ranking	Distance to public transport in min
Spearman-Rho	Performance rating	Correlation coefficient	1	-0,389**
		Sig. (1-sided)		0,00
		N	183	182
	Distance to public transport in min	Correlation coefficient	-0,389**	1
		Sig. (1-sided)	0,00	
		N	182	182

**. The correlation is significant at the 0.01 level (one-sided).

Table 4.17 Correlation between public transport within walking distance and tenants' performance rating

The result of the calculation shows a negative correlation between the two items with a significance of $p < 0.01$ and thus supports the first finding that the walking distance to public transport is associated with a more negative

performance rating. That is, the greater the distance to public transit, the better the tenants' performance rating, or: a better performance rating is associated with a greater distance to public transit. Thus, a correlation occurs between the distance to public transport and the performance rating. Thus, the null hypothesis must be rejected and the alternative hypothesis accepted.

To summarize once again the importance of transport connections for tenant satisfaction in the shopping centers, it should be noted that a favorable location of the shopping center plays a greater role in terms of connections to individual transport than connections to local public transport: the latter is surprisingly more negatively related to tenant satisfaction.

4.5 Non-systemic influences building structure of the centers

The non-systemic influences building structure of the shopping center can be identified as significant factors, especially by the management. In its form and conception, the orientation of the center presents itself as, for example, a one level specialist market-oriented city district center or an inner-city integrated multi level center.

4.5.1 Age

Younger shopping centers show a better performance rating than older shopping centers.

In order to be able to investigate the hypothesis, the shopping centers assessed in the survey were first divided into three different groups according to the year of opening: Of the 183 shopping centers, 27 opened

between 1964 and 1979, 63 between 1980 and 1999, and 93 between 2000 and 2015. In the present work, three age classes were formed for practical purposes, since in the SCPR con 2015 to 2022, for example, only those centers could be evaluated which had at least three tenant statements on performance per year and were ranked per year from 2015 to 2022. The following diagram 3.8 shows the performance rating of the tenants along the three time periods of the new openings.

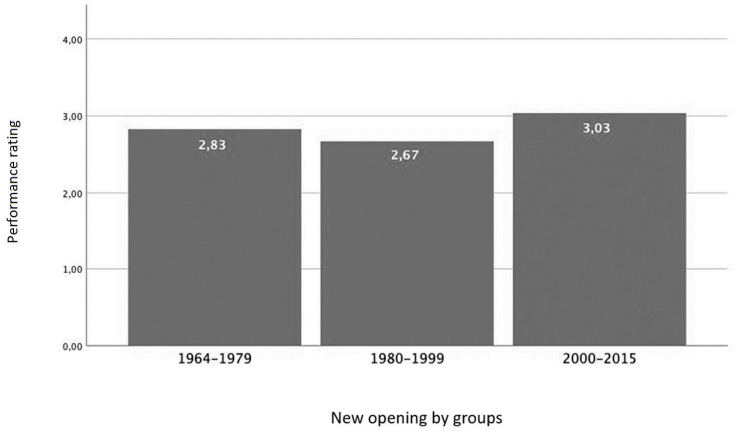


Diagram 3.8 Performance rating by age of shopping centers

The bar chart indicates that the opposite of the hypothesis is true: the performance rating of tenants seems to be worse for younger shopping centers.

A Kruskal-Wallis test was conducted to calculate whether the age of the shopping centers actually has an impact on tenants' performance ratings:

Null hypothesis:

H0 = There is no difference in tenant performance ratings between younger and older shopping centers.

Alternative hypothesis:

H1 = There is a difference in tenant performance ratings between younger and older shopping centers.

New opening by groups		N	Middle rank
Performance rating	1964-1979	27	91,00
	1980-1999	63	69,87
	2000-2015	93	107,28
	Total	183	

Statistics for test[a,b]

	Overall ranking
Kruskal-Wallis H	18,740
df	2
Asymptotic significance	0,000

a. Kruskal-Wallis test

b. Group variable: New opening by group

Table 4.18 Performance rating by age of shopping center

The Kruskal-Wallis test revealed that there is a significant difference in performance evaluation between the different opening periods ($p < 0.01$). Thus, the null hypothesis is rejected and the alternative hypothesis is accepted. Since the Kruskal-Wallis test can only determine if differences exist, but not between which of the groups the differences occur, a post-hoc test is required:

Pairwise comparisons of new opening by group					
Sample 1-Sample 2	Test statistics	Std. error	Standard test statistics	Sig.	Corr. sig.[a]
1980-1999 and 1964-1979	21,127	12,185	1,734	0,083	0,249
1980-1999 and 2000-2015	-37,407	8,644	-4,328	0,000	0,000
1964-1979 and 2000-2015	-16,280	11,580	-1,406	0,160	0,479

Each row tests the null hypothesis that the distributions in sample 1 and sample 2 are the same.
Asymptotic significances (two-sided tests) are displayed. The significance level is 0.05.

a. Significance values are adjusted by the Bonferroni correction for multiple testing.

Table 4.19 Performance rating by age of shopping center

The pairwise comparisons showed that the differences in performance rating between shopping centers opened between 1980 and 1999 and between 2000 and 2015 are significant ($p < 0.01$). In contrast, the differences in performance rating between the older shopping centers among themselves (opened between 1964 and 1979 and between 1980 and 1999) and between the oldest and the youngest (opened between 1964 and 1979 and between 2000 and 2015) are not significant ($p = 0.25$ and $p = 0.48$, respectively).

Overall, the tests confirm the visual impression (diagram 3.8): The younger shopping centers, which opened between 2000 and 2015, show a worse performance rating than the older shopping centers.

4.5.2 Parking places

The higher the number of parking spaces in a shopping center, the better

the performance rating of the tenants.

To test the hypothesis, the correlation of the item "performance rating " with the item "Number of parking spaces" was first visually tested using a scatter diagram and a Lowess fit line was drawn in for exploratory analysis of a possible correlation (diagram 4.9). This shows that there is a linear relationship between the two items.

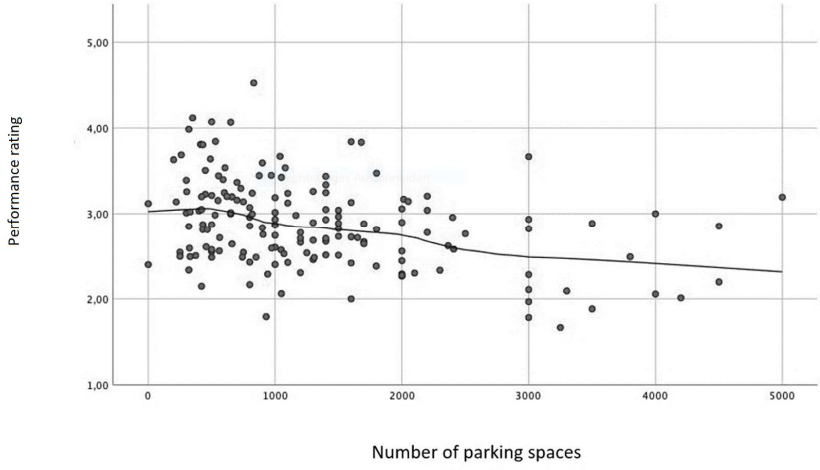


Diagram 4.9 Correlation between the number of parking spaces and tenants' performance rating

To further test the hypothesis, the correlation between the items "overall ranking" and "number of parking spaces" was tested using a Pearson's bivariate correlation.

Null hypothesis:

H0 = There is no correlation between tenant performance ratings and the

number of parking spaces in a shopping center.

Alternative hypothesis:

H1 = There is a correlation between tenant performance ratings and the number of parking spaces in a shopping center.

Correlation			
		Performance rating	Number of parking spaces
Performance rating	Correlation according to Pearson	1	-0,350**
	Significance (1-sided)		0,00
	N	183	165
Number of parking spaces	Correlation according to Pearson	-0,350**	1
	Significance (1-sided)	0,00	
	N	165	165
**. The correlation is significant at the 0.01 level (1-sided).			

Table 4.20 Correlation between the number of parking spaces and tenants' performance rating

The result shows that there is a negative correlation between the two items: the higher the number of parking spaces in a shopping center, the better the performance rating of the tenants. Thus, the null hypothesis is rejected and the alternative hypothesis is accepted: There is a correlation between the number of parking spaces in a shopping center and the performance rating of the tenants: a larger number of parking spaces is associated with a better performance rating or vice versa: a better performance rating is associated with a larger number of parking spaces.

4.5.3 Level

The fewer levels the shopping center has (for example, only first floor), the better the performance rating of the tenants.

Of the 183 shopping centers evaluated, the number of floors was reported for 181: 23 shopping centers have one floor, 59 have two, 78 have three, 13 have four, and only eight shopping centers span five floors.

To test the hypothesis, the relationship between the number of floors and tenants' performance ratings was first visualized with a bar chart (see diagram 3.10).

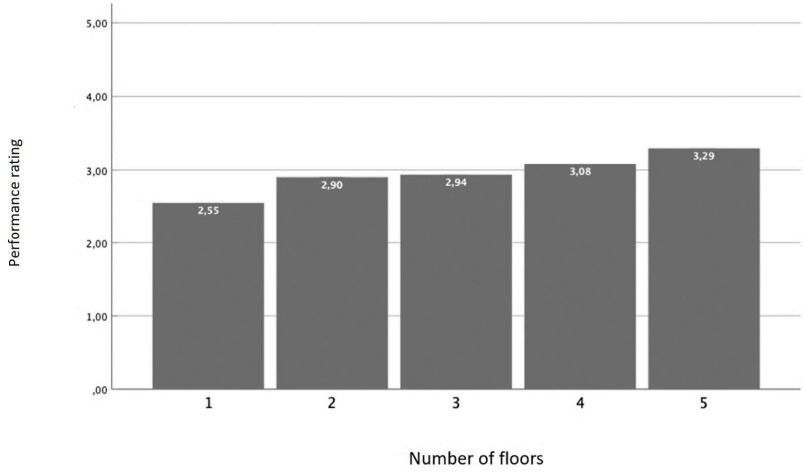


Diagram 3.10 Correlation between the number of floors and tenants' performance rating

The visualization suggests that the hypothesis is correct: the lower the number of floors over which the shopping center extends, the better the performance assessment of the tenants appears to be. In particular, shopping centers with only one floor seem to stand out with a significantly better performance rating.

A Kruskal-Wallis test was conducted to calculate whether the number of shopping center floors actually has an impact on tenant performance ratings:

Null hypothesis:

H0 = There is no correlation between tenant performance ratings and the number of floors in the shopping center.

Alternative hypothesis:

H1 = There is a correlation between tenant performance ratings and the number of floors in the shopping center.

Summary of the Kruskal-Wallis test for independent samples.	
Total	181
Test statistics	18,641[a]
Degree of freedom	4
Asymptotic Sig. (two-sided test)	0,001
a. The test statistic is adjusted for ties.	

Table 4.21 Correlation between the number of floors and tenants' performance rating

The Kruskal-Wallis test revealed that there is a significant difference in performance evaluation between the different levels ($p < 0.01$). Thus, the null hypothesis is rejected and the alternative hypothesis is accepted. Since the Kruskal-Wallis test can only determine if differences exist, but not between which of the groups the differences occur, a post-hoc test is required:

Pairwise comparisons of number of floors					
Sample 1-Sample 2	Test statistics	Std. error	Standard test statistics	Sig.	Anp. Sig.[a]
1-2	-36,859	12,879	-2,862	0,004	0,042
1-3	-39,304	12,431	-3,162	0,002	0,016
1-4	-59,746	18,179	-3,286	0,001	0,010
1-5	-76,630	21,505	-3,563	0,000	0,004
2-3	-2,444	9,040	-0,270	0,787	1,000
2-4	-22,887	16,052	-1,426	0,154	1,000
2-5	-39,771	19,739	-2,015	0,044	0,439
3-4	-20,442	15,695	-1,302	0,193	1,000
3-5	-37,327	19,450	-1,919	0,055	0,550
4-5	-16,885	23,542	-0,717	0,473	1,000

Each row tests the null hypothesis that the distributions in sample 1 and sample 2 are the same.
Asymptotic significances (2-sided tests) are displayed. The significance level is 0.050.

a. Significance values are adjusted by the Bonferroni correction for multiple testing.

Table 4.22 Pairwise comparison of number of floors

The pairwise comparisons revealed that the differences in performance assessment between the shopping centers that span only one floor and those that span more than one floor are significant ($p < 0.05$). In contrast, the differences in performance rating between the multi-story shopping centers among themselves are not significant ($p > 0.05$).

Overall, the tests confirm the visual impression (see Figure 14): Shopping centers that extend over only one floor show a better performance rating Shopping centers with more than one floor.

4.5.4 Rental space

The larger a shopping center is, the better the performance rating of the tenants

The hypothesis is examined in the following in two ways: firstly, via the area (operationalized with the help of the item "rental space") and secondly, via the number of sectors represented in the shopping center.

To test the hypothesis, the correlation of the item "performance rating" with the item "rental space" was first checked visually using a scatter diagram and a Lowess fit line was drawn in for exploratory analysis of a possible correlation (diagram 3.11). This shows that there is a linear relationship between the two items.

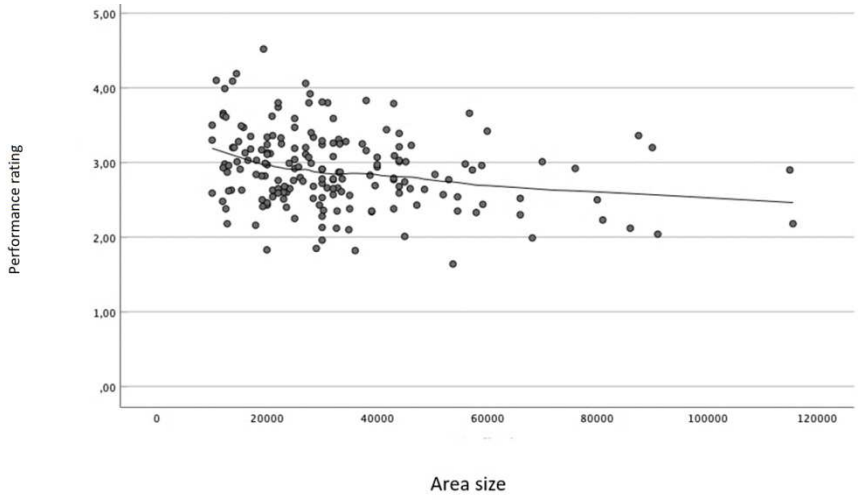


Diagram 3.11 Correlation between area size and tenant performance rating

To further test the hypothesis, the correlation between the items "performance rating" and "rental space" was tested using a Pearson bivariate correlation.

Null hypothesis:

H0 = There is no correlation between tenant performance ratings and a

shopping center's retail space.

Alternative hypothesis:

H1 = There is a correlation between tenant performance ratings and a shopping center's retail space.

Correlations			
		Performance rating	Rental space
Overall ranking	Pearson correlation	1	-0,26**
	Sig. (2-sided)		0,00
	N	183	183
Rental space	Pearson correlation	-0,026**	1
	Sig. (2-sided)	0,00	
	N	183	183
**. The correlation is significant at the 0.01 level (2-sided).			

Table 4.23 Correlation between rental space and tenant performance rating

The result shows that there is a negative correlation - albeit a relatively weak one - between the two items: the larger the area of a shopping center, the better the tenants' performance rating. Thus, the null hypo thesis is rejected and the alternative hypothesis is accepted: There is a correlation between the floor space of a shopping center and the performance rating of the tenants: a larger floor space is associated with a better performance rating or vice versa: a better performance rating is associated with a larger floor space.

4.6 Non-systemic influences industry mix

A decisive factor in the acceptance of a shopping center by customers is the way in which the stores are coordinated with one another, also known as the sector mix or industry mix. Anchor tenants are positioned in the centers which alone attract many customers so that the center generates a

positive frequency. These magnets are deliberately placed mostly at opposite ends or in the center of the shopping center, in order to create an optimal and well-frequented customer flow for all tenants within the center through the walking axes created. Large-scale grocery stores, fashion outlets and consumer electronics stores have established themselves as magnet businesses. In between, smaller stores are grouped together, which pay proportionally significantly higher rents per square meter than the anchor tenants.

4.6.1 Food and drugstore

The higher the number of supply-relevant rental units (food and drugstore) in a shopping center, the better the performance rating.

To test the hypothesis, the various constellations of grocery stores and drugstores occurring in the shopping centers were first grouped as follows:

- Shopping center without retailers for food and drugstore items,
- Shopping center with up to two units (retailers for food and drugstore articles added),
- Shopping center with three units (retailers for food and drugstore items added) and
- Shopping centers with four or more units (retailers for food and drugstore articles added).

The following picture emerged: only four of the shopping centers have neither a food retailer nor a drugstore, 121 shopping centers have one or two retailers for food and/or drugstore items, 33 shopping centers have

three food retailers and/or drugstores and 25 shopping centers even have four or five retailers for food and/or drugstore items.

In the next step, the correlation of the item "performance rating" with the item "Number of supply-relevant units by group" was visualized using a bar chart (see diagram 3.12). There is no clear correlation between the two items.

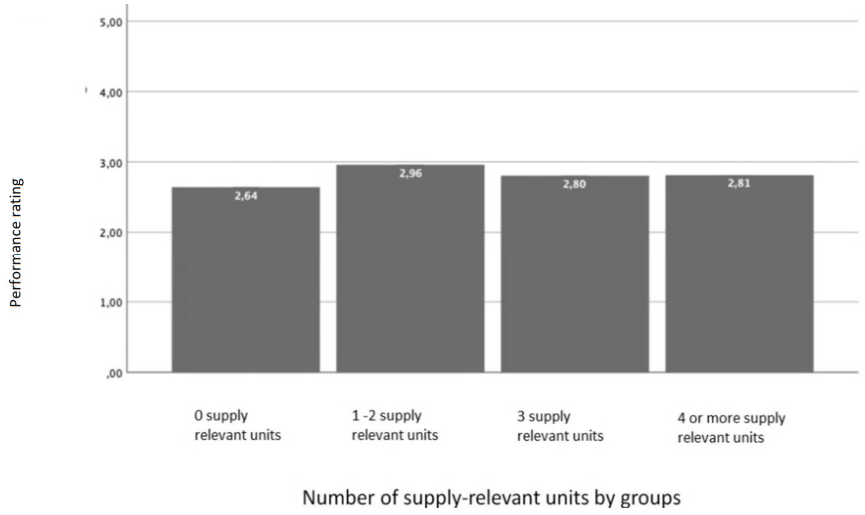


Diagram 3.12 Correlation between the number of supply-relevant units in the shopping center and the performance rating of the tenants

A Kruskal-Wallis test was conducted to calculate whether the number of utility relevant units in a shopping center has an impact on tenants' performance rating, contrary to visual impressions:

Null hypothesis:

H0 = There is no correlation between tenant performance ratings and the number of utility-related units in a shopping center.

Alternative hypothesis:

H1 = There is no correlation between tenant performance ratings and the

number of utility-related units in a shopping center.

Summary of the Kruskal-Wallis test for independent samples.	
Total	183
Test statistics	4,315[a]
Degree of freedom	3
Asymptotic Sig. (two-sided test)	0,229
a. The test statistic is adjusted for ties.	

Table 4.24 Correlation between the number of supply-relevant units in the shopping center and the performance rating of the tenants

The Kruskal-Wallis test confirmed the visual impression that there is no difference in the performance assessment depending on the number of supply-relevant units in a shopping center. Thus, the null hypothesis must be accepted and the native hypothesis rejected

4.6.2 Number of industries

In the next step, the correlation of the "performance rating" item with the "number of industries" item was tested visually using a bar chart to further test the hypothesis (see diagram 3.13). This shows that there is no correlation between the two items: Satisfaction appears to be equally pronounced in almost all groups - only the shopping centers with the lowest number of sectors stand out positively from this at first glance.

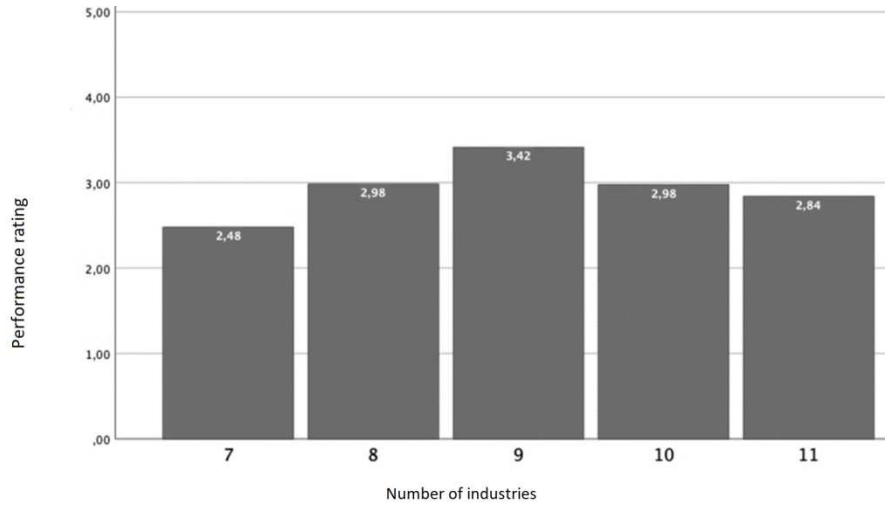


Diagram 3.13 Performance rating by the number of industries

A Kruskal-Wallis test was conducted to calculate whether the number of industries represented in the shopping center had an impact on tenant performance ratings:

Null hypothesis:

H0 = There is no correlation between tenant performance ratings and the number of industries represented in the shopping center.

Alternative hypothesis:

H1 = There is a correlation between tenant performance ratings and the number of industries represented in the shopping center.

Summary of the Kruskal-Wallis test for independent samples.	
Total	183
Test statistics	5,283[a]
Degree of freedom	4
Asymptotic Sig. (two-sided test)	0,259
a. The test statistic is adjusted for ties.	

Table 4.25 Performance rating by the number of industries

The Kruskal-Wallis test confirmed the visual impression that there is no difference in the performance rating depending on the number of sectors represented in the shopping center. Thus, the null hypothesis must be accepted and the alternative hypothesis rejected.

In summary, the size of a shopping center in terms of square footage has an impact on tenant satisfaction (chapter 4.5.4), but not the number of industries represented in the shopping center.

4.6.3 Number of restaurants

Centers with a higher number of food service operations have better performance ratings.

To test the hypothesis, the correlation of the "performance rating" item with the "number of restaurants" item was first visualized using a bar chart (see diagram 3.14). At first glance, there is no correlation between the two

items.

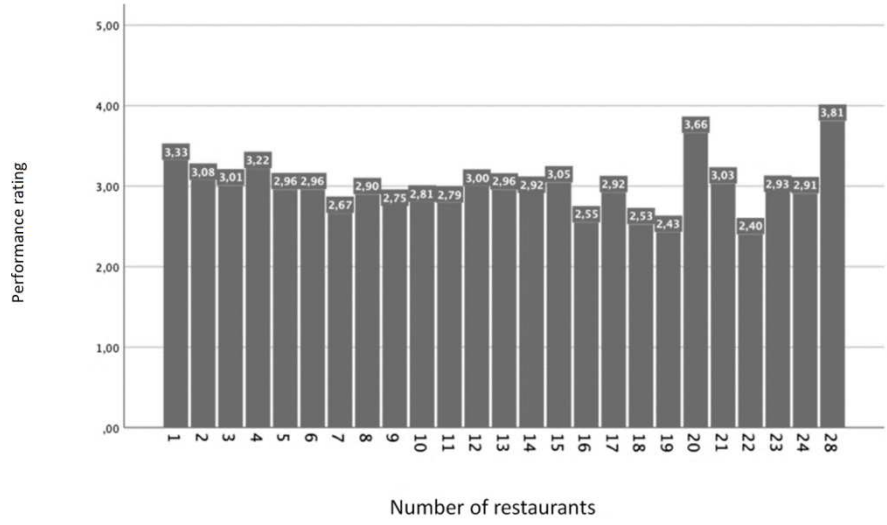


Diagram 3.14 Correlation between the number of restaurants and the performance rating

A Kruskal-Wallis test was conducted to calculate whether the number of restaurants in a shopping center has an impact on tenants' performance ratings, contrary to visual impressions:

Null hypothesis:

H0 = There is no relationship between tenant performance ratings and the number of restaurants in a shopping center.

Alternative hypothesis:

H1 = There is a correlation between tenant performance ratings and the number of restaurants in a shopping center.

Summary of the Kruskal-Wallis test for independent samples.	
Total	183
Test statistics	26,650[a]
Degree of freedom	24
Asymptotic Sig. (two-sided test)	0,321
a. The test statistic is adjusted for ties.	

Table 4.26 Correlation between the number of restaurants and the performance rating

The Kruskal-Wallis test confirmed the visual impression that there is no difference in performance rating depending on the number of restaurants in a shopping center. Thus, the null hypothesis must be accepted and the alternative hypothesis rejected.

4.6.4 Number of anchor tenants

Centers with more magnet operations have better performance ratings.

To test the hypothesis, the correlation of the "overall ranking" item with the "sales magnet" item was first visualized using a bar chart. There is no clear correlation between the two items: Satisfaction appears to be more or less the same in all groups. However, on very close inspection, there appears to be a tendency (albeit weak) to recognize better performance with increased numbers of anchor tenants.

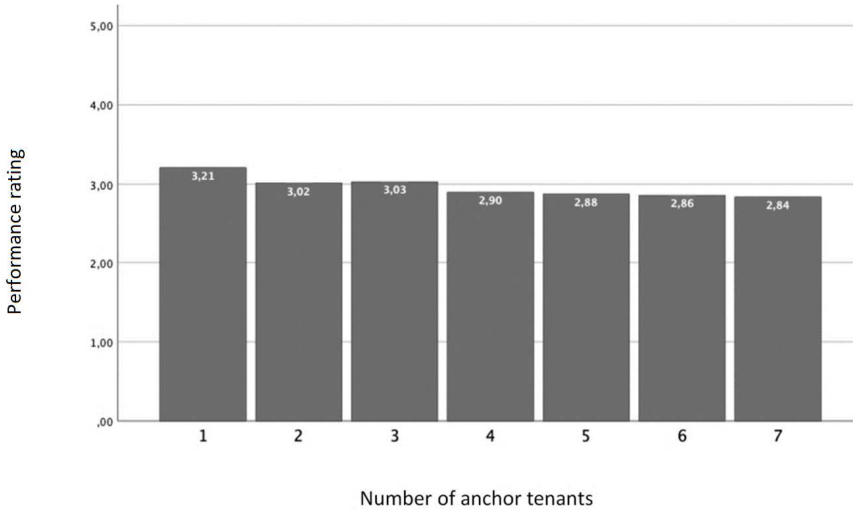


Diagram 3.15 Correlations between the number of anchor tenants and the performance rating

A Kruskal-Wallis test was conducted to calculate whether the number of magnet businesses in a shopping center has an impact on tenant performance ratings:

Null hypothesis:

H0 = There is no correlation between tenant performance ratings and the number of magnet businesses in a shopping center.

Alternative hypothesis:

H1 = There is a correlation between tenant performance ratings and the number of magnet businesses in a shopping center.

Summary of the Kruskal-Wallis test for independent samples.	
Total	182
Test statistics	2,975[a]
Degree of freedom	6
Asymptotic Sig. (two-sided test)	0,812
a. The test statistic is adjusted for ties.	

Table 4.27 Correlation between the number of anchor tenant and the performance rating

The Kruskal-Wallis test confirmed the visual impression that there is no essential difference in performance rating depending on the number of magnet businesses in a shopping center. Thus, the null hypothesis must be accepted and the alternative hypothesis rejected, although the diagramm suggests a minimal trend towards better performance with more anchor tenants.

4.7 Excurs Covid: Supply-relevant trade

However, if the "Corona" factor is included in the analysis, a different picture may emerge : As stated in chapter 4.2, tenant satisfaction in shopping centers was lower during and after the Corona pandemic than before. Since during the Corona pandemic retail activities were partly restricted to supply-relevant units, it would be reasonable to assume that this resulted in differences in the performance assessment of the tenants in the shopping centers depending on the presence of supply-relevant units: If supply-relevant units are present in a shopping center, the differences in the performance assessment before and during/after the Corona pandemic are smaller than in shopping centers without supply-relevant units. In order

to test this hypothesis, the correlation of the tenants' performance rating in the form of the item "satisfaction" (taking into account the two measurement points "before Corona" and "during/after Corona") with the item "presence of supply-relevant units" was visualized with the help of a bar chart. This shows that the difference in satisfaction between the two measurement points is noticeably greater in the group of shopping centers without supply-relevant units than in the group of shopping centers with supply-relevant units.

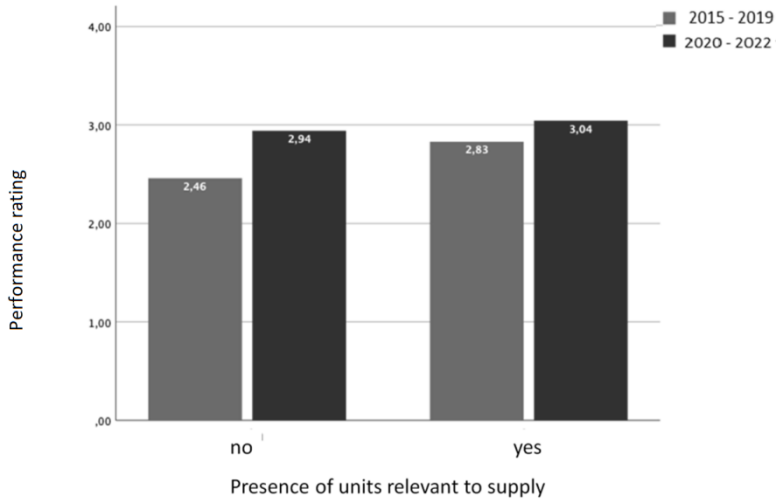


Diagram 3.16 Correlation between the presence of supply-relevant units and the performance rating of tenants taking into account the Corona pandemic

A Wilcoxon test was conducted for both groups to calculate whether, as a function of the Corona pandemic, the presence of utility-related units in a shopping center affects tenant performance ratings:

Null hypothesis:

H0 = The Corona pandemic has had the same impact on tenant satisfaction in shopping centers without utility-related units as it has on tenant

satisfaction in shopping centers with utility-related units.

Alternative hypothesis:

H1 = The Corona pandemic had a greater impact on tenant satisfaction in shopping centers without utility-related units than on tenant satisfaction in shopping centers with utility-related units.

Test statistics[a]

Presence of units relevant to supply		Satisfaction after Corona cumulative 2020 to 2022 - Satisfaction before Corona cumulative 2015 to 2019
no	Z	-1,83[b]
	Asymp. Sig. (2-sided)	0,07
yes	Z	-7,19[b]
	Asymp. Sig. (2-sided)	0,00

a. Wilcoxon test

b. Based on negative ranks.

Table 4.28 Correlation between the presence of supply-relevant units and the performance rating of tenants taking into account the Corona pandemic

The Wilcoxon test showed that there are no significant differences in the performance assessment of tenants before and during/after the Corona pandemic for the group of shopping centers without supply-relevant units with $p > 0.05$, while the differences in the performance rating of tenants for the group of shopping centers with supply-relevant units are significant with $p < 0.01$. The visually determined stronger satisfaction difference for the shopping centers without utility-relevant units (see Figure 21) thus occurred by chance and cannot be attributed to the Corona pandemic. Thus, the null hypothesis must be accepted and the alternative hypothesis rejected: Thus, the hypothesis that the Corona pandemic had a greater impact on shopping centers without utility-related units cannot be

confirmed. This finding reinforces the fact established above that utility relevant units in a shopping center do not affect tenants' performance evaluations. However, this purely quantitative analysis must be evaluated critically, as it cannot be ruled out that during the period of closure, which also corresponds in part to the survey period, companies may simply not have participated in the survey.

4.8 Exkurs Covid: Digital mall

Centers with the Digital Mall show a better performance rating than centers without it.

To test the hypothesis, the correlation of the "performance rating" item with the "digital mall" item was first visualized using a bar chart (see diagram 3.17). There is no correlation between the two items: satisfaction appears to be equally pronounced in both groups.

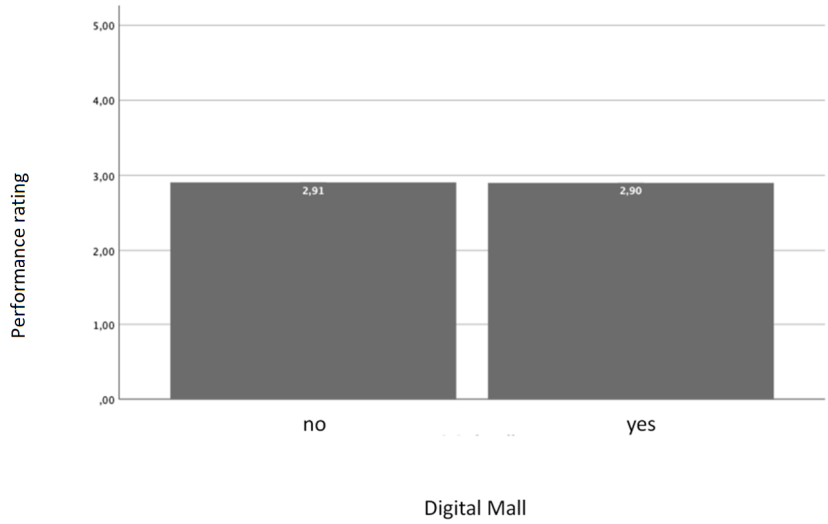


Diagram 3.17 Correlation between centers with digital mall and without digital mall according to performance rating

Using a t-test for independent samples, we now examined whether, contrary to initial impressions, there were differences in performance rating that could be attributed to the presence - or absence - of a digital mall.

Null hypothesis:

H0 = There is no difference in the performance rating between the group of shopping centers that have a digital mall and the group of shopping centers that do not have a digital mall.

Alternative hypothesis:

H1 = There is a difference in performance rating between the group of shopping centers that have a digital mall and the group of shopping centers that do not have a digital mall.

Independent samples test

		Levene test of variance equality		T-test for equality of means						
		F	Signifi-kanz	T	df	Sig. (2-sided)	Mean difference	Standard error of the difference	95% confidence interval of the difference	
									At	Upper
Performance rating	Variances are equal	7,17	0,01	0,08	181	0,93	0,01	0,08	-0,15	0,16
	Variances are not equal			0,09	173,20	0,93	0,01	0,07	-0,14	0,15

Table 4.29 T Tests with no effect on performance rating of the digital mall during the Corona pandemic

The t-test confirmed the visual impression and showed that the presence of a digital mall has no effect on the performance assessment of the shopping centers from the tenant's perspective. The null hypothesis must therefore be confirmed and the alternative hypothesis rejected: There is no

correlation between the presence of a digital mall and the performance assessment of the tenants.

4.9 Exkurs Research Tringualation

As a critical digression of this work, it will be examined whether there is a connection between tenant and customer assessment of performance (or popularity from the customer's perspective). Research triangulation is used to evaluate successful centres not only from the tenant's perspective, but also from the customer's perspective. The comparison portal Testberichte.de evaluated almost 3.4 million online reviews of around 600 shopping centres as a basis and compiled a ranking. The comparison portal's evaluation is based on customer reviews on Google Maps for medium-sized and large shopping centres with at least 100 reviews. The survey took place on 05.12.2023. There was an average rating of 4.13 and a total number of all ratings of 3.399.320. The authors of the survey used a classic ranking, whereby centres with a rating of 4.2 or better were categorised as "very popular", while centres with a rating of less than 4.1 were classified as "less popular". On this basis, the following hypothesis is put forward

Centers with a good performance rating from the tenant's perspective also have a good customer rating.

To test the hypothesis, the correlation of the item "Overall ranking" with the item "Evaluation result above 4.2 or below" was first visualized using a bar chart (see diagram 3.18). Of the 183 shopping centers for which a performance assessment is available, there is also a customer rating for 171. 46 shopping centers were rated with an average of less than 4.2 points,

125 with 4.2 or more points. A visual comparison shows that tenant satisfaction appears to be higher in shopping centers rated by customers with an average of at least 4.2 points. The assumption of a correlation between the two items is therefore obvious.

Diagram 3.18 Correlation between the customer rating and the performance rating of the tenants

A t-test for independent samples was used to check whether the first impression was confirmed and whether there were differences in the performance assessment that could be traced back to a customer rating above - or below - 4.2 points

Null hypothesis:

H0 = There is no difference in the performance assessment between the group of shopping centers that receive a rating of at least 4.2 from customers and the group of shopping centers that receive a rating of less than 4.2 from customers.

Alternative hypothesis:

H1 = There is a difference in the performance assessment between the group of shopping centers that receive a rating of at least 4.2 from customers and the group of shopping centers that receive a rating of less than 4.2 from customers.

Test with independent samples										
		Levene test of equality of variance		T-test for equality of means						
		F	Signifi-cance	T	df	Sig. (2-sided)	Mean difference	Standard error of the difference	95% confidence interval of the difference	
									Lower	Upper
Overall ranking	Variances are equal	0,09	0,75	6,34	169	0,00	0,48	0,08	0,33	0,63
	Variances are not equal			6,41	81,79	0,00	0,48	0,08	0,33	0,63

Table 4.30 T Tests with correlation between costumer and tenant performance

The t-test showed that a high rating from the customer's perspective has a correlation with a significance of $p < 0.01$ with the performance assessment of the shopping center from the tenant's perspective. The null hypothesis can therefore be rejected and the alternative hypothesis retained: There is a difference in the performance assessment between the group of shopping centers that receive a rating of at least 4.2 from customers and the group of shopping centers that receive a rating below 4.2 from customers. Shopping centers with a better performance assessment from the tenants' perspective are also rated better by customers.

In this context, the question arises as to what are the key factors influencing

the valuation?

In order to investigate which of the key factors from the previous analysis have the greatest influence on the performance assessment, a stepwise regression was calculated on the basis of the key factors identified above. In a stepwise regression, the predictors are selected in a data-driven manner, i.e. those that can best predict the dependent variable ("overall ranking") are statistically selected. Predictors that do not make a significant contribution to clarifying the overall ranking are excluded from the analysis. The significance level is set at $\alpha = .05$. Of 183 cases, a total of 162 were included in the study for which a rating was available for all items. Of the predictors tested, centrality (item "centrality index"), location (item "location grouped greenfield vs rest"), accessibility (operationalized using the items "distance to main road in min" and "public transport within walking distance"), age (items "new opening by group" and "old vs new"), parking facilities (items "free parking spaces" and "number of parking spaces"), number of floors and rental space (item "rental space"), only the two items "number of parking spaces" and "distance to main road in minutes" are included as significant predictors in the model for predicting the overall ranking. In summary, it should be noted that the predictors examined only make a low to medium contribution to the performance assessment of tenants (14%) and the assessment by customers (26%) and that a complex interplay of numerous factors flows into the performance assessment of tenants in shopping centers/customers. Of the predictors examined, the number of parking spaces exerts the greatest influence in both target groups, which a detailed analysis in the appendix illustrates.

Nevertheless, one of the important unanswered questions concerning, what

are the best and worst shopping centres from the perspective of tenants and customers?

Therefore a hierarchical cluster analysis was carried out to investigate which shopping centers perform best and worst from the perspective of tenants and customers (see appendix). This involved examining whether the properties under investigation could be grouped into natural groups, i.e. clusters, based on their characteristics. Each of these clusters should be as homogeneous as possible, while differing as much as possible from the other clusters. The analysis was carried out according to the Ward method using the Euclidean distance as a measure of proximity. Furthermore, the values were z-transformed in order to standardize the variables. As the number of parking spaces and the distance to the main road have proven to be the most meaningful predictors (at least of the performance assessment by the tenants) in the analysis to date, the clustering is based on these two variables. The attached dendrogram in the appendix, shows the grouping of the shopping centers into six clusters. The following visualisation was chosen to illustrate the result.

The following figure shows that the first cluster was rated best by both tenants and customers (tenants: $M = 2.46$, $SD = 0.61$, customers: $M = 4.39$, $SD = 0.09$) mean value. Cluster 1 is therefore a high performer. In the other clusters, the assessment by tenants and customers is more divergent, so that it is not clear which cluster was rated worst overall.

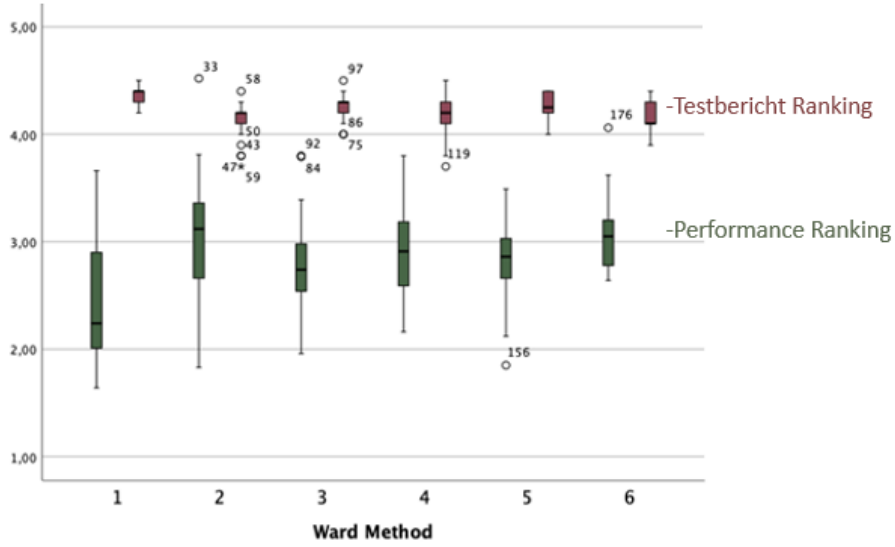


Diagram 3.19 Performance rating of tenants and customer ratings based on the six clusters

Further investigation into the common characteristics of the shopping centers belonging to the first cluster and thus to the high performers revealed that the majority have free parking (92.9%) and were opened before the year 2000 (85.7%). The upper bar illustrates the number of shopping centers opened between 2000 and 2015.

Overall as made in the previous section that the factors influencing tenant and customer satisfaction interact in so many ways that the formulation of clear cause-and-effect relationships in the form of a comprehensive model for predicting the satisfaction of both target groups is only possible to a limited extent and further analysis would go far beyond the scope of this dissertation.

Chapter Five

Discussion of results and conclusion

5.1 Study finding

Overall, the general conditions for bricks-and-mortar retail have become more difficult. An increasing reluctance to buy on the part of investors in the markets of the large retail agglomerations shows this, as does the likewise "continuously" worsening assessment of the tenants with regard to the performance of the evaluated shopping centres (n 183) in the period from 2015 to 2022.

The reasons are complex and range from higher market interest rates for financing to excessively high operating and construction costs of the rental units to a strong change in customer behaviour after the corona pandemic, in particular a reluctance of consumers to save due to inflation, to name just a few reasons. All this is under the sign of a necessary transformation, also caused by a strong pressure to develop and adapt. Therefore, significant influences on the positive or negative success of a center from the tenant's point of view can be identified. The following results of the hypotheses are now summarized.

H_n Confirmed	Constant	Variable	Hypothesis
H1: Yes	Center Performance	Year 2015 - 2022	It is assumed that the market environment from 2015 to 2022 within the brick-and-mortar retail sector for shopping centers has led to a weaker performance assessment of shopping centers from a tenant's perspective
H2: No	Center Performance	Systemic influence macro location	It is assumed that at least two of the four systemic influencing variables of the macro location (sales area per inhabitant, purchasing power, centrality rating, Prognos Rank) have a positive impact on the performance assessment of shopping centers from the tenant's perspective.
H3: Yes	Center Performance	Systemic influence micro location	It is assumed that at least two of the four systemic influencing variables of the micro location (location, competition, car accessibility, public transport) have a positive impact on the performance assessment of shopping centers from the tenant's perspective.
H4: Yes	Center Performance	Building center structure	It is assumed that at least two of the four non-systemic influencing variables of the building center structure (age, parking spaces, levels, rental space) have a positive impact on the performance assessment of shopping centers from the tenant's perspective.
H5: No	Center Performance	Industry mix	It is assumed that at least two of the four non-systemic influencing variables of the industry mix (number of supply-relevant rental units, number of industries, number of restaurants, number of anchor tenants) have a positive impact on the performance assessment of shopping centers from the tenant's perspective.
H6: No	Center Performance	Corona	It is assumed that the Corona pandemic had a greater impact on tenant satisfaction in shopping centers without utility-related units than on tenant satisfaction in shopping centers with utility-related units
H7: No	Center Performance	Digital Mall	It is assumed that there is a difference in performance assessment between the group of shopping centers that have a digital mall and the group of shopping centers that do not have a digital mall

Table 4. 31 Summary of hypothesis

Trend movement of the shopping center asset class

H1 Master: It is assumed that the market environment from 2015 to 2022 within the brick-and-mortar retail sector for shopping centers has led to a weaker performance assessment of shopping centers from a tenant

perspective.

Hypothesis H1 can be confirmed, as can be seen in the operationalised statistical analysis.

The visualisation of the shopping centre business model and its life cycle (figure 2.3) presented in this dissertation highlighted a difficult market situation, which is confirmed by the analyses made here from the tenant's point of view. There is a degressive trend in the shopping centre asset class when tenants are asked to value it. In 2015, the mean value was still 2.72 of the 183 centres to be valued, but by 2022 it had already fallen to 3.09 (chapter 4.2).

The trend is thus sustainably degressive and is an expression of the difficult economic situation in the market. In this respect, it is all the more important to analyse which factors have a significant influence on the valuation of the centres from the tenant's point of view.

Systemic influences macro-location

H2 Master: It is assumed that at least two of the four systemic influencing variables of the macro location (sales area per inhabitant, purchasing power, centrality rating, Prognos Rank) have a positive impact on the performance assessment of shopping centers from the tenant's perspective.

Hypothesis H2 cannot be confirmed, as can be seen in the operationalised statistical analysis. Only the centrality factor shows a low correlation between a good performance rating and a high centrality rating. This means that in the case of shopping centres and their analysis, it must be taken into account that people often do not shop in their own place of

residence, so that locations with a high centrality rating benefit from additional inflows of purchasing power. This is an important factor from a macro perspective.

Statistical hypotheses for operationalization:

H2.1 = Shopping centers with a lower sales area per inhabitant at the macro-location show a better performance rating. → Hypothesis not confirmed

The result (chapter 4.3.1) shows that there is a weak negative correlation between the variables studied, which is significant at $p = 0.05$: the greater the sales area per inhabitant in the macro location, the better the tenants' performance assessment.

H2.2 = Shopping centers with a higher purchasing power at the macro-location show a better performance rating. → Hypothesis not confirmed

The result (chapter 4.3.2) shows that there is a weak correlation between the two items, which is significant at $p = 0.03$: the higher the purchasing power at the macro-location, the worse the tenants' performance assessment. Therefore, the null hypothesis is rejected and the alternative hypothesis is accepted: There is a (weak) correlation between the purchasing power at the macro-location and the tenants' performance assessment.

H2.3 = Shopping centers with a high centrality rating at the macro-location show a better performance rating. → Hypothesis confirmed

The result (chapter 4.3.3) shows that there is a weak negative correlation between the two items with a significance of $p < 0.01$. That is, the higher the centrality, the better the tenant's performance rating

H2.4 = Shopping centers with a good Prognos Rank at the location show a better performance rating. → Hypothesis not confirmed

The result (chapter 4.3.4) shows that there is no correlation, p = -0,03, between the two items.

Systemic influences micro-location

H3 Master: It is assumed that at least two of the four systemic influencing variables of the micro-location (location, competition, car accessibility, public transport) have a positive impact on the performance rating of shopping centers from the tenant's perspective.

Hypothesis H 3 can be confirmed, as can be seen in the operationalised statistical analysis. The factors influencing the micro-location, in particular location and accessibility have a decisive positive impact on the performance of the centers from the tenant's point of view. It is also surprising that centers with low competition are not rated significantly better and that public transport does not lead to an improved assessment by tenants.

Statistical hypotheses for operationalization:

H3.1 = Greenfield shopping centers show a better performance rating by tenants than the rest. → Hypothesis confirmed

The Kruskal-Wallis test revealed that there is a significant difference in performance evaluation between the different locations ($p < 0.01$). Continuing so then the blogspot shows a clearly better rating of greenfield centers than other locations (chapter 4.4.1).

H3.2 = Shopping centers with little competition (center or downtown nearby) show a better performance rating than shopping centers with more competition. → Hypothesis not confirmed

The t-test showed that the competitive situation has no influence on the performance assessment of the shopping centers from the tenants' point of view.

Since this result is surprising, it was further investigated whether the number of competitors in the neighbourhood could have an influence on the performance evaluation: Therefore, to test the hypothesis in more detail, the correlation between the items "overall ranking" and "number of shopping centers within a 10-minute radius" was tested using a Spearman-Rho bivariate correlation. However, this analysis also showed no correlation (0.07)

H3.3 = Shopping centers with a shorter distance to the highway show a better performance rating than shopping centers that are further away from the highway. → Hypothesis confirmed

The first analysis result shows that there is no correlation between the two items.

In addition, it was investigated whether this could be observed for a connection to private transport as a whole by testing the correlation between the items "overall ranking" and "distance to federal highway in minutes" also using a bivariate correlation according to Spearman-Rho.

Interestingly, the test comes to a different conclusion with regard to the connection to a federal highway: There is a correlation - albeit a weak one - between the two items with a significance of $p < 0.01$

H3.4 = Shopping centers with a public transport connection within walking distance show a better performance rating than shopping centers without a public transport connection within walking distance. → Hypothesis not confirmed

The result of the calculation shows a negative correlation between the two items with a significance of $p < 0.01$, confirming the initial finding that walking distance to public transport is associated with a more negative performance assessment. That is, the greater the distance to public transportation, the better the tenants' performance evaluation, or better performance evaluation is associated with greater distance to public transportation. Thus, there is a relationship between distance to public transportation and performance ratings.

To summarize the importance of transport connections for tenant satisfaction in shopping centers once again, it should be noted that a favorable location of the shopping center plays a greater role for connections to private transport than for connections to public transport. Surprisingly, the latter is more negatively related to tenant satisfaction. The overriding interpretation here is that greenfield center concepts (often without public transport connections) have advantages over inner-city centers in terms of tenant evaluation.

Non-systemic influences structural center concept

H4 Master = It is assumed that at least two of the four non-systemic influencing variables of the building center structure (age, parking spaces, levels, rental space) have a positive impact on the performance assessment

of shopping centers from the tenant's perspective.

Hypothesis H 4 can be confirmed, as can be seen in the operationalised statistical analysis.

The factors influencing the center structure, such as the number of parking spaces, levels, and the size of the sales area, have a positive impact on the shopping center rating from the tenant's perspective. Surprisingly, it can also be seen that centers of a younger age are not rated positively from the tenant's point of view. Centers of middle age are rated significantly better.

Statistical hypotheses for operationalization:

H4.1 = Younger shopping centers show a better performance rating than older shopping centers. → Hypothesis not confirmed

The Kruskal-Wallis test revealed that there is a significant difference in performance evaluation between the different opening periods ($p < 0.01$).

Since the Kruskal-Wallis test can only determine if differences exist, but not between which of the groups the differences occur, a post-hoc test is required ant the pairwise comparisons showed that the differences in performance assessment between shopping centers opened between 1980 and 1999 and between 2000 and 2015 are significant ($p < 0.01$). In contrast, the differences in performance assessment between the older shopping centers among themselves (opened between 1964 and 1979 and between 1980 and 1999) and between the oldest and the youngest (opened between 1964 and 1979 and between 2000 and 2015) are not significant ($p = 0.25$ and $p = 0.48$, respectively).

Overall, the tests confirm the visual impression (diagram 3.8): The younger shopping centers, which opened between 2000 and 2015, show a

worse performance rating than the older shopping centers.

H4.2 = The higher the number of parking spaces in a shopping center, the better the performance rating of the tenants. → Hypothesis confirmed

The result shows that there is a negative correlation (Correlation according to Pearson -0,350)

between the two items: the higher the number of parking spaces in a shopping center, the better the performance assessment of the tenants.

H4.3 = The fewer levels the shopping center has (for example, only one floor), the better the performance assessment of the tenants. → Hypothesis confirmed

The more advanced tests, in particular the pairwise comparisons revealed that the differences in performance assessment between the shopping centers that span only one floor and those that span more than one floor are significant ($p < 0.05$). In contrast, the differences in performance assessment between the multi-story shopping centers among themselves are not significant ($p > 0.05$).

Overall, the tests confirm the visual impression (see Figure 14): Shopping centers that extend over only one floor show a better performance rating Shopping centers with more than one floor.

H4.4 = The larger a shopping center is, the better the performance rating of the tenants. → Hypothesis confirmed

The result shows that there is a negative correlation (Pearson correlation -0,026) - albeit a relatively weak one - between the two items: the larger the area of a shopping center, the better the tenants' performance assessment

Non-systemic influences industry mix

H5 Master = It is assumed that at least two of the four non-systemic influencing variables of the industry mix (number of supply-relevant rental units, number of industries, number of restaurants, number of anchor tenants) have a positive impact on the performance assessment of shopping centers from the tenant's perspective.

Hypothesis H 5 cannot be confirmed, as can be seen in the operationalised statistical analysis.

The sector mix and its analysis led to a falsification of the aforementioned hypothesis on the basis of the data available here. However, it is critical to note that there was no analysis of the quality of the tenants, but only the number of industries or their size within the industry mix was evaluated.

H5.1 = The higher the number of supply-relevant rental units (food and drugstore) in a shopping center, the better the performance assessment. → Hypothesis not confirmed

The Kruskal-Wallis test (4,315) confirmed the visual impression (diagram 3.12) that there is no difference in the performance assessment depending on the number of supply-relevant units in a shopping center

H5.2 = There is a correlation between tenant performance ratings and the number of industries represented in the shopping center. → Hypothesis not confirmed

The Kruskal-Wallis test (5,283) confirmed the visual impression (diagram 3.13) that there is no difference in the performance assessment depending

on the number of sectors represented in the shopping center.

In summary, the size of a shopping center in terms of square footage has an impact on tenant satisfaction (chapter 4.5.4), but not the number of industries represented in the shopping center

H5.3 = Centers with a higher number of food service operations have better performance ratings. → Hypothesis not confirmed

The Kruskal-Wallis test (26.650) confirmed the visual impression (diagram 4.14) that there is no difference in performance assessment depending on the number of restaurants in a shopping center.

H5.4 = Centers with more magnet operations have better performance ratings. → Hypothesis not confirmed

The Kruskal-Wallis test (2,975) confirmed the visual impression (diagramm3.15) that there is no essential difference in performance assessment depending on the number of magnet businesses in a shopping center

However, on very close inspection, there appears to be a tendency (albeit weak) to recognize better performance with increased numbers of anchor tenants, however, without sufficient statistical relevance due to the differences being too small.

Exkurs COVID-19 pandemic

H6 Master = It is assumed that the Corona pandemic had a greater impact on tenant satisfaction in shopping centers without utility-related units than on tenant satisfaction in shopping centers with utility-related units. →

Hypothesis not confirmed

Hypothesis H 6 cannot be confirmed, as can be seen in the operationalised statistical analysis.

The Wilcoxon test showed that there are no significant differences in the performance assessment of tenants before and during/after the Corona pandemic for the group of shopping centers without supply-relevant units with $p > 0.05$, while the differences in the performance assessment of tenants for the group of shopping centers with supply-relevant units are significant with $p < 0.01$. The visually determined stronger satisfaction difference for the shopping centers without utility-relevant units (see Figure 21) thus occurred by chance and cannot be attributed to the Corona pandemic

H7 Master = It is assumed that there is a difference in performance assessment between the group of shopping centers that have a digital mall and the group of shopping centers that do not have a digital mall. → Hypothesis not confirmed

Hypothesis H 7 cannot be confirmed, as can be seen in the operationalised statistical analysis.

To test the correlation of the "overall ranking" item with the "digital mall" item was first visualized using a bar chart (see diagram 3.17). There is no correlation between the two items: Satisfaction appears to be equally pronounced in both shopping center groups with and without digital mall. Furthermore the t-test confirmed the visual impression and showed that the presence of a digital mall has no effect on the performance assessment of the shopping centers from the tenant's perspective.

However, the main study findings can be summarized in a condensed form in the following chart. Here is shown how 6 of the 18 factors with a significant impact stand out, distributed among macro-location, micro-location and building structure. This scientific derivation enables the center management in practical operation to make direct improvements, for example, in the number of parking spaces, the number of floors or the size of the sales area.

Furthermore, it also enables investors to segment shopping centers according to these 6 performance characteristics and to make strategic purchase decisions regarding undervalued or overvalued centers. Of course, the annual rent multiplied by a multiple will always represent the value of the property (capitalized earnings value method), but the influencing factors provide an additional indication for investors as to whether the center can also perform sustainably in the future. This could also be done for centers of the own asset portfolio, if from a risk perspective such centers are segmented, which show only three or less of these influencing factors. Here, on the contrary, a sale would have to be examined or a structural improvement would have to be considered in order to increase the performance of the center. The additional consideration of the successful centers from the customer's point of view, which are usually also successful from the tenant's point of view, also creates a higher evidential value of the centers ranked well here (chapter 4.9), although this confirmation cannot be integrated into the analysis **hypotheses H1 – H7** on the influencing factors from the tenant's perspective.

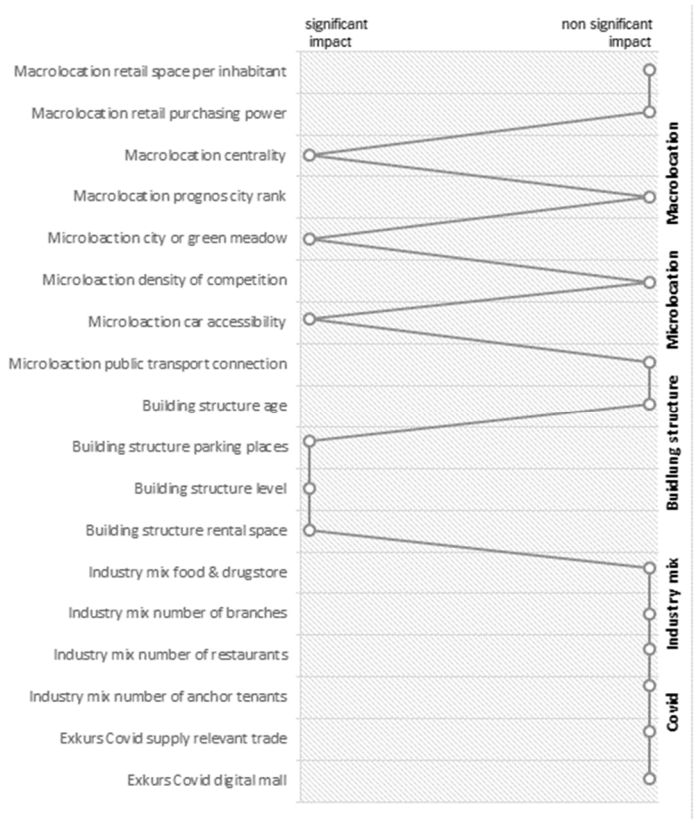


Figure 2.14 Influencing factors

In summary it should be noted, that the complex economic structure of the real estate industry cannot be singularly based on a single factor influencing the success of a center. However, the analysis presented here provides an opportunity for shopping centers with exemplary poorly endowed influencing factors, especially the six just named, to be viewed in a risk-averse manner by management.

The performance evaluation of a shopping center from the tenant's point of view depends on turnover and rental costs, which can lead to distortions. The representativeness of the sample and the high dependency of the influencing variables also put the results into perspective. Nevertheless,

macro location and micro location, building structure and sector mix can explain trends of a successful center, although a large number of additional factors, also play an important role (Chebat 2012). All the more enriching is the addition of the evaluation of the shopping centers from the customer's point of view, as made possible by the customer survey of Testbericht 2023. This shows that there is a clear correlation between successful centers from the tenant's perspective and the customer's perspective, although many other factors such as management or the environment must also be taken into account.

5.2 Findings implications

5.2.1 Theoretical implications

Within the scope of the investigations the main study finding could be shown that shopping centers, contrary to a long history of success, are in a saturation process, partly even in a process of degeneration. **The trend movement of the shopping center asset class is decreasing**.

Continuing, the first of the three research questions, to what extent do macro and micro location influencing factors contribute to the success of a shopping center from the tenant's point of view, can be answered as follows.

1. **The systemic influences at the macro-location** do not have a significant impact on the positive performance assessment in the influencing factors analyzed here. Only a high centrality index shows a positive performance assessment.

It is analytically remarkable that, for example, the sales areas per inhabitant or purchasing power per inhabitant do not allow any further conclusions, at least in this analysis. The analysis of the location from the Prognos Rank also does not provide any further information on the performance assessment from the tenants view of the center. It cannot be ruled out that very attractive locations in cities have given rise to a large number of centers and that the resulting strong competition is reflected in weaker tenant performance ratings for these centers.

The systemic influences of the micro-location show a differentiated picture of the performance assessment from the tenant's perspective for the shopping center. The greenfield location and the proximity to a freeway were particularly positive factors. Direct stationary competition in the vicinity and public transport connections do not have a significant influence.

Further, the second of the **three research questions**, to what extent can the structural center design and the sector mix contribute to the success of a shopping center from the tenants' perspective, can be answered as follows.

2 **The non-systematic influences structural center** offers considerable opportunities for management to positively influence the performance assessment from the tenant's point of view. In particular, the number of parking spaces, the size of the center and a small number of floors (one floor). On the other hand, it is revealing that younger centers tend to be rated poorly from the tenant's perspective than older centers on the market.

The non-systemic influencing factor of the sector mix is

theoretically a decisive element for the evaluation of shopping centers from the tenant's point of view, in particular due to coupling and synergy effects among each other. However, statistically, in the present work and data basis for the supply-relevant stores, the diversity of the industry mix, the food service establishments and the number of anchor tenants, no significant findings can be determined about their significantly positive influence. Only in the interpretation of the bar chart for the number of magnet businesses could a slightly positive performance rating be interpreted descriptively, even if this could not be sufficiently validated statistically.

It must be critically mentioned that the quality of the anchor tenants could not be included in the evaluation.

The third of the three research questions, to what extent does **Covid 19** influence the success of a shopping center from the tenants' perspective, can be answered as follows

3. The security-oriented measures by **Covid 19** of the state to restrict contact had no impact on the centers with a share of supply-relevant stores or without this supply-relevant share, from the tenants point of view.

   Likewise, the possibility of using **the digital mall** (shipping and collection of products from the mall with interlinking) from the tenant's point of view had either no significant impact on performance.

5.2.2 Practical implications

Several important practical and scientific implications can be derived from the results of this study that are useful for shopping center managers, investors and tenants. The study sheds light on the macro location, micro location, building structure, industry mix and Covid 19 as factors that can influence the performance evaluation of shopping centers from the tenants' perspective.

It should be noted that the results do not fully reflect the complex reality. Nevertheless, there are some success factors that can be derived not only from the established literature but also from this study for Germany in particular. In this contest and of practical interest are likely to be the shopping center trends in the SCPR and results;

- Where does the center stand in comparison to the competition?
- How are the trends developing?
- What insights and measures can be derived from this to improve the center's performance?

And this is precisely where the results of the work offer added value in terms of insights.

The decisive factor for evaluating shopping centers and answering the above questions is always the return on sales, i.e. the ratio between tenant turnover and center costs - consisting of rent, ancillary costs and municipal contributions (see figure 2.7). The return on sales provides an objective assessment based on performance data when evaluating retail properties. Every landlord, expansion manager, division manager, center manager or

owner uses it in negotiations or tenant discussions about day-to-day business or leasing as sometimes the most important decision criterion for an existing or future contractual partnership and derives measures from it.

Whether a contractual relationship is to be continued depends essentially on a positive earnings outlook or a positive cash flow forecast for the rental unit.

Statements on profitability form the basis of the business relationship at the time the contract is concluded. Without empirical data or more detailed knowledge of the contractual partner and the center, it is always difficult to make these statements in an informed manner, especially for decision-makers who have very limited time and are not in the immediate vicinity of the property in question. The SCPR and the results of this dissertation uses a tenant survey and a new database of decision-makers to map precisely this relationship between the revenue potential and cost structure of the property in comparison with several centers in Germany and their potential. The result of the SCPR thus reflects the amount of revenue that the tenant can generate from transactional relationships with customers and the center operator or owner.

The work presented here creates practical added value in terms of knowledge as to which relevant influencing factors management must optimize in order to achieve higher value creation for the center and their assessment.

To date, there is no model or analysis that uses a comprehensible, scientific method like the SCPR to shed light on the non-transparent shopping center landscape. However, it must be clear to every decision-maker that the most beautiful architecture or the best BREEAM (Building Research

Establishment Environmental Assessment Methodology) concept will not be effective if the respective measures do not have a positive effect on the transaction relationship with the tenant. And this is exactly one of the practical results of the SCPR and the results derived from it in this thesis. It shows whether the operator's or the owner's actions (always assuming the same tenant performance) contribute to positive cash flow. The SCPR evaluates revenue prospects from the tenant's point of view, not from an architectural feel-good perspective according to BREEAM standards or other stakeholder interests.

The SCPR positions centers based on a tenant survey according to the ranking principle and maps trend movements over a longer period of time. Minor changes in ranking within the midfield must always be seen in relation to the overall timeline of a center assessed since 2015. From a practical perspective, it seems helpful to use the center's ranking relative to the mean as a guide. But quite crucial are the results of this thesis to be able to interpret the trend movements of the center upwards or downwards by the factors macro location, micro location, building center structure and industry mix.

From a practical perspective, management can use the following linked visualisation of the Sturm centre success model with operational KPIs to precisely identify the opportunities for action with high and low impact (results of this dissertation) and draw conclusions for proactive management. Even if qualitative factors such as management were not taken into account in this study or the analysis of the sector mix such as the quality of the tenants was not sufficiently possible with the database, other property-specific factors show a clear influence on the success of the

centre. To this end, key performance indicators such as rental turnover or visitor frequency can be used to interpret which influencing factors the management can focus on directly or indirectly using the Action Cockpit as an extension to Sturm's model and improve within the centre, according to the author's new interpretation.

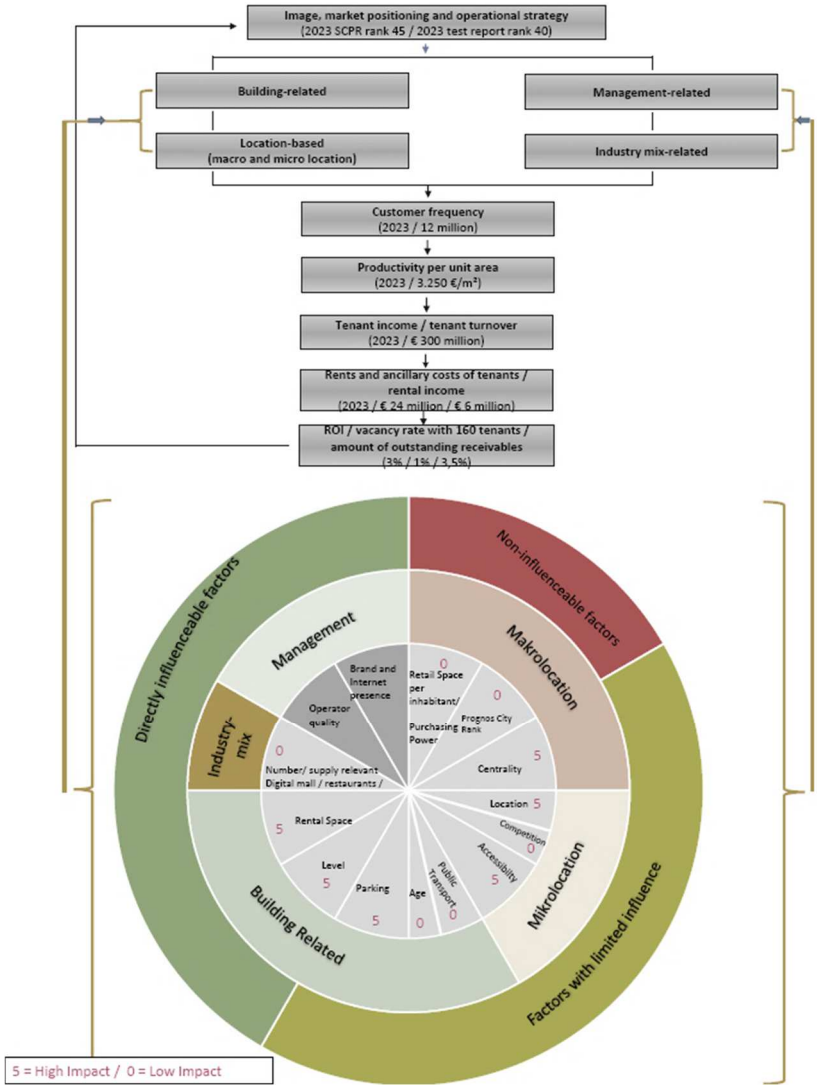


Figure 2.15 KPI Action Cockpit based on Sturm / Stoyke

There is definitely a need for action if there is a poor ranking over several years or if the ranking deteriorates every year of a center.

Particularly in the case of distressed properties, which generally have conceptual, location, structural and usage-related deficiencies, the results of this work creates additional transparency with the help of the ranking. The insights created here, especially on the structural optimization potential, then enable management to actively intervene in the value creation of the property. The permanent laggards in the center ranking are most likely also struggling with more or less visible vacancies. The dissertation can be used as an indicator of known or emerging structural problems and thus reflects a very high degree of reality in this segment of centers.

In this case, there is already an unmistakable trend towards declining visitor numbers, lower sales, falling rents and vacancies. The results of this dissertation can then be used as an additional source of information, either as a leading or lagging indicator, to review the management and conceptual direction of the property (Stoyke, 2020).

5.3 Limitations and future research directions

Beyond the findings of this study, it should be interpreted as identifying a number of limitations that need to be overcome and suggesting some possibilities for future research, including the following:

1. This research only assessed the influencing factors of macro location, micro location, building structure of the centre and industry mix. Individual influencing factors were analysed and their interaction should be investigated in further studies.

2. In particular, the existing studies on consumers and their attitudes towards shopping mall success factors in the American literature should be taken into account, but could not be further considered in this dissertation with the underlying data base.

3. There are conceptual limitations that make it impossible to test every potential hypothesis that can be made in the research framework. Furthermore, specific influencing factors should be further explored in more in-depth studies. Unfortunately, within the framework of the present work, no significant insights into the design of the industry mix could be gained. However, further analyses, also from practice, could try to identify the optimal sector mix of a center in the present time. In addition, the quality of tenants is another important field of research

4. As a further delimitation, also limiting the result assumptions formulated here, the German environment should be mentioned. While it is reasonable to assume that similar trends in success factors for centres exist in neighbouring countries such as Switzerland or Austria, perhaps

even in Europe, this also requires further investigation.

5. Sustainability, environmental awareness or even CO2 emissions (lack of data) as factors are not yet influencing factors and should definitely be included in the consideration in the future.

6. Excessive rent amounts can negatively influence the rating of tenants, while above-average rent amounts can positively influence it. The pro rata rating of only 10 percent of tenants may not be sufficiently representative of the actual performance of all tenants at a center. These factors may mean that the actual success of a center could be distorted by measuring it on the basis of tenant satisfaction.

7. There is a high degree of interdependence between the influencing variables, which means that it is not possible to speak categorically of a good or bad characteristic of a shopping center, since the requirements for individual centers differ greatly. A detailed differentiation can often lead to a very small number of cases, which greatly reduces the quality and significance of the quantitative analysis. In some cases, it is not even possible to make a sufficient distinction to sufficiently reduce the influence of other confounding variables, as there is simply too small a number of cases to be able to conduct statistically representative analyses.

8. It can be plausibly argued that only a proportion of the success can be explained on the basis of factors such as the micro and macro location, the building center structure and the sector mix. A multitude of factors, such as management, customer environment, etc., influence the success of a center in a complex way.

9. On a micro level, the built atmosphere in particular must be

considered as one of the most important requirements. Empirical studies show that a pleasant atmosphere is one of the most important requirements of customers for German shopping centers (El Hedhli, 2013). The mall image and the customer approach (SOR) by means of marketing communication can offer further insights here through research that can contribute to the success of a center (El-Adly, 2016).

10. The survey of customers of the Testreport 2023 portal has provided additional added value in terms of knowledge about high-performance shopping centers. However, an in-depth analysis of the centers only from the customer's point of view would certainly provide further insights, but this is outside the scope of the research, as is the survey of owners or investors. But this in particular can raise new research questions about shopping centers for those interested in future research, nationally or internationally.

Chapter Six

The new scientific results

6.1 New scientific results of the study and summary

The aim of this dissertation is to take a closer look at the developments in stationary real estate in order to be able to derive findings on the main factors influencing shopping centers and their performance on the basis of quantitative analyses. This serves to derive recommendations for action in order to prevent the critical developments of the recent past described in the following.

Specifically, there are signs of increasing competition from bricks-and-mortar retail in US, Europe and especially Germany, as a result of which shopping centers are having to contend with declining customer footfall, falling sales and, consequently, considerable vacancy rates. Extensive revitalization, but in some cases also conversion to other concepts, is then relevant.

The Shopping Center Performance Report, compiled since 2011, shows how centers are increasingly unable to position themselves successfully in the market. The increasing intensity of competition and the associated market saturation due to the further expansion of retail space with declining productivity per unit area will further complicate the successful positioning of all centers and requires critical awareness. In addition, the fact that customer expectations of brick-and-mortar retail are in constant competition with e-commerce will not make the successful operation of centers any easier in the future (Zhang, 2016). In this respect, the center

industry and its players will have to face the new challenges of the current market requirements. As a result of the increased demands of consumers, inadequacies in the location, the structural and design concept, and the staffing that can be tolerated can result in serious competitive disadvantages in the medium term, as has already happened with regard to a number of foreign shopping center markets, in particular the USA (deadmalls.com). This is documented by the recent spread of leasing difficulties, vacancies and problems with subsequent use in many places (Calvo-Porral and Lévy-Mangin, 2019).

Current developments demand such a high level of professionalism from today's decision-makers and executives in the management of shopping centers in terms of site selection at the macro- and micro-location, the building structure of the center, the design of the sector mix as well as the management that without these factors there is no longer any market acceptance today.

However, a resulting, often uniform and homogeneous appearance of the centers all too often causes an indifferent market position from the customer's point of view, so that no sufficient competitive advantages can be achieved for the individual shopping center brand. In this respect, the operation of centers in the coming years with unchanged concepts will not be able to meet the expectations of customers and also investors. The market has changed too dynamically for this, with more and more centers in German cities suffering from structural problems. This makes the findings of this dissertation of value-added management with application of the right influencing factors all the more crucial. In the future, the insights gained may be useful to center operators in the form of a catalog

of actions, as there are likely to be similar, if not the same, challenges to difficult market positioning as recently observed in the Shopping Center Performance Report (2022) for new centers (Mall of Berlin, Schultheis Quartier) or centers that have shown steadily declining performance in recent years (Zwickau Arcaden, My Zeil, Neukölln Arcaden).

Operator	Center	Ranking
HGHI	Mall of Berlin	(3.57)
ECE	Zwickau Arcaden	(3.6)
ECE	My Zeil	(3.75)
URW	Neukölln Arcaden	(4.00)
HGHI -	Schultheis Quartier	(4.78)

It must be mentioned, however, that a generalized catalog of measures for unconditional center operation must be viewed critically. The highly complex requirements of center project planning and leasing and operation are always current and must be perceived individually due to the large number of participants and their motivations and often do not follow a linear course of action (Stoyke, 2020). The exogenous economic structure additionally dynamizes the complex challenges and also influences the most important factors of management such as macro location, micro location, building structure and industry mix.

Nevertheless, this work can sensitize investors, developers, municipalities and other stakeholders to the fact that centers are not always a consistently successful and secure value investment in today's world and have a positive signal effect in terms of urban policy. Furthermore, the work

shows what tenants value in order to evaluate a center as successful and which factors are decisive for a sustainable management of the center on the market, with following findings of this work:

1. This dissertation examined the factors influencing shopping centers. The study is of particular importance because it shows the significance of influencing and non-influencing factors for center performance from the tenant's point of view. The way in which the analysis draws on the recognized Shopping Center Performance Report and derives insights for shopping center management from a database by means of quantitative analysis represents a significant added value in terms of knowledge.
2. On the one hand, the significance of this study lies in its scientific nature. In particular, the analysis and evaluation of numerous studies, primarily from the USA, Europe and Germany, provides interested parties with essential findings on the research framework for shopping centers.
3. The importance of this study on the other hand lies in its practical relevance. In particular, the analysis and evaluation of numerous practical approaches provides a sound basis for identifying the key influencing factors that can be focused on by management in order to improve center performance.
4. Furthermore, the analysis methodology can be extended to other countries in the European area. The Shopping Center Performance Report is also carried out in Austria, so that similar studies and analyses are possible for Austria, resulting in research potential for other countries. Especially for this purpose the author has created the website deadmalls.de to enter into dialogue with interested researcher,

besides the most famous website deadmalls.com.

5. In 2020, for the first time, 261 main shopping streets in 128 cities were evaluated by ecostra using the same survey methodology and presented in a shopping street ranking, comparable to the Shopping Center Performance Report. Crisis cities with significant vacancy problems have structurally similar retail problems as shopping centers or large retail agglomerations. In this respect, the results of this dissertation can also become an important information basis for retail concepts in cities for municipal economic development and urban development planning or offer further research opportunities here.
6. The analysis of the key positive success factors of the shopping centers from the tenants' perspective offers the opportunity to delve even deeper into the future viability of individual properties. In particular, if centers are combined according to good ratings from the tenant's perspective, from the customer's perspective and the success factors, very high-performing centers and very low-performing centers can be segmented and clustered (see digramm 3.19).

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Curriculum Vitae

Thomas Stoyke was born on September 10th, 1981 in Neuss, Germany. After graduating from the Marie-Curie-Gymnasium, he did his military service at the NATO E3A unit in Geilenkirchen. From 2002 to 2005, he studied at the Baden-Wuerttemberg Cooperative State University (DHBW) in Heidenheim, including a semester abroad at the University of California Santa Barbara. He began his professional career in 2005 as a Junior Center Manager in one of the largest shopping centers in Berlin, the Gropius Passagen. In 2007 he moved to the shopping center Galerie Roter Turm Chemnitz and graduated from the Chemnitz University of Technology with an MBA in 2009.

Several positions and centers in the real estate industry followed and now since 2015 as Center Manager of the Chemnitz Center. Since 2010, Thomas Stoyke has been an honorary lecturer at the Zwickau University of Applied Sciences and the Glauchau University of Cooperative Education. The interlocking of practice and science will lead to the launch of the Doctoral School of Management and Organizational Science at Kaposvar University in 2019.

His orcid profile is https://orcid.org/0000-0002-6054-2798

Appendix Dataset Center 2015 - 2022

Number	Center	City	Management	OverallRanking	Ranking 2015	Ranking 2016	Ranking 2017	Ranking 2018	Ranking 2019	Ranking 2020	Ranking 2021	Ranking 2022
1	A10 Center	Wildau	ECE Projektmanagement GmbH & Co. KG	2,30	2,17	2,10	2,11	2,18	2,07	2,70	2,65	2,38
2	Aachen Arkaden	Aachen	Apleona GmbH	4,52	4,25	4,13	4,74	4,56	5,00	4,50	4,50	4,50
3	Alexa	Berlin	Sierra Germany GmbH	2,43	2,00	2,52	2,35	2,33	2,43	2,48	2,81	2,50
4	Allee-Center Berlin	Berlin	Phoenix Property Consulting GmbH	2,98	2,60	2,57	3,50	2,88	2,50	3,00	4,00	2,80
5	Allee-Center Essen	Essen	ECE Projektmanagement GmbH & Co. KG	3,24	3,06	3,60	3,36	3,00	3,30	3,09	3,00	3,50
6	Allee-Center Hamm	Hamm	ECE Projektmanagement GmbH & Co. KG	2,54	2,00	2,29	2,00	2,64	2,90	2,67	2,70	3,11
7	Allee-Center Leipzig	Leipzig	ECE Projektmanagement GmbH & Co. KG	2,99	3,07	2,80	3,18	2,80	3,13	2,54	3,00	3,40
8	Allee-Center Magdeburg	Magdeburg	ECE Projektmanagement GmbH & Co. KG	2,56	3,06	2,14	2,52	2,24	2,42	2,64	2,77	2,65
9	Allee-Center Remscheid	Remscheid	ECE Projektmanagement GmbH & Co. KG	3,24	2,90	3,30	3,09	2,86	3,33	3,40	3,43	3,58
10	Alstertal Einkaufs-Zentrum	Hamburg	ECE Projektmanagement GmbH & Co. KG	2,96	2,80	2,93	2,62	2,74	2,85	3,31	3,27	3,12
11	Altmarkt-Galerie	Dresden	ECE Projektmanagement GmbH & Co. KG	2,59	2,10	2,41	2,32	2,65	2,63	3,13	2,78	2,72
12	Arneken Galerie	Hildesheim	Klépierre Management Deutschland GmbH	3,80	3,64	4,00	3,85	4,00	3,62	3,55	4,00	3,70
13	Arsenal	Wittenberg	GERMAN REAL Asset & Property Managament	2,87	3,33	3,00	3,67	2,86	2,40	1,67	3,00	3,00
14	Billstedt-Center	Hamburg	ECE Projektmanagement GmbH & Co. KG	2,94	3,28	3,26	2,36	3,00	2,64	3,21	3,00	2,80
15	Blautal-Center	Ulm	IPH Handelsimmobilien GmbH	3,09	2,80	3,27	3,38	2,33	3,00	3,18	3,31	3,45
16	Blechen-Carré	Cottbus	CBC Projekt GmbH	2,82	2,63	2,91	2,70	2,92	2,78	2,82	2,91	2,91
17	Boulevard Berlin	Berlin	Klépierre Management Deutschland GmbH	3,36	3,31	3,27	4,08	3,80	3,29	3,23	3,13	2,75
18	Breuningerland	Sindelfingen	ECE Projektmanagement GmbH & Co. KG	1,82	1,44	1,55	1,63	1,90	1,64	2,15	2,17	2,10
19	Breuningerland	Ludwigsburg	ECE Projektmanagement GmbH & Co. KG	2,12	1,58	2,05	2,16	1,92	1,78	2,63	2,63	2,17
20	Brücken-Center Ansbach	Ansbach	Brücken-Center Ansbach GmbH	2,01	2,11	1,92	2,07	2,09	1,92	2,11	1,86	2,00
21	Buchholz Galerie	Buchholz	CEV Handelsimmobilien GmbH	3,66	4,00	3,75	3,40	4,00	4,00	3,33	3,33	3,50
22	Carré Bad Cannstatt	Stuttgart	JLL Jones Lang LaSalle GmbH	3,12	3,00	3,17	3,40	2,80	3,20	2,80	3,60	3,00
23	CCL City-Center Landshut	Landshut	4-RED GmbH Real Estate Development	3,01	4,00	3,00	3,00	3,17	2,33	2,00	3,20	3,40
24	Centrum-Galerie	Dresden	Klépierre Management Deutschland GmbH	2,57	2,71	2,00	2,90	2,60	2,82	2,40	2,57	2,56
25	Chemnitz Center	Chemnitz	CMC Center Management & Consulting	2,12	2,00	1,88	1,89	2,20	2,00	2,15	2,27	2,55
26	Citti-Park Kiel	Kiel	CITTI Handelsgesellschaft mbH & Co. KG	1,64	1,56	1,73	2,00	1,89	1,58	1,40	1,50	1,47
27	City Galerie Aschaffenburg	Aschaffenburg	DVI Deutsche Verwaltungsgesellschaft	2,68	2,67	2,67	2,60	2,70	2,85	2,67	2,50	2,75
28	City-Arkaden Wuppertal	Wuppertal	ECE Projektmanagement GmbH & Co. KG	2,97	3,00	3,00	2,92	2,75	3,18	3,23	3,00	2,64
29	City-Center Bergedorf	Hamburg	DVI	2,72	3,00	3,07	2,69	2,58	2,44	2,25	2,75	3,00
30	City-Galerie Augsburg	Augsburg	ECE Projektmanagement GmbH & Co. KG	2,25	1,93	2,13	2,56	2,32	1,90	2,38	2,63	2,14

Number	Center	City	Management	OverallRanking	Ranking 2015	Ranking 2016	Ranking 2017	Ranking 2018	Ranking 2019	Ranking 2020	Ranking 2021	Ranking 2022
30	City-Galerie Augsburg	Augsburg	ECE Projektmanagement GmbH & Co. KG	2,25	1,93	2,13	2,56	2,32	1,90	2,38	2,63	2,14
31	City-Galerie Siegen	Siegen	ECE Projektmanagement GmbH & Co. KG	2,40	2,06	2,10	2,30	2,25	2,14	2,28	3,00	3,10
32	City-Galerie Wolfsburg	Wolfsburg	ECE Projektmanagement GmbH & Co. KG	2,44	2,08	2,28	2,50	2,56	2,57	2,67	2,33	2,55
33	City-Point Kassel	Kassel	ECE Projektmanagement GmbH & Co. KG	3,13	2,64	2,80	2,91	3,24	3,43	3,64	3,30	3,09
34	City-Point Nürnberg	Nürnberg	JLL Jones Lang LaSalle GmbH	3,63	3,13	3,27	3,46	3,89	4,33	3,62	3,71	3,60
35	City-Rondell Schwenningen	Villingen-Schwenningen	CIV City-Immobilien Verwaltungsgesellschaft mbH & Co. Betreuungs KG	3,30	2,20	2,86	3,50	3,38	3,25	3,40	3,80	4,00
36	Das Schloss	Berlin	WealthCap Real Estate Management GmbH	2,77	2,23	2,94	2,35	2,92	2,69	2,64	3,23	3,14
37	Der Clou	Berlin	JLL Jones Lang LaSalle GmbH	2,99	2,88	2,80	3,00	3,00	3,00	3,00	3,20	3,00
38	DEZ Kassel	Kassel	ECE Projektmanagement GmbH & Co. KG	2,53	2,20	2,37	2,50	2,48	2,55	2,65	2,83	2,65
39	Die MEP	Meppen	RME Retail Management Expertise Asset & Property Management GmbH	4,19	4,00	3,43	4,14	4,33	4,80	4,80	3,00	5,00
40	Donau-Einkaufszentrum	Regensburg	Donau Einkaufszentrum GmbH	1,99	1,93	1,95	2,06	1,67	1,83	2,06	2,27	2,17
41	Drehscheibe/ City-Point Bochum	Bochum	Kintyre Management GmbH	3,50	3,40	3,38	2,71	3,17	3,40	3,75	3,75	4,40
42	Düsseldorf Bilk Arcaden	Düsseldorf	Unibail-Rodamco Germany GmbH	3,28	3,33	3,28	3,32	2,95	3,00	3,53	3,27	3,53
43	Eastgate	Berlin	ECE Projektmanagement GmbH & Co. KG	2,77	2,20	2,63	2,47	2,74	2,78	2,88	3,00	3,43
44	Elbe-Einkaufszentrum	Hamburg	ECE Projektmanagement GmbH & Co. KG	2,79	2,75	2,67	2,61	2,74	2,70	2,92	3,04	2,85
45	Elbepark Dresden	Dresden	CMC Center Management & Consulting	2,23	2,08	2,29	2,39	2,11	2,27	2,41	2,07	2,25
46	Erlangen Arcaden	Erlangen	Unibail-Rodamco Germany GmbH	2,66	2,29	2,27	2,47	2,63	2,50	3,11	3,21	2,82
47	Ernst-August-Galerie	Hannover	ECE Projektmanagement GmbH & Co. KG	2,78	2,27	2,48	2,53	2,69	2,59	3,09	3,30	3,29
48	Ettlinger Tor	Karlsruhe	ECE Projektmanagement GmbH & Co. KG	2,87	2,59	2,67	2,52	2,81	2,70	3,21	3,32	3,12
49	Europa-Galerie	Saarbrücken	ECE Projektmanagement GmbH & Co. KG	3,47	3,40	3,39	3,68	3,21	3,47	3,38	3,44	3,75
50	Famila Einkaufsland Wechloy	Oldenburg	FAMILA Verbrauchermarkt Einkaufsstätte GmbH & Co. KG	1,85	1,80	1,55	1,78	1,82	1,56	2,00	2,67	1,63
51	Flensburg Galerie	Flensburg	KOPRIAN IQ MANAGEMENT GmbH	2,76	2,77	2,89	2,63	2,29	2,13	3,29	2,21	3,86
52	Forum Allgäu	Kempten/Allgäu	ECE Projektmanagement GmbH & Co. KG	2,51	2,24	2,22	2,50	2,22	2,47	2,88	3,15	2,40
53	Forum City Mülheim	Mülheim a. d. Ruhr	Multi Germany GmbH	3,59	3,54	3,44	3,78	3,30	3,67	3,75	3,67	3,57
54	Forum Duisburg	Duisburg	Klépierre Management Deutschland GmbH	2,90	2,58	3,33	3,00	2,40	3,33	3,10	3,11	2,36
55	Forum Köpenick	Berlin	DVI Deutsche Verwaltungsgesellschaft für Immobilien mbH	2,66	2,31	2,27	2,50	2,44	2,23	3,00	3,00	3,50
56	Forum Mittelrhein	Koblenz	ECE Projektmanagement GmbH & Co. KG	3,34	3,11	3,13	3,56	3,25	3,33	3,47	3,10	3,77
57	Forum Steglitz	Berlin	Unibail-Rodamco Germany GmbH	3,59	3,00	3,70	3,17	3,45	3,43	4,00	4,00	4,00
58	Forum Wetzlar	Wetzlar	ECE Projektmanagement GmbH & Co. KG	2,66	2,26	2,47	2,58	2,43	2,75	2,94	3,06	2,80
59	Franken-Center	Nürnberg	ECE Projektmanagement GmbH & Co. KG	2,97	2,67	2,70	2,74	2,71	3,05	3,28	3,35	3,23
60	Galerie Neustädter Tor	Gießen	Prelios Immobilien Management GmbH	3,34	3,00	3,60	3,86	3,89	4,00	3,00	3,40	2,00

Number	Center	City	Management	OverallRanking	Ranking 2015	Ranking 2016	Ranking 2017	Ranking 2018	Ranking 2019	Ranking 2020	Ranking 2021	Ranking 2022
61	Galerie Roter Turm	Chemnitz	IPH Handelsimmobilien GmbH	2,68	2,00	2,20	2,88	2,60	2,67	2,89	3,00	3,22
62	Gera Arcaden	Gera	Unibail-Rodamco Germany GmbH	2,57	2,09	2,42	2,82	2,42	2,07	2,77	2,78	3,20
63	Gesundbrunnen-Center	Berlin	ECE Projektmanagement GmbH & Co. KG	3,04	2,75	3,08	3,33	3,00	3,00	2,93	3,00	3,19
64	Glacis-Galerie	Neu-Ulm	ECE Projektmanagement GmbH & Co. KG	3,92	3,99	4,50	4,10	4,00	3,64	3,70	3,62	3,81
65	Goethe Galerie	Jena	IPH Handelsimmobilien GmbH	2,52	2,70	2,50	2,73	2,44	2,13	2,40	2,50	2,78
66	Gropius Passagen	Berlin	Unibail-Rodamco Germany GmbH	3,20	2,80	3,24	3,40	3,11	3,05	3,53	3,05	3,42
67	Hallen am Borsigturm	Berlin	ECE Projektmanagement GmbH & Co. KG	2,76	2,90	2,50	2,54	2,64	3,00	2,73	2,75	3,00
68	Hallescher Einkaufspark HEP	Halle/ Saale	CMde CENTERMANAGER und IMMOBILIEN GmbH	2,87	1,75	2,50	2,71	2,90	3,43	3,27	3,71	2,67
69	Hamburger Meile	Hamburg	ECE Projektmanagement GmbH & Co. KG	3,23	3,05	3,29	3,23	3,29	3,19	3,32	3,06	3,44
70	HavelPark Dallgow	Dallgow-Döberitz	Unibail-Rodamco Germany GmbH	2,35	2,00	2,09	2,00	2,08	2,25	2,13	3,13	3,11
71	Hessen-Center	Frankfurt am Main	ECE Projektmanagement GmbH & Co. KG	3,16	3,08	3,23	2,75	2,73	3,40	3,14	3,67	3,26
72	Hirsch Center	Aachen	Retail Management Expertise Asset & Property Management GmbH	2,63	3,00	2,80	2,20	2,20	2,40	2,40	2,40	3,67
73	Höfe am Brühl	Leipzig	Unibail-Rodamco Germany GmbH	3,01	3,12	3,16	2,94	2,87	2,74	2,89	3,25	3,12
74	Huma Sankt Augustin	Sankt Augustin	Jost Hurler Beteiligungs- u. Verwaltungsgesellschaft	2,69	2,75	2,14	2,33	2,43	3,20	2,77	3,00	2,87
75	Hürth-Park	Hürth	ECE Projektmanagement GmbH & Co. KG	2,84	2,84	2,70	2,82	2,50	2,81	3,00	3,07	3,00
76	Isenburg-Zentrum	Neu-Isenburg	ECE Projektmanagement GmbH & Co. KG	3,21	3,22	2,83	3,06	3,14	3,17	3,10	3,39	3,74
77	K in Lautern	Kaiserslautern	ECE Projektmanagement GmbH & Co. KG	3,62	3,67	3,85	3,38	3,65	3,65	3,83	3,44	3,47
78	Kamp-Promenade	Osnabrück	VÖLKEL COMPANY Asset Management GmbH & Co. KG	2,48	2,00	2,13	2,50	2,25	2,83	2,88	2,88	2,33
79	KaufPark Dresden	Dresden	Unibail-Rodamco Germany GmbH	2,54	2,27	2,62	2,70	2,25	2,55	2,17	2,67	3,10
80	KaufPark Eiche	Ahrensfeld	Unibail-Rodamco Germany GmbH	2,44	2,25	2,36	2,42	1,94	2,62	2,57	2,88	2,46
81	Köln Arcaden	Köln	Unibail-Rodamco Germany GmbH	2,38	2,39	2,36	2,20	2,05	2,53	2,47	2,67	2,33
82	KOMM Einkaufscenter	Offenbach	Apleona GmbH	3,28	3,56	3,33	3,38	2,80	2,75	3,33	3,57	3,50
83	Königsbau Passagen	Stuttgart	ECE Projektmanagement GmbH & Co. KG	3,11	2,91	3,40	2,71	3,11	2,89	3,17	3,14	3,57
84	Königsgalerie	Duisburg	Klépierre Management Deutschland GmbH	3,99	4,00	4,00	4,43	4,14	3,67	3,83	3,83	4,00
85	Königshof-Galerie	Mettmann	ILG Holding GmbH	4,09	4,71	4,86	3,88	4,00	3,67	4,00	4,00	3,60
86	Kornmarkt-Center	Bautzen	ECE Projektmanagement GmbH & Co. KG	2,59	2,43	2,20	2,29	2,30	2,33	2,67	3,22	3,25
87	Lago Shopping-Center	Konstanz	Prelios Immobilien Management GmbH	1,83	1,63	1,44	1,38	1,56	1,60	2,27	2,67	2,08
88	Lausitz Park	Cottbus	EDEKA-MIHA Immobilien Service GmbH	2,65	2,44	2,67	2,56	2,67	2,44	2,67	2,88	2,83
89	Lausitz-Center	Hoyerswerda	MEC METRO-ECE Centermanagement GmbH & Co. KG	2,91	3,00	2,92	3,00	2,50	2,75	2,63	3,29	3,20
90	Leine-Center	Laatzen	Unibail-Rodamco Germany GmbH	3,08	3,00	3,26	2,78	2,94	3,10	3,08	3,17	3,33

Number	Center	City	Management	OverallRanking	Ranking 2015	Ranking 2016	Ranking 2017	Ranking 2018	Ranking 2019	Ranking 2020	Ranking 2021	Ranking 2022
91	Leo-Center	Leonberg	ECE Projektmanagement GmbH & Co. KG	3,20	3,07	3,07	3,40	3,19	3,21	3,42	3,31	2,93
92	Limbecker Platz	Essen	ECE Projektmanagement GmbH & Co. KG	3,01	2,63	3,11	2,85	3,03	2,84	3,40	3,53	2,68
93	Linden-Center	Berlin	ECE Projektmanagement GmbH & Co. KG	2,92	2,90	3,08	2,92	2,60	2,82	3,08	2,57	3,38
94	Löhr-Center	Koblenz	ECE Projektmanagement GmbH & Co. KG	3,26	2,79	2,80	3,04	3,21	3,50	3,77	3,61	3,39
95	Lookentor	Lingen / Ems	Hermann KLAAS Projektentwicklung GmbH	3,03	2,71	3,30	3,00	3,40	3,57	2,50	2,50	3,25
96	LOOP5	Weiterstadt	Sierra Germany GmbH	3,66	3,86	3,63	3,30	3,73	3,61	3,86	3,67	3,59
97	Luisen-Center	Darmstadt	ECE Projektmanagement GmbH & Co. KG	3,13	3,11	3,78	2,90	2,83	3,00	2,82	3,43	3,18
98	LuisenForum	Wiesbaden	OMEGA Immobilien GmbH	3,11	3,00	3,00	3,00	3,22	2,88	3,40	3,00	3,40
99	Main-Taunus-Zentrum	Sulzbach (Taunus)	ECE Projektmanagement GmbH & Co. KG	2,04	1,72	1,83	2,00	1,88	1,87	2,42	2,48	2,12
100	Marktplatz Galerie Bramfeld	Hamburg	BCM Center Management GmbH	2,82	3,50	3,55	3,00	3,18	1,89	2,22	2,33	2,91
101	Marktplatz-Center	Neubrandenburg	ECE Projektmanagement GmbH & Co. KG	2,38	2,55	2,46	2,00	2,09	2,13	2,56	2,56	2,67
102	Mercaden Böblingen	Böblingen	hkm Management AG	3,19	3,29	3,69	3,00	3,54	3,36	2,86	2,93	2,88
103	Mercado Nürnberg	Nürnberg	KOPRIAN IQ MANAGEMENT GmbH	2,74	2,71	2,71	2,71	2,42	2,55	2,75	3,15	2,93
104	Milaneo	Stuttgart	ECE Projektmanagement GmbH & Co. KG	3,79	3,87	3,40	4,08	3,89	4,07	3,91	3,61	3,52
105	Minto	Mönchengladbach	Unibail-Rodamco Germany GmbH	2,80	2,74	2,64	2,44	2,55	2,83	3,25	2,81	3,17
106	Münster Arkaden	Münster	Sierra Germany GmbH	2,60	1,33	2,71	3,00	2,33	2,43	3,00	3,00	3,00
107	MyZeil	Frankfurt am Main	ECE Projektmanagement GmbH & Co. KG	3,39	3,00	3,58	3,60	3,44	3,17	3,14	3,43	3,75
108	Neefepark	Chemnitz	JLL Jones Lang LaSalle GmbH	2,36	2,57	3,14	3,00	2,00	2,40	1,67	2,33	1,75
109	Neukölln Arcaden	Berlin	Unibail-Rodamco Germany GmbH	4,06	3,40	4,00	3,86	4,17	4,67	4,17	4,20	4,00
110	Neutor Galerie	Dinslaken	IPH Handelsimmobilien GmbH	3,74	3,85	4,00	3,14	3,67	4,17	4,25	3,83	3,00
111	Nova Eventis	Leuna	ECE Projektmanagement GmbH & Co. KG	2,92	2,28	2,65	2,74	2,95	3,30	3,53	2,73	3,16
112	Oder-Center	Schwedt / Oder	MEC METRO-ECE Centermanagement GmbH & Co. KG	2,84	2,63	3,13	3,00	2,85	2,22	2,92	3,00	3,00
113	Olympia-Einkaufszentrum	München	ECE Projektmanagement GmbH & Co. KG	2,98	2,10	2,64	2,78	2,96	3,14	3,58	3,48	3,15
114	Ostsee Park	Lambrechtshagen	MEC METRO-ECE Centermanagement GmbH & Co. KG	2,33	2,50	2,11	2,00	2,38	2,00	2,43	2,60	2,60
115	Palais Vest	Recklinghausen	Unibail-Rodamco Germany GmbH	3,44	3,48	4,00	3,58	3,26	3,33	3,25	3,23	3,41
116	Pasing Arcaden	München	Unibail-Rodamco Germany GmbH	2,34	2,16	2,26	2,13	2,29	2,09	2,52	2,56	2,68
117	Paunsdorf Center	Leipzig	Unibail-Rodamco Germany GmbH	2,90	2,72	2,80	2,81	2,60	2,83	3,00	3,20	3,25
118	PEP Einkaufs-Center	München	ECE Projektmanagement GmbH & Co. KG	2,77	2,33	2,68	2,95	2,62	2,63	3,11	3,00	2,80
119	PEP Eisenach	Eisenach	CIV City-Immobilien Verwaltungsgesellschaft mbH & Co. Betreuungs KG	2,35	2,33	2,50	2,40	2,40	2,67	2,25	2,25	2,00
120	Phoenix-Center	Hamburg	ECE Projektmanagement GmbH & Co. KG	2,75	2,33	2,40	2,50	2,82	2,95	3,00	2,93	3,07

Number	Center	City	Management	OverallRanking	Ranking 2015	Ranking 2016	Ranking 2017	Ranking 2018	Ranking 2019	Ranking 2020	Ranking 2021	Ranking 2022
121	Post Galerie Karlsruhe	Karlsruhe	CEMAGG GmbH	3,03	3,33	3,45	3,33	3,20	3,00	1,50	3,33	3,13
122	Postgalerie	Speyer	IPH Handelsimmobilien GmbH	4,10	4,20	4,40	4,40	4,17	5,00	4,43	2,22	4,00
123	Quarree Wandsbek-Markt	Hamburg	Sierra Germany GmbH	2,65	2,33	2,40	2,45	2,69	2,55	2,80	2,92	3,07
124	Rahlstedt Center	Hamburg	ESTAma Gesellschaft für Real Estate Management mbH	3,40	3,29	3,71	3,86	3,63	3,50	3,40	2,71	3,13
125	Rathaus Galerie Essen	Essen	KOPRIAN IQ MANAGEMENT GmbH	3,80	3,36	3,54	3,73	4,00	4,00	4,25	4,00	3,50
126	Rathaus-Center Ludwigshafen	Ludwigshafen	ECE Projektmanagement GmbH & Co. KG	2,99	2,83	3,00	3,36	2,88	2,56	3,11	3,20	2,99
127	Rathaus-Galerie Hagen	Hagen	KOPRIAN IQ MANAGEMENT GmbH	3,80	3,77	3,78	3,45	3,85	3,67	4,11	4,00	3,80
128	Rathaus-Galerie Leverkusen	Leverkusen	ECE Projektmanagement GmbH & Co. KG	3,25	3,04	2,90	3,04	2,85	3,43	3,43	3,80	3,48
129	Rathauspassagen Halberstadt	Halberstadt	Webegemeinschaft Rathauspassage GbR mbH	2,50	2,67	2,89	3,00	2,43	2,40	2,00	2,00	2,60
130	Ratio-Land	Baunatal	RME Retail Management Expertise Asset & Property Management GmbH	2,78	3,11	2,77	2,56	2,78	2,67	2,38	2,83	3,11
131	Regensburg Arcaden	Regensburg	Unibail-Rodamco Germany GmbH	3,07	2,56	2,76	2,80	2,85	3,53	3,63	3,14	3,29
132	Rhein Center	Weil am Rhein	CEV Handelsimmobilien GmbH	2,13	1,75	2,00	1,71	1,88	2,00	2,86	2,22	2,60
133	RheinBerg Galerie	Bergisch Gladbach	Apleona GmbH	3,07	2,88	3,20	3,00	3,00	3,00	2,00	5,00	2,50
134	Rhein-Center	Köln	ECE Projektmanagement GmbH & Co. KG	2,91	2,67	2,81	2,89	2,73	2,96	3,04	3,09	3,08
135	Rhein-Galerie	Ludwigshafen am Rhein	ECE Projektmanagement GmbH & Co. KG	3,42	3,00	3,26	3,68	3,38	3,71	3,67	3,35	3,32
136	Rhein-Neckar-Zentrum	Viernheim	ECE Projektmanagement GmbH & Co. KG	2,50	2,52	2,42	2,30	2,26	2,48	2,50	2,95	2,56
137	Rheinpark-Center	Neuss	ECE Projektmanagement GmbH & Co. KG	3,47	3,40	3,67	3,57	3,30	3,58	3,61	3,18	3,44
138	Rhein-Ruhr-Zentrum	Mülheim a. d. Ruhr	ECE Projektmanagement GmbH & Co. KG	3,25	2,90	3,09	3,12	2,68	3,64	3,29	3,63	3,61
139	Riem Arcaden	München	Unibail-Rodamco Germany GmbH	2,64	2,00	2,32	2,68	2,17	2,70	3,24	2,94	3,09
140	Ring-Center	Berlin	ECE Projektmanagement GmbH & Co. KG	3,01	2,53	2,74	3,07	2,85	2,75	2,92	3,18	4,00
141	Roland-Center	Bremen	ECE Projektmanagement GmbH & Co. KG	2,91	2,50	2,74	3,00	2,62	2,93	3,00	3,36	3,09
142	Rotmain-Center	Bayreuth	ECE Projektmanagement GmbH & Co. KG	2,43	2,10	1,91	2,19	2,31	2,35	2,71	3,07	2,81
143	Ruhr-Park	Bochum	Unibail-Rodamco Germany GmbH	2,18	2,14	2,30	2,20	2,08	2,37	2,14	2,14	2,08
144	Saarpark-Center	Neunkirchen (Saar)	ECE Projektmanagement GmbH & Co. KG	2,61	2,20	2,60	2,45	2,32	2,62	3,05	2,88	2,79
145	Sachsen-Allee	Chemnitz	ECE Projektmanagement GmbH & Co. KG	2,65	2,08	2,36	2,45	2,15	2,71	2,85	3,30	3,30
146	Sankt Annen Galerie	Brandenburg a. d. Havel	HGHI Holding GmbH	3,20	2,50	3,13	3,86	3,14	3,00	2,80	2,80	4,33
147	Schloss Arkaden	Heidenheim	CIV City-Immobilien Verwaltungsgesellschaft mbH & Co. Betreuungs KG	3,35	2,75	3,29	2,67	3,50	3,86	3,80	3,86	3,10
148	Schloss-Arkaden	Braunschweig	ECE Projektmanagement GmbH & Co. KG	2,28	1,94	2,14	2,13	2,07	2,33	2,48	2,70	2,48
149	Schlosshöfe	Oldenburg	ECE Projektmanagement GmbH & Co. KG	3,61	3,30	3,40	3,88	3,75	3,46	3,29	3,80	4,00
150	Schlössle-Galerie	Pforzheim	Apleona GmbH	2,63	2,00	2,22	2,38	2,50	2,50	2,50	3,43	3,50

Number	Center	City	Management	OverallRanking	Ranking 2015	Ranking 2016	Ranking 2017	Ranking 2018	Ranking 2019	Ranking 2020	Ranking 2021	Ranking 2022
151	Schlosspark-Center	Schwerin	ECE Projektmanagement GmbH & Co. KG	2,46	2,40	2,35	2,53	2,19	2,35	2,35	2,79	2,73
152	Schönhauser Allee-Arcaden	Berlin	Unibail-Rodamco Germany GmbH	2,60	2,43	3,07	2,64	2,50	2,43	2,50	2,57	2,64
153	Shopping Arkaden	Bocholt	CIV City-Immobilien Verwaltungsgesellschaft	2,94	2,60	2,50	2,60	2,63	3,67	3,00	3,25	3,27
154	Shopping Cité	Baden-Baden	MEC METRO-ECE Centermanagement GmbH	2,16	2,75	2,00	2,00	2,33	1,67	2,20	2,20	2,10
155	Shopping Plaza Garbsen	Garbsen	CIV City-Immobilien Verwaltungsgesellschaft mbH	2,93	3,00	3,11	2,56	2,91	2,75	2,88	2,88	3,33
156	Sieben Seen Center	Schwerin	MEC METRO-ECE Centermanagement GmbH	1,96	2,13	2,36	2,00	2,22	1,86	1,71	1,71	1,71
157	Skyline Plaza	Frankfurt am Main	ECE Projektmanagement GmbH & Co. KG	3,83	3,96	3,72	3,67	3,58	3,57	4,00	4,07	4,05
158	SMC Spitzkrug Center	Frankfurt/ Oder	MEC METRO-ECE Centermanagement GmbH	2,35	1,86	2,22	2,11	2,36	2,50	2,43	2,43	2,90
159	Sophienhof	Kiel	ECE Projektmanagement GmbH & Co. KG	2,78	2,38	2,44	2,67	2,59	2,71	3,15	3,25	3,06
160	Spandau Arcaden	Berlin	Unibail-Rodamco Germany GmbH	2,83	2,50	2,71	2,64	2,50	3,29	3,11	2,94	2,95
161	StadtCenter Düren	Düren	Apleona GmbH	3,17	2,71	2,90	2,50	3,00	3,22	3,89	3,88	3,22
162	Stadt-Galerie Hameln	Hameln	ECE Projektmanagement GmbH & Co. KG	3,20	2,94	3,00	3,05	2,67	3,06	3,60	3,50	3,77
163	Stadtgalerie Heilbronn	Heilbronn	ECE Projektmanagement GmbH & Co. KG	3,18	3,00	3,09	3,42	3,27	2,77	3,47	3,36	3,07
164	Stadtgalerie Passau	Passau	ECE Projektmanagement GmbH & Co. KG	2,62	2,53	2,33	2,31	2,69	2,17	2,67	3,15	3,13
165	Stadt-Galerie Plauen	Plauen	ECE Projektmanagement GmbH & Co. KG	2,63	3,00	2,63	2,53	2,47	2,40	2,55	2,64	2,83
166	Stadtgalerie Schweinfurt	Schweinfurt	ECE Projektmanagement GmbH & Co. KG	3,33	2,86	2,77	3,06	3,31	3,50	3,23	4,09	3,85
167	Stern Center	Sindelfingen	MEC METRO-ECE Centermanagement	3,81	3,44	3,40	3,00	3,88	3,80	3,50	4,67	4,75
168	Stern-Center	Potsdam	ECE Projektmanagement GmbH & Co. KG	2,38	2,00	1,65	2,00	2,22	2,44	2,61	3,18	2,91
169	Stern-Center Lüdenscheid	Lüdenscheid	ECE Projektmanagement GmbH & Co. KG	3,29	3,10	3,17	2,75	2,90	3,31	3,67	3,69	3,75
170	Südharz Galerie	Nordhausen	ROSCO Centermanagement	2,65	2,00	2,88	2,83	2,00	3,00	2,60	2,60	3,25
171	Taunus Carré	Friedrichsdorf	ILG Holding GmbH	3,49	4,00	3,67	3,67	3,60	3,60	3,00	3,00	3,40
172	Tempelhofer Hafen	Berlin	ECE Projektmanagement GmbH & Co. KG	3,36	2,89	3,40	3,70	3,38	3,57	3,29	3,56	3,10
173	Thier-Galerie	Dortmund	ECE Projektmanagement GmbH & Co. KG	3,31	3,00	3,15	3,04	3,23	3,43	3,52	3,70	3,40
174	Thüringen-Park	Erfurt	ECE Projektmanagement GmbH & Co. KG	2,59	2,00	2,38	2,33	2,50	2,83	2,62	2,90	3,13
175	Tibarg Center	Hamburg	BCM Center Management GmbH	2,18	2,60	2,57	2,14	1,80	1,80	1,86	2,25	2,44
176	Warnow Park	Rostock	EDEKA Nord SB - Warenhaus GmbH	2,68	2,75	2,67	2,86	3,00	2,80	2,67	2,67	2,00
177	Waterfront	Bremen	ECE Projektmanagement GmbH & Co. KG	3,03	2,60	2,84	2,90	3,26	2,95	3,06	3,38	3,24
178	Weimar Atrium	Weimar	City- & Centermanagement Weimar GmbH	2,41	2,14	2,90	2,43	2,33	2,25	2,14	2,60	2,50
179	Werre-Park	Bad Oeynhausen	ECE Projektmanagement G.m.b.H. & Co. KG	2,43	2,20	1,94	1,88	2,33	2,36	2,79	2,83	3,07
180	Weserpark	Bremen	RME Retail Management Expertise	2,52	2,33	2,59	2,25	2,52	2,54	2,83	2,59	2,50
181	Westpark	Ingolstadt	WESTPARK Einkaufszentrum Verwaltungs-GmbH	2,10	1,90	2,04	1,92	1,88	1,96	2,33	2,61	2,13
182	Wilmersdorfer Arcaden	Berlin Wilmersdorf	Unibail-Rodamco Germany GmbH	3,25	3,36	3,50	3,38	3,36	2,92	3,08	3,20	3,22
183	Zwickau Arcaden	Zwickau	ECE Projektmanagement GmbH & Co. KG	2,96	2,83	2,92	2,67	2,70	2,80	2,67	3,50	3,60

Number	Center	City	Management	OverallRanking	Retail space per inhabitant -source Lademann Partner-	Retail purchasing power	Centrality index	Prognos Atlas Rank	Prognos Dynamics Class
1	A10 Center	Wildau	ECE Projektmanagement GmbH & Co. KG	2,30	1,32	94,20	165,60	200	2
2	Aachen Arkaden	Aachen	Apleona GmbH	4,52	1,64	99,60	121,80	101	3
3	Alexa	Berlin	Sierra Germany GmbH	2,43	1,90	95,80	109,90	93	1
4	Allee-Center Berlin	Berlin	Phoenix Property Consulting GmbH	2,98	1,90	95,80	109,90	93	1
5	Allee-Center Essen	Essen	ECE Projektmanagement GmbH & Co. KG	3,24	1,92	99,10	112,00	239	4
6	Allee-Center Hamm	Hamm	ECE Projektmanagement GmbH & Co. KG	2,54	1,84	88,80	107,50	332	5
7	Allee-Center Leipzig	Leipzig	ECE Projektmanagement GmbH & Co. KG	2,99	1,84	91,10	106,50	104	1
8	Allee-Center Magdeburg	Magdeburg	ECE Projektmanagement GmbH & Co. KG	2,56	1,98	91,60	115,70	290	3
9	Allee-Center Remscheid	Remscheid	ECE Projektmanagement GmbH & Co. KG	3,24	1,76	97,80	103,20	323	5
10	Alstertal Einkaufs-Zentrum	Hamburg	ECE Projektmanagement GmbH & Co. KG	2,96	1,97	108,40	113,70	21	2
11	Altmarkt-Galerie	Dresden	ECE Projektmanagement GmbH & Co. KG	2,59	1,91	94,10	110,80	41	2
12	Arneken Galerie	Hildesheim	Klépierre Management Deutschland GmbH	3,80	1,56	98,60	91,00	250	5
13	Arsenal	Wittenberg	GERMAN REAL Asset & Property Managament GmbH	2,87	1,43	88,30	84,40	385	5
14	Billstedt-Center	Hamburg	ECE Projektmanagement GmbH & Co. KG	2,94	1,97	108,40	113,70	21	2
15	Blautal-Center	Ulm	IPH Handelsimmobilien GmbH	3,09	2,39	108,10	138,60	17	2
16	Blechen-Carré	Cottbus	CBC Projekt GmbH	2,82	2,16	93,60	126,40	363	5
17	Boulevard Berlin	Berlin	Klépierre Management Deutschland GmbH	3,36	1,90	95,80	109,90	93	1
18	Breuningerland	Sindelfingen	ECE Projektmanagement GmbH & Co. KG	1,82	1,47	107,20	171,10	7	2
19	Breuningerland	Ludwigsburg	ECE Projektmanagement GmbH & Co. KG	2,12	1,44	110,10	83,30	18	3
20	Brücken-Center Ansbach	Ansbach	Brücken-Center Ansbach GmbH	2,01	3,10	100,90	180,10	51	3
21	Buchholz Galerie	Buchholz	CEV Handelsimmobilien GmbH	3,66	3,30	117,10	125,20	86	3
22	Carré Bad Cannstatt	Stuttgart	JLL Jones Lang LaSalle GmbH	3,12	2,08	111,50	120,30	5	1
23	CCL City-Center Landshut	Landshut	4-RED GmbH Real Estate Development	3,01	2,74	112,90	157,50	15	2
24	Centrum-Galerie	Dresden	Klépierre Management Deutschland GmbH	2,57	1,91	94,10	110,80	41	2
25	Chemnitz Center	Chemnitz	CMC Center Management & Consulting	2,12	2,14	91,10	125,50	243	4
26	Citti-Park Kiel	Kiel	CITTI Handelsgesellschaft mbH & Co. KG	1,64	2,30	94,40	133,70	173	2
27	City Galerie Aschaffenburg	Aschaffenburg	DVI Deutsche Verwaltungsgesellschaft für Immobilien mbH	2,68	2,70	104,40	157,00	42	4
28	City-Arkaden Wuppertal	Wuppertal	ECE Projektmanagement GmbH & Co. KG	2,97	1,79	96,70	104,30	189	3
29	City-Center Bergedorf	Hamburg	DVI Deutsche Verwaltungsgesellschaft für Immobilien mbH	2,72	1,97	108,40	113,70	21	2
30	City-Galerie Augsburg	Augsburg	ECE Projektmanagement GmbH & Co. KG	2,25	2,12	97,40	122,40	49	2

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30	City-Galerie Augsburg	Augsburg	ECE Projektmanagement GmbH & Co. KG	2,25	2,12	97,40	122,40	49	2
31	City-Galerie Siegen	Siegen	ECE Projektmanagement GmbH & Co. KG	2,40	1,83	99,40	107,20	219	5
32	City-Galerie Wolfsburg	Wolfsburg	ECE Projektmanagement GmbH & Co. KG	2,44	2,05	108,50	119,90	9	4
33	City-Point Kassel	Kassel	ECE Projektmanagement GmbH & Co. KG	3,13	2,47	95,00	143,50	117	3
34	City-Point Nürnberg	Nürnberg	JLL Jones Lang LaSalle GmbH	3,63	2,30	104,00	129,00	61	2
35	City-Rondell Schwenningen	Villingen-Schwenningen	CIV City-Immobilien Verwaltungsgesellschaft	3,30	1,80	100,80	127,50	109	3
36	Das Schloss	Berlin	WealthCap Real Estate Management GmbH	2,77	1,90	95,80	109,90	93	1
37	Der Clou	Berlin	JLL Jones Lang LaSalle GmbH	2,99	1,90	95,80	109,90	93	1
38	DEZ Kassel	Kassel	ECE Projektmanagement GmbH & Co. KG	2,53	2,47	95,00	143,50	117	3
39	Die MEP	Meppen	RME Retail Management Expertise	4,19	1,80	96,00	120,00	142	4
40	Donau-Einkaufszentrum	Regensburg	Donau Einkaufszentrum GmbH	1,99	2,87	109,70	165,90	19	1
41	Drehscheibe/ City-Point Bochum	Bochum	Kintyre Management GmbH	3,50	2,00	95,70	116,80	292	4
42	Düsseldorf Bilk Arcaden	Düsseldorf	Unibail-Rodamco Germany GmbH	3,28	2,05	115,30	119,40	12	2
43	Eastgate	Berlin	ECE Projektmanagement GmbH & Co. KG	2,77	1,90	95,80	109,90	93	1
44	Elbe-Einkaufszentrum	Hamburg	ECE Projektmanagement GmbH & Co. KG	2,79	1,97	108,40	113,70	21	2
45	Elbepark Dresden	Dresden	CMC Center Management & Consulting	2,23	1,91	94,10	110,80	41	2
46	Erlangen Arcaden	Erlangen	Unibail-Rodamco Germany GmbH	2,66	1,94	113,20	112,80	6	2
47	Ernst-August-Galerie	Hannover	ECE Projektmanagement GmbH & Co. KG	2,78	1,89	103,02	124,40	83	4
48	Ettlinger Tor	Karlsruhe	ECE Projektmanagement GmbH & Co. KG	2,87	1,37	104,80	79,60	23	1
49	Europa-Galerie	Saarbrücken	ECE Projektmanagement GmbH & Co. KG	3,47	1,80	94,80	111,10	327	5
50	Famila Einkaufsland Wechloy	Oldenburg	FAMILA Verbrauchermarkt Einkaufsstätte GmbH	1,85	2,46	102,90	144,00	96	2
51	Flensburg Galerie	Flensburg	KOPRIAN IQ MANAGEMENT GmbH	2,76	2,89	94,20	168,10	169	2
52	Forum Allgäu	Kempten/Allgäu	ECE Projektmanagement GmbH & Co. KG	2,51	3,20	103,70	185,10	33	3
53	Forum City Mülheim	Mülheim a. d. Ruhr	Multi Germany GmbH	3,59	1,91	103,50	111,80	241	5
54	Forum Duisburg	Duisburg	Klépierre Management Deutschland GmbH	2,90	1,77	87,50	103,60	317	4
55	Forum Köpenick	Berlin	DVI Deutsche	2,66	1,90	95,80	109,90	93	1
56	Forum Mittelrhein	Koblenz	ECE Projektmanagement GmbH & Co. KG	3,34	2,83	101,60	165,40	64	3
57	Forum Steglitz	Berlin	Unibail-Rodamco Germany GmbH	3,59	1,90	95,80	109,90	93	1
58	Forum Wetzlar	Wetzlar	ECE Projektmanagement GmbH & Co. KG	2,66	3,80	94,50	196,90	211	6
59	Franken-Center	Nürnberg	ECE Projektmanagement GmbH & Co. KG	2,97	2,30	104,00	129,00	61	2
60	Galerie Neustädter Tor	Gießen	Prelios Immobilien Management GmbH	3,34	1,77	94,30	102,70	110	2

Number	Center	City	Management	OverallRanking	Retail space -	Retail P P	Centrality index	Prognos Rank	Prognos
61	Galerie Roter Turm	Chemnitz	IPH Handelsimmobilien GmbH	2,68	2,14	91,10	125,50	243	4
62	Gera Arcaden	Gera	Unibail-Rodamco Germany GmbH	2,57	2,18	91,30	128,10	366	6
63	Gesundbrunnen-Center	Berlin	ECE Projektmanagement GmbH & Co. KG	3,04	1,90	95,80	109,90	93	1
64	Glacis-Galerie	Neu-Ulm	ECE Projektmanagement GmbH & Co. KG	3,92	2,10	104,00	121,40	125	3
65	Goethe Galerie	Jena	IPH Handelsimmobilien GmbH	2,52	1,86	92,80	108,50	29	2
66	Gropius Passagen	Berlin	Unibail-Rodamco Germany GmbH	3,20	1,90	95,80	109,90	93	1
67	Hallen am Borsigturm	Berlin	ECE Projektmanagement GmbH & Co. KG	2,76	1,90	95,80	109,90	93	1
68	Hallescher EKP	Halle/ Saale	CMde CENTERMANAGER und IMMOBILIEN	2,87	1,65	87,50	96,60	310	3
69	Hamburger Meile	Hamburg	ECE Projektmanagement GmbH & Co. KG	3,23	1,97	108,40	113,70	21	2
70	HavelPark Dallgow	Dallgow	Unibail-Rodamco Germany GmbH	2,35	1,00	100,10	338,00	311	3
71	Hessen-Center	Frankfurt a.M.	ECE Projektmanagement GmbH & Co. KG	3,16	1,87	111,70	108,50	10	1
72	Hirsch Center	Aachen	Retail Management Expertise	2,63	1,80	96,00	120,00	101	3
73	Höfe am Brühl	Leipzig	Unibail-Rodamco Germany GmbH	3,01	1,84	91,10	106,50	104	1
74	Huma S.A:	Sankt Augustin	Jost Hurler	2,69	1,80	96,00	120,00	161	4
75	Hürth-Park	Hürth	ECE Projektmanagement GmbH & Co. KG	2,84	1,80	104,50	92,80	131	4
76	Isenburg-Zentrum	Neu-Isenburg	ECE Projektmanagement GmbH & Co. KG	3,21	1,40	110,70	111,90	263	3
77	K in Lautern	Kaiserslautern	ECE Projektmanagement GmbH & Co. KG	3,62	3,00	91,60	175,50	221	3
78	Kamp-Promenade	Osnabrück	VÖLKEL COMPANY Asset Management	2,48	2,43	98,50	142,60	63	2
79	KaufPark Dresden	Dresden	Unibail-Rodamco Germany GmbH	2,54	1,91	94,10	110,80	41	2
80	KaufPark Eiche	Ahrensfeld	Unibail-Rodamco Germany GmbH	2,44	5,34	109,70	221,00	251	3
81	Köln Arcaden	Köln	Unibail-Rodamco Germany GmbH	2,38	2,00	106,10	115,50	26	2
82	KOMM EKZ er	Offenbach	Apleona GmbH	3,28	1,40	107,50	81,00	236	4
83	Königsbau Passagen	Stuttgart	ECE Projektmanagement GmbH & Co. KG	3,11	2,08	111,50	120,30	5	1
84	Königsgalerie	Duisburg	Klépierre Management Deutschland GmbH	3,99	1,77	87,50	103,60	317	4
85	Königshof-Galerie	Mettmann	ILG Holding GmbH	4,09	1,59	108,50	93,00	111	5
86	Kornmarkt-Center	Bautzen	ECE Projektmanagement GmbH & Co. KG	2,59	1,46	88,80	85,90	294	5
87	Lago	Konstanz	Prelios Immobilien Management GmbH	1,83	2,00	104,00	115,20	81	3
88	Lausitz Park	Cottbus	EDEKA-MIHA Immobilien Service GmbH	2,65	2,16	93,60	126,40	363	5
89	Lausitz-Center	Hoyerswerda	MEC METRO-ECE Centermanagement GmbH & Co. KG	2,91	1,85	87,10	107,90	294	5
90	Leine-Center	Laatzen	Unibail-Rodamco Germany GmbH	3,08	1,50	110,10	124,40	83	4
91	Leo-Center	Leonberg	ECE Projektmanagement GmbH & Co. KG	3,20	1,80	118,40	124,80	7	2
92	Limbecker Platz	Essen	ECE Projektmanagement GmbH & Co. KG	3,01	1,92	99,10	112,00	239	4
93	Linden-Center	Berlin	ECE Projektmanagement GmbH & Co. KG	2,92	1,90	95,80	109,90	93	1
94	Löhr-Center	Koblenz	ECE Projektmanagement GmbH & Co. KG	3,26	2,83	101,60	165,40	64	3
95	Lookentor	Lingen / Ems	Hermann KLAAS Projektentwicklung GmbH	3,03	1,80	99,00	123,20	142	4

Number	Center	City	Management	OverallRanking	Retail space L M -	Retail P P	Centrality	Prognos Rank	PrognosDC
96	LOOP5	Weiterstadt	Sierra Germany GmbH	3,66	1,44	103,20	419,00	123	4
97	Luisen-Center	Darmstadt	ECE Projektmanagement GmbH & Co. KG	3,13	1,95	106,30	113,10	4	1
98	LuisenForum	Wiesbaden	OMEGA Immobilien GmbH	3,11	1,94	107,80	112,60	46	4
99	Main-Taunus-Zentrum	Sulzbach	ECE Projektmanagement GmbH & Co. KG	2,04	1,80	118,70	481,30	11	3
100	Marktplatz Galerie	Hamburg	BCM Center Management GmbH	2,82	1,97	108,40	113,70	21	1
101	Marktplatz-Center	Neubrandenburg	ECE Projektmanagement GmbH & Co. KG	2,38	2,75	90,70	151,40	391	5
102	Mercaden Böblingen	Böblingen	hkm Management AG	3,19	1,63	112,20	94,30	7	2
103	Mercado Nürnberg	Nürnberg	KOPRIAN IQ MANAGEMENT GmbH	2,74	2,30	104,00	129,00	61	2
104	Milaneo	Stuttgart	ECE Projektmanagement GmbH & Co. KG	3,79	2,08	111,50	120,30	5	1
105	Minto	Mönchengladbach	Unibail-Rodamco Germany GmbH	2,80	2,00	96,00	117,00	249	3
106	Münster Arkaden	Münster	Sierra Germany GmbH	2,60	2,20	104,50	127,50	25	2
107	MyZeil	Frankfurt am Main	ECE Projektmanagement GmbH & Co. KG	3,39	1,87	111,70	108,50	10	1
108	Neefepark	Chemnitz	JLL Jones Lang LaSalle GmbH	2,36	2,14	91,10	125,50	243	4
109	Neukölln Arcaden	Berlin	Unibail-Rodamco Germany GmbH	4,06	1,90	95,80	109,90	93	1
110	Neutor Galerie	Dinslaken	IPH Handelsimmobilien GmbH	3,74	1,84	102,80	96,70	242	5
111	Nova Eventis	Leuna	ECE Projektmanagement GmbH & Co. KG	2,92	1,80	96,00	120,00	348	6
112	Oder-Center	Schwedt / Oder	MEC METRO-ECE Centermanagement GmbH & Co. KG	2,84	1,80	89,80	128,00	392	5
113	Olympia-EKZ	München	ECE Projektmanagement GmbH & Co. KG	2,98	1,47	122,10	85,20	1	1
114	Ostsee Park	Lambrechtshagen	MEC METRO-ECE Centermanagement GmbH & Co. KG	2,33	1,80			356	4
115	Palais Vest	Recklinghausen	Unibail-Rodamco Germany GmbH	3,44	1,63	96,00	95,60	93	6
116	Pasing Arcaden	München	Unibail-Rodamco Germany GmbH	2,34	1,47	122,10	85,20	1	1
117	Paunsdorf Center	Leipzig	Unibail-Rodamco Germany GmbH	2,90	1,84	91,10	106,50	104	1
118	PEP Einkaufs-Center	München	ECE Projektmanagement GmbH & Co. KG	2,77	1,47	122,10	85,20	1	1
119	PEP Eisenach	Eisenach	CIV City-Immobilien Verwaltungsgesellschaft	2,35	2,35	91,20	137,50	321	5
120	Phoenix-Center	Hamburg	ECE Projektmanagement GmbH & Co. KG	2,75	1,97	108,40	113,70	21	1
121	Post Galerie Karlsruhe	Karlsruhe	CEMAGG GmbH	3,03	1,37	104,80	79,60	23	1
122	Postgalerie	Speyer	IPH Handelsimmobilien GmbH	4,10	2,42	104,50	140,90	66	4
123	Quarree Wandsbek-Markt	Hamburg	Sierra Germany GmbH	2,65	1,97	108,40	113,70	21	1
124	Rahlstedt Center	Hamburg	ESTAma Gesellschaft für Real Estate Management mbH	3,40	1,97	108,40	113,70	21	1
125	Rathaus Galerie Essen	Essen	KOPRIAN IQ MANAGEMENT GmbH	3,80	1,92	99,10	112,00	239	4
126	Rathaus-Center Ludwigshafen	Ludwigshafen	ECE Projektmanagement GmbH & Co. KG	2,99	1,92	94,50	111,50	139	3
127	Rathaus-Galerie Hagen	Hagen	KOPRIAN IQ MANAGEMENT GmbH	3,80	1,95	92,90	114,00	118	6
128	Rathaus-Galerie	Leverkusen	ECE Projektmanagement GmbH & Co. KG	3,25	1,82	101,00	106,00	122	5
129	Rathauspassagen	Halberstadt	Webegemeinschaft Rathauspassage GbR mbH	2,50	1,50	76,50	120,60	369	5
130	Ratio-Land	Baunatal	RME Retail Management Expertise	2,78	0,50	102,10	118,70	90	4

Number	Center	City	Management	OverallRanking	Retail space L P -	Retail purchasing	Centrality	Prognos Ra	Prognos DC
131	Regensburg Arcaden	Regensburg	Unibail-Rodamco Germany GmbH	3,07	2,87	109,70	165,90	19	1
132	Rhein Center	Weil am Rhein	CEV Handelsimmobilien GmbH	2,13	2,35	101,50	166,00	168	6
133	RheinBerg Galerie	Bergisch Gladbach	Apleona GmbH	3,07	1,80	117,00	95,90	87	4
134	Rhein-Center	Köln	ECE Projektmanagement GmbH & Co. KG	2,91	2,00	106,10	115,50	26	2
135	Rhein-Galerie	Ludwigshafen am Rhein	ECE Projektmanagement GmbH & Co. KG	3,42	1,92	94,50	111,50	139	3
136	Rhein-Neckar-Zentrum	Viernheim	ECE Projektmanagement GmbH & Co. KG	2,50	0,36	99,40	150,30	130	5
137	Rheinpark-Center	Neuss	ECE Projektmanagement GmbH & Co. KG	3,47	1,10	103,00	117,10	70	4
138	Rhein-Ruhr-Zentrum	Mülheim a. d. Ruhr	ECE Projektmanagement GmbH & Co. KG	3,25	1,91	103,50	111,80	241	5
139	Riem Arcaden	München	Unibail-Rodamco Germany GmbH	2,64	1,47	122,10	85,20	1	1
140	Ring-Center	Berlin	ECE Projektmanagement GmbH & Co. KG	3,01	1,90	95,80	109,90	93	1
141	Roland-Center	Bremen	ECE Projektmanagement GmbH & Co. KG	2,91	2,02	96,60	117,80	293	4
142	Rotmain-Center	Bayreuth	ECE Projektmanagement GmbH & Co. KG	2,43	2,50	100,00	145,60	50	2
143	Ruhr-Park	Bochum	Unibail-Rodamco Germany GmbH	2,18	2,00	95,70	116,80	292	4
144	Saarpark-Center	Neunkirchen (Saar)	ECE Projektmanagement GmbH & Co. KG	2,61	1,63	92,10	96,30	362	6
145	Sachsen-Allee	Chemnitz	ECE Projektmanagement GmbH & Co. KG	2,65	2,14	91,10	125,50	243	4
146	Sankt Annen Galerie	Brandenburg a. d. Havel	HGHI Holding GmbH	3,20	1,96	87,70	114,70	370	4
147	Schloss Arkaden	Heidenheim	CIV City-Immobilien	3,35	1,50	100,90	87,30	124	4
148	Schloss-Arkaden	Braunschweig	ECE Projektmanagement GmbH & Co. KG	2,28	2,40	105,60	140,60	53	3
149	Schlosshöfe	Oldenburg	ECE Projektmanagement GmbH & Co. KG	3,61	2,46	102,90	144,00	96	2
150	Schlössle-Galerie	Pforzheim	Apleona GmbH	2,63	2,31	97,80	133,70	163	3
151	Schlosspark-Center	Schwerin	ECE Projektmanagement GmbH & Co. KG	2,46	2,10	92,50	123,30	183	4
152	Schönhauser Allee-Arcaden	Berlin	Unibail-Rodamco Germany GmbH	2,60	1,90	95,80	109,90	93	1
153	Shopping Arkaden Bocholt	Bocholt	CIV City-Immobilien	2,94	1,40	99,40	124,10	188	5
154	Shopping Cité	Baden-Baden	MEC METRO-ECE Centermanagement	2,16	1,84	114,20	107,40	67	4
155	Shopping Plaza Garbsen	Garbsen	CIV City-Immobilien	2,93	2,80	102,90	1,34	126	4
156	Sieben Seen Center	Schwerin	MEC METRO-ECE Centermanagement	1,96	2,10	92,50	123,30	183	4
157	Skyline Plaza	Frankfurt am Main	ECE Projektmanagement GmbH & Co. KG	3,83	1,87	111,70	108,50	8	1
158	SMC Spitzkrug Multi Center	Frankfurt/ Oder	MEC METRO-ECE Centermanagement	2,35	1,94	89,40	114,40	377	6
159	Sophienhof	Kiel	ECE Projektmanagement GmbH & Co. KG	2,78	2,30	94,40	133,70	173	2
160	Spandau Arcaden	Berlin	Unibail-Rodamco Germany GmbH	2,83	1,90	95,80	109,90	93	1
161	StadtCenter Düren	Düren	Apleona GmbH	3,17	1,49	96,90	87,00	196	5
162	Stadt-Galerie Hameln	Hameln	ECE Projektmanagement GmbH & Co. KG	3,20	1,85	97,00	107,80	305	6
163	Stadtgalerie Heilbronn	Heilbronn	ECE Projektmanagement GmbH & Co. KG	3,18	2,60	104,80	151,60	32	2
164	Stadtgalerie Passau	Passau	ECE Projektmanagement GmbH & Co. KG	2,62	3,90	100,10	225,80	39	2
165	Stadt-Galerie Plauen	Plauen	ECE Projektmanagement GmbH & Co. KG	2,63	2,95	88,60	144,00	322	5

Number	Center	City	Management	OverallRanking	Retail space per inhabitant -source Lademann Partner-	Retail purchasing power	Centrality index	Prognos Atlas Rank	Prognos Dynamics Class
166	Stadtgalerie Schweinfurt	Schweinfurt	ECE Projektmanagement GmbH & Co. KG	3,33	3,69	96,40	214,80	112	5
167	Stern Center	Sindelfingen	MEC METRO-ECE Centermanagement GmbH & Co. KG	3,81	1,80	96,00	120,00	7	2
168	Stern-Center	Potsdam	ECE Projektmanagement GmbH & Co. KG	2,38	1,61	99,30	92,90	92	2
169	Stern-Center Lüdenscheid	Lüdenscheid	ECE Projektmanagement GmbH & Co. KG	3,29	1,21	100,94	1,21	282	6
170	Südharz Galerie	Nordhausen	ROSCO Centermanagement und Immobilienverwaltung GmbH	2,65	1,73	85,20	101,90	368	6
171	Taunus Carré	Friedrichsdorf	ILG Holding GmbH	3,49	1,80	96,50	129,30	14	4
172	Tempelhofer Hafen	Berlin	ECE Projektmanagement GmbH & Co. KG	3,36	1,90	95,80	109,90	93	1
173	Thier-Galerie	Dortmund	ECE Projektmanagement GmbH & Co. KG	3,31	2,02	94,10	117,60	255	4
174	Thüringen-Park	Erfurt	ECE Projektmanagement GmbH & Co. KG	2,59	2,00	93,00	116,70	253	3
175	Tibarg Center	Hamburg	BCM Center Management GmbH	2,18	1,97	108,40	113,70	28	2
176	Warnow Park	Rostock	EDEKA Nord SB - Warenhaus GmbH	2,68	1,82	91,20	106,70	58	3
177	Waterfront	Bremen	ECE Projektmanagement GmbH & Co. KG	3,03	2,02	96,60	117,80	293	4
178	Weimar Atrium	Weimar	City- & Centermanagement Weimar GmbH	2,41	1,69	91,20	99,10	102	3
179	Werre-Park	Bad Oeynhausen	ECE Projektmanagement G.m.b.H. & Co. KG	2,43	1,62	103,30	103,90	156	5
180	Weserpark	Bremen	RME Retail Management Expertise Asset & Property Management GmbH	2,52	2,02	96,60	117,80	293	4
181	Westpark	Ingolstadt	WESTPARK Einkaufszentrum Verwaltungs-GmbH	2,10	2,60	108,80	150,10	3	2
182	Wilmersdorfer Arcaden	Berlin Wilmersdorf	Unibail-Rodamco Germany GmbH	3,25	1,90	95,80	109,90	93	1
183	Zwickau Arcaden	Zwickau	ECE Projektmanagement GmbH & Co. KG	2,96	1,64	88,80	96,50	247	5

Number	Center	City	Management	OverallRanking	Location	Distanz Mainstreet	Main shopping street within walking distance	Distance highway in min	Distanz Bundesstraße in min	Distance S-, U-, and regional train in min	Public transport within walking distance
1	A10 Center	Wildau	ECE Projektmanagement GmbH & Co. KG	2,30	Green meadow	Not within walking distance		2	2	30	No
2	Aachen Arkaden	Aachen	Apleona GmbH	4,52	City district	Not within walking distance		6	4	2	Yes
3	Alexa	Berlin	Sierra Germany GmbH	2,43	City center	Directly	Alexanderplatz	19	1	2	Yes
4	Allee-Center Berlin	Berlin	Phoenix Property Consulting GmbH	2,98	City district	Not within walking distance		17	5	36	No
5	Allee-Center Essen	Essen	ECE Projektmanagement GmbH & Co. KG	3,24	City district	Not within walking distance		5	4	1	Yes
6	Allee-Center Hamm	Hamm	ECE Projektmanagement GmbH & Co. KG	2,54	City center	Nearby	Weststraße	16	1	6	Yes
7	Allee-Center Leipzig	Leipzig	ECE Projektmanagement GmbH & Co. KG	2,99	City district	Not within walking distance		17	3	1	Yes
8	Allee-Center Magdeburg	Magdeburg	ECE Projektmanagement GmbH & Co. KG	2,56	City center	Directly	Breiter Weg	15	5	11	Yes
9	Allee-Center Remscheid	Remscheid	ECE Projektmanagement GmbH & Co. KG	3,24	City center	Directly	Alleestraße	8	2	12	Yes
10	Alstertal Einkaufs-Zentrum	Hamburg	ECE Projektmanagement GmbH & Co. KG	2,96	City district	Not within walking distance		19	16	5	Yes
11	Altmarkt-Galerie	Dresden	ECE Projektmanagement GmbH & Co. KG	2,59	City center	Directly	Altmarkt	13	2	13	Yes
12	Arneken Galerie	Hildesheim	Klépierre Management Deutschland GmbH	3,80	City center	Directly	Almstraße	9	3	8	Yes
13	Arsenal	Wittenberg	GERMAN REAL Asset & Property Managament GmbH	2,87	City center	Nearby	Collegienstraße	26	2	8	Yes
14	Billstedt-Center	Hamburg	ECE Projektmanagement GmbH & Co. KG	2,94	City district	Not within walking distance		6	2	1	Yes
15	Blautal-Center	Ulm	IPH Handelsimmobilien GmbH	3,09	Stadtteil	Not within walking distance		8	1	9	Yes
16	Blechen-Carré	Cottbus	CBC Projekt GmbH	2,82	City center	Nearby	Spremberger Straße	10	4	14	Yes
17	Boulevard Berlin	Berlin	Klépierre Management Deutschland GmbH	3,36	City district	Directly	Schloßstraße	3	4	2	Yes
18	Breuningerland	Sindelfingen	ECE Projektmanagement GmbH & Co. KG	1,82	City district	Not within walking distance		4	13	33	No
19	Breuningerland	Ludwigsburg	ECE Projektmanagement GmbH & Co. KG	2,12	Green meadow	Not within walking distance		5	3	25	No
20	Brücken-Center Ansbach	Ansbach	Brücken-Center Ansbach GmbH	2,01	City center	Walking distance	Neustadt, Uzstraße	10	1	15	Yes
21	Buchholz Galerie	Buchholz	CEV Handelsimmobilien GmbH	3,66	City center	Directly	Breite Straße	9	6	6	Yes
22	Carré Bad Cannstatt	Stuttgart	JLL Jones Lang LaSalle GmbH	3,12	City district	Walking distance	Markplatz	22	5	5	Yes
23	CCL City-Center Landshut	Landshut	4-RED GmbH Real Estate Development	3,01	City center	Walking distance	Altstadt	14	4	28	No
24	Centrum-Galerie	Dresden	Klépierre Management Deutschland GmbH	2,57	City center	Nearby	Prager Straße	11	2	9	Yes
25	Chemnitz Center	Chemnitz	CMC Center Management & Consulting	2,12	City district	Not within walking distance	Ringstraße	2	2		Yes
26	Citti-Park Kiel	Kiel	CITTI Handelsgesellschaft mbH & Co. KG	1,64	City district	Not within walking distance		2	4	1	Yes
27	City Galerie Aschaffenburg	Aschaffenburg	DVI Deutsche Verwaltungsgesellschaft für Immobilien mbH	2,68	City center	Directly	Herstallstraße	6	1	8	Yes
28	City-Arkaden Wuppertal	Wuppertal	ECE Projektmanagement GmbH & Co. KG	2,97	City center	Directly	Alte Freiheit	6	1	7	Yes
29	City-Center Bergedorf	Hamburg	DVI Deutsche Verwaltungsgesellschaft für Immobilien mbH	2,72	City district	Nearby	Sachsentor	4	1	2	Yes
30	City-Galerie Augsburg	Augsburg	ECE Projektmanagement GmbH & Co. KG	2,25	City center	Walking distance	Annastraße	10	4	22	No

Number	Center	City	Management	OverallRanking	Location	Distanz Mainstreet	Main shopping street within walking distance	Distance highway in min	Distanz Bundesstraße in min	Distance S-, U-, and regional train in min	Public transport within walking distance
31	City-Galerie Siegen	Siegen	ECE Projektmanagement GmbH & Co. KG	2,40	City center	Nearby	Bahnhofstraße	7	1	2	Yes
32	City-Galerie Wolfsburg	Wolfsburg	ECE Projektmanagement GmbH & Co. KG	2,44	City center	Directly	Porschestraße	10	5	10	Yes
33	City-Point Kassel	Kassel	ECE Projektmanagement GmbH & Co. KG	3,13	City center	Not within walking distance		11	3	7	Yes
34	City-Point Nürnberg	Nürnberg	JLL Jones Lang LaSalle GmbH	3,63	City center	Directly	Breite Gasse	18	8	3	Yes
35	City-Rondell Schwenningen	Villingen-Schwenningen	CIV City-Immobilien Verwaltungsgesellschaft mbH & Co. Betreuungs KG	3,30	City center	Directly	In der Mulsen	12	7	5	Yes
36	Das Schloss	Berlin	WealthCap Real Estate Management GmbH	2,77	City district	Directly	Schloßstraße	6	7	1	Yes
37	Der Clou	Berlin	JLL Jones Lang LaSalle GmbH	2,99	City district	Nicht fußläufig		3	5	1	Yes
38	DEZ Kassel	Kassel	ECE Projektmanagement GmbH & Co. KG	2,53	City district	Directly	Untere Königsstraße	2	1	25	No
39	Die MEP	Meppen	RME Retail Management Expertise Asset & Property Management GmbH	4,19	City center	Walking distance	Hasestraße	13	5	3	Yes
40	Donau-Einkaufszentrum	Regensburg	Donau Einkaufszentrum GmbH	1,99	City district	Not within walking distance		6	2	31	No
41	Drehscheibe/ City-Point Bochum	Bochum	Kintyre Management GmbH	3,50	City center	Directly	Kortumstraße	7	1	2	Yes
42	Düsseldorf Bilk Arcaden	Düsseldorf	Unibail-Rodamco Germany GmbH	3,28	City district	Walking distance	Friedrichstraße	8	4	1	Yes
43	Eastgate	Berlin	ECE Projektmanagement GmbH & Co. KG	2,77	City district	Not within walking distance		15	3	2	Yes
44	Elbe-Einkaufszentrum	Hamburg	ECE Projektmanagement GmbH & Co. KG	2,79	City district	Not within walking distance		9	1	25	No
45	Elbepark Dresden	Dresden	CMC Center Management & Consulting	2,23	City district	Not within walking distance		2	6	13	Yes
46	Erlangen Arcaden	Erlangen	Unibail-Rodamco Germany GmbH	2,66	City center	Directly	Nürnberger Straße	3	4	6	Yes
47	Ernst-August-Galerie	Hannover	ECE Projektmanagement GmbH & Co. KG	2,78	City center	Walking distance	Bahnhofstraße, Georgstraße	15	7	2	Yes
48	Ettlinger Tor	Karlsruhe	ECE Projektmanagement GmbH & Co. KG	2,87	City center	Walking distance	Kaiserstraße	9	1	4	Yes
49	Europa-Galerie	Saarbrücken	ECE Projektmanagement GmbH & Co. KG	3,47	City center	Nearby	Bahnhofstraße	3	1	2	Yes
50	Famila Einkaufsland Wechloy	Oldenburg	FAMILA Verbrauchermarkt Einkaufsstätte GmbH & Co. KG	1,85	City district	Not within walking distance		2	9	11	Yes
51	Flensburg Galerie	Flensburg	KOPRIAN IQ MANAGEMENT GmbH	2,76	City center	Directly	Holm	10	1	15	Yes
52	Forum Allgäu	Kempten/Allgäu	ECE Projektmanagement GmbH & Co. KG	2,51	City center	Walking distance	Fischerstraße	9	2	12	Yes
53	Forum City Mülheim	Mülheim a. d. Ruhr	Multi Germany GmbH	3,59	City center	Directly	Schloßstraße	8	3	1	Yes
54	Forum Duisburg	Duisburg	Klépierre Management Deutschland GmbH	2,90	City center	Directly	Königsstraße	4	12	1	Yes
55	Forum Köpenick	Berlin	DVI Deutsche Verwaltungsgesellschaft für Immobilien mbH	2,66	City district	Not within walking distance		25	15	2	Yes
56	Forum Mittelrhein	Koblenz	ECE Projektmanagement GmbH & Co. KG	3,34	City center	Nearby	Löhrstraße	9	1	12	Yes
57	Forum Steglitz	Berlin	Unibail-Rodamco Germany GmbH	3,59	City district	Directly	Schloßstraße	5	5	1	Yes
58	Forum Wetzlar	Wetzlar	ECE Projektmanagement GmbH & Co. KG	2,66	City center	Nearby	Bahnhofstraße	4	1	2	Yes
59	Franken-Center	Nürnberg	ECE Projektmanagement GmbH & Co. KG	2,97	City district	Not within walking distance		6	4	3	Yes
60	Galerie Neustädter Tor	Gießen	Prelios Immobilien Management GmbH	3,34	City center	Walking distance	Seltersweg	13	3	2	Yes

Number	Center	City	Management	OverallRanking	Location	Distanz Mainstreet	Main shopping street within walking distance	Distance highway in min	Distanz Bundesstraße in min	Distance S-, U-, and regional train in min	Public transport within walking distance
61	Galerie Roter Turm	Chemnitz	IPH Handelsimmobilien GmbH	2,68	City center	Directly	Straße der Nationen	10	3	15	Yes
62	Gera Arcaden	Gera	Unibail-Rodamco Germany GmbH	2,57	City center	Walking distance	Sorge	10	2	9	Yes
63	Gesundbrunnen-Center	Berlin	ECE Projektmanagement GmbH & Co. KG	3,04	City district	Not within walking distance		20	4	4	Yes
64	Glacis-Galerie	Neu-Ulm	ECE Projektmanagement GmbH & Co. KG	3,92	Innenstadt	Not within walking distance		13	4	2	Yes
65	Goethe Galerie	Jena	IPH Handelsimmobilien GmbH	2,52	City center	Nearby	Markt, Teichgraben	12	1	7	Yes
66	Gropius Passagen	Berlin	Unibail-Rodamco Germany GmbH	3,20	City district	Not within walking distance		6	8	1	Yes
67	Hallen am Borsigturm	Berlin	ECE Projektmanagement GmbH & Co. KG	2,76	City district	Walking distance	Gorkistraße	4	11	3	Yes
68	Hallescher Einkaufspark HEP	Halle/ Saale	CMde CENTERMANAGER und IMMOBILIEN GmbH	2,87	City district	Not within walking distance		14	1	22	No
69	Hamburger Meile	Hamburg	ECE Projektmanagement GmbH & Co. KG	3,23	City district	Not within walking distance		12	1	3	Yes
70	HavelPark Dallgow	Dallgow-Döberitz	Unibail-Rodamco Germany GmbH	2,35	Green meadow	Not within walking distance		8	1	32	No
71	Hessen-Center	Frankfurt am Main	ECE Projektmanagement GmbH & Co. KG	3,16	City district	Not within walking distance		1	7	1	Yes
72	Hirsch Center	Aachen	Retail Management Expertise Asset & Property Management GmbH	2,63	City district	Not within walking distance		4	4	15	No
73	Höfe am Brühl	Leipzig	Unibail-Rodamco Germany GmbH	3,01	City center	Directly	Hainstraße	18	1	3	Yes
74	Huma Sankt Augustin	Sankt Augustin	Jost Hurler Beteiligungs- u. Verwaltungsgesellschaft	2,69	City center	Not within walking distance		4	1	1	Yes
75	Hürth-Park	Hürth	ECE Projektmanagement GmbH & Co. KG	2,84	City center	Not within walking distance		15	4	23	No
76	Isenburg-Zentrum	Neu-Isenburg	ECE Projektmanagement GmbH & Co. KG	3,21	City center	Walking distance	Frankfurter Straße	6	5	33	No
77	K in Lautern	Kaiserslautern	ECE Projektmanagement GmbH & Co. KG	3,62	City center	Directly	Fackelstraße	8	7	13	Yes
78	Kamp-Promenade	Osnabrück	VÖLKEL COMPANY Asset Management GmbH & Co. KG	2,48	City center	Nearby	Große Straße	9	3	14	Yes
79	KaufPark Dresden	Dresden	Unibail-Rodamco Germany GmbH	2,54	City district	Not within walking distance		4	1	23	No
80	KaufPark Eiche	Ahrensfeld	Unibail-Rodamco Germany GmbH	2,44	City district	Not within walking distance		8	10	25	No
81	Köln Arcaden	Köln	Unibail-Rodamco Germany GmbH	2,38	City district	Not within walking distance		10	1	1	Yes
82	KOMM Einkaufscenter	Offenbach	Apleona GmbH	3,28	City center	Directly	Große Marktstraße	10	5	6	Yes
83	Königsbau Passagen	Stuttgart	ECE Projektmanagement GmbH & Co. KG	3,11	City center	Walking distance	Calwer Straße	17	1	1	Yes
84	Königsgalerie	Duisburg	Klépierre Management Deutschland GmbH	3,99	City center	Directly	Kuhstraße	5	11	2	Yes
85	Königshof-Galerie	Mettmann	ILG Holding GmbH	4,09	City center	Walking distance	Markt	8	4	3	Yes
86	Kornmarkt-Center	Bautzen	ECE Projektmanagement GmbH & Co. KG	2,59	City center	Nearby	Karl-Marx-Straße	4	1	13	Yes
87	Lago Shopping-Center	Konstanz	Prelios Immobilien Management GmbH	1,83	City center	Nearby	Rosengartenstraße	5	5	2	Yes
88	Lausitz Park	Cottbus	EDEKA-MIHA Immobilien Service GmbH	2,65	City district	Not within walking distance		6	4	54	Yes
89	Lausitz-Center	Hoyerswerda	MEC METRO-ECE Centermanagement GmbH & Co. KG	2,91	City district	Not within walking distance		37	1	31	Yes
90	Leine-Center	Laatzen	Unibail-Rodamco Germany GmbH	3,08	City district	Not within walking distance		6	6	1	Yes

Number	Center	City	Management	OverallRanking	Location	Distanz Mainstreet	Main shopping street within walking distance	Distance highway in min	Distanz Bundesstraße in min	Distance S-, U-, and regional train in min	Public transport within walking distance
91	Leo-Center	Leonberg	ECE Projektmanagement GmbH & Co. KG	3,20	City center	Walking distance	Marktplatz	6	7	12	Yes
92	Limbecker Platz	Essen	ECE Projektmanagement GmbH & Co. KG	3,01	City center	Directly	Limbecker Straße	3	3	3	Yes
93	Linden-Center	Berlin	ECE Projektmanagement GmbH & Co. KG	2,92	City district	Not within walking distance		16	8	6	Yes
94	Löhr-Center	Koblenz	ECE Projektmanagement GmbH & Co. KG	3,26	City center	Directly	Löhrstraße	7	3	5	Yes
95	Lookentor	Lingen / Ems	Hermann KLAAS Projektentwicklung GmbH	3,03	City center	Directly	Lookenstraße	10	7	2	Yes
96	LOOP5	Weiterstadt	Sierra Germany GmbH	3,66	Green meadow	Not within walking distance		3	2	44	No
97	Luisen-Center	Darmstadt	ECE Projektmanagement GmbH & Co. KG	3,13	City center	Directly	Schuchardstraße	5	1	21	No
98	LuisenForum	Wiesbaden	OMEGA Immobilien GmbH	3,11	City center	Directly	Kirchgasse	10	3	15	Yes
99	Main-Taunus-Zentrum	Sulzbach (Taunus)	ECE Projektmanagement GmbH & Co. KG	2,04	Green meadow	Not within walking distance		4	1	38	No
100	Marktplatz Galerie Bramfeld	Hamburg	BCM Center Management GmbH	2,82	City district	Not within walking distance		16	14	40	No
101	Marktplatz-Center	Neubrandenburg	ECE Projektmanagement GmbH & Co. KG	2,38	City center	Directly	Treptower Straße	18	2	8	Yes
102	Mercaden Böblingen	Böblingen	hkm Management AG	3,19	City center	Walking distance	Altstadt Böblingen	2	8	1	Yes
103	Mercado Nürnberg	Nürnberg	KOPRIAN IQ MANAGEMENT GmbH	2,74	City center	Not within walking distance		12	1	5	Yes
104	Milaneo	Stuttgart	ECE Projektmanagement GmbH & Co. KG	3,79	City center	Not within walking distance		19	1	2	Yes
105	Minto	Mönchengladbach	Unibail-Rodamco Germany GmbH	2,80	City center	Directly	Hindenburgstraße	7	3	8	Yes
106	Münster Arkaden	Münster	Sierra Germany GmbH	2,60	City center	Directly	Ludgeristraße	13	2	9	Yes
107	MyZeil	Frankfurt am Main	ECE Projektmanagement GmbH & Co. KG	3,39	City center	Directly	Zeil	8	3	2	Yes
108	Neefepark	Chemnitz	JLL Jones Lang LaSalle GmbH	2,36	Green meadow	Not within walking distance		4	3	29	No
109	Neukölln Arcaden	Berlin	Unibail-Rodamco Germany GmbH	4,06	City district	Directly	Karl-Marx-Straße	13	7	1	Yes
110	Neutor Galerie	Dinslaken	IPH Handelsimmobilien GmbH	3,74	City center	Nearby	Neustraße	9	4	9	Yes
111	Nova Eventis	Leuna	ECE Projektmanagement GmbH & Co. KG	2,92	Green meadow	Not within walking distance		2	1	60	No
112	Oder-Center	Schwedt / Oder	MEC METRO-ECE Centermanagement GmbH & Co. KG	2,84	City center	Not within walking distance		26	3	2	Yes
113	Olympia-Einkaufszentrum	München	ECE Projektmanagement GmbH & Co. KG	2,98	City district	Not within walking distance		10	2	1	Yes
114	Ostsee Park	Lambrechtshagen	MEC METRO-ECE Centermanagement GmbH & Co. KG	2,33	Green meadow	Not within walking distance		17	3	52	No
115	Palais Vest	Recklinghausen	Unibail-Rodamco Germany GmbH	3,44	City center	Nearby	Breite Straße	8	7	5	Yes
116	Pasing Arcaden	München	Unibail-Rodamco Germany GmbH	2,34	City district	Not within walking distance		6	1	2	Yes
117	Paunsdorf Center	Leipzig	Unibail-Rodamco Germany GmbH	2,90	City district	Not within walking distance		5	2	8	Yes
118	PEP Einkaufs-Center	München	ECE Projektmanagement GmbH & Co. KG	2,77	City district	Not within walking distance		5	4	1	Yes
119	PEP Eisenach	Eisenach	CIV City-Immobilien Verwaltungsgesellschaft mbH & Co. Betreuungs KG	2,35	Green meadow	Not within walking distance		7	5	53	No
120	Phoenix-Center	Hamburg	ECE Projektmanagement GmbH & Co. KG	2,75	City district	Nearby	Lüneburger Straße	2	2	5	Yes

Number	Center	City	Management	OverallRanking	Location	Distanz Mainstreet	Main shopping street within walking distance	Distance highway in min	Distanz Bundesstraße in min	Distance S-, U-, and regional train m	Public transport within walking distance
121	Post Galerie Karlsruhe	Karlsruhe	CEMAGG GmbH	3,03	City center	Directly	Kaiserstraße	18	3	1	Yes
122	Postgalerie	Speyer	IPH Handelsimmobilien GmbH	4,10	City center	Nearby	Maximilianstraße	9	5	10	Yes
123	Quarree Wandsbek-Markt	Hamburg	Sierra Germany GmbH	2,65	City district	Directly	Wandsbeker Marktstraße	6	7	3	Yes
124	Rahlstedt Center	Hamburg	ESTAma Gesellschaft für Real Estate Management mbH	3,40	City district	Directly	Hamburg- Rahlstedt	9	20	4	Yes
125	Rathaus Galerie Essen	Essen	KOPRIAN IQ MANAGEMENT GmbH	3,80	City center	Nearby	Limbecker Straße	2	4	6	Yes
126	Rathaus-Center Ludwigshafen	Ludwigshafen	ECE Projektmanagement GmbH & Co. KG	2,99	City center	Directly	Bismarckstraße	4	1	14	Yes
127	Rathaus-Galerie Hagen	Hagen	KOPRIAN IQ MANAGEMENT GmbH	3,80	City center	Directly	Elberfelder Straße	7	1	12	Yes
128	Rathaus-Galerie Leverkusen	Leverkusen	ECE Projektmanagement GmbH & Co. KG	3,25	City center	Directly	Wiesdorfer Platz	7	3	7	Yes
129	Rathauspassagen Halberstadt	Halberstadt	Webegemeinschaft Rathauspassage GbR mbH	2,50	City center	Directly	Fischmarkt	28	2	21	No
130	Ratio-Land	Baunatal	RME Retail Management Expertise Asset & Property Management GmbH	2,78	City district	Not within walking distance		4	6	42	No
131	Regensburg Arcaden	Regensburg	Unibail-Rodamco Germany GmbH	3,07	City center	Walking distance	Maximilianstraße	7	4	1	Yes
132	Rhein Center	Weil am Rhein	CEV Handelsimmobilien GmbH	2,13	City district	Not within walking distance		4	3	19	No
133	RheinBerg Galerie	Bergisch Gladbach	Apleona GmbH	3,07	City center	Directly	Hauptstraße	13	4	2	Yes
134	Rhein-Center	Köln	ECE Projektmanagement GmbH & Co. KG	2,91	City district	Not within walking distance		5	7	1	Yes
135	Rhein-Galerie	Ludwigshafen am Rhein	ECE Projektmanagement GmbH & Co. KG	3,42	City center	Walking distance	Bismarckstraße	7	4	10	Yes
136	Rhein-Neckar-Zentrum	Viernheim	ECE Projektmanagement GmbH & Co. KG	2,50	City center	Not within walking distance		3	4	60	No
137	Rheinpark-Center	Neuss	ECE Projektmanagement GmbH & Co. KG	3,47	Green meadow	Not within walking distance		4	2	8	Yes
138	Rhein-Ruhr-Zentrum	Mülheim a. d. Ruhr	ECE Projektmanagement GmbH & Co. KG	3,25	City district	Not within walking distance		1	4	2	Yes
139	Riem Arcaden	München	Unibail-Rodamco Germany GmbH	2,64	City district	Not within walking distance		4	9	2	Yes
140	Ring-Center	Berlin	ECE Projektmanagement GmbH & Co. KG	3,01	City district	Not within walking distance		25	1	1	Yes
141	Roland-Center	Bremen	ECE Projektmanagement GmbH & Co. KG	2,91	City district	Not within walking distance		7	2	60	No
142	Rotmain-Center	Bayreuth	ECE Projektmanagement GmbH & Co. KG	2,43	City center	Nearby	Maximilianstraße	7	1	11	Yes
143	Ruhr-Park	Bochum	Unibail-Rodamco Germany GmbH	2,18	Green meadow	Not within walking distance		2	4	43	No
144	Saarpark-Center	Neunkirchen (Saar)	ECE Projektmanagement GmbH & Co. KG	2,61	City center	Directly	Pasteurstraße	5	4	14	Yes
145	Sachsen-Allee	Chemnitz	ECE Projektmanagement GmbH & Co. KG	2,65	City center	Not within walking distance		13	2	14	Yes
146	Sankt Annen Galerie	Brandenburg a. d. Havel	HGHI Holding GmbH	3,20	City center	Nearby	Hauptstraße	11	3	32	No
147	Schloss Arkaden	Heidenheim	CIV City-Immobilien Verwaltungsgesellschaft mbH & Co. Betreuungs KG	3,35	City center	Nearby	Hauptstraße	8	1	4	Yes
148	Schloss-Arkaden	Braunschweig	ECE Projektmanagement GmbH & Co. KG	2,28	City center	Nearby	Damm	8	3	25	No
149	Schlosshöfe	Oldenburg	ECE Projektmanagement GmbH & Co. KG	3,61	City center	Nearby	Achternstraße	8	7	11	Yes
150	Schlössle-Galerie	Pforzheim	Apleona GmbH	2,63	City center	Directly	Westliche Karl- Friedrich Straße	12	1	9	Yes
151	Schlosspark-Center	Schwerin	ECE Projektmanagement GmbH & Co. KG	2,46	City center	Directly	Marienplatz	14	2	3	Yes
152	Schönhauser Arcaden	Berlin	Unibail-Rodamco Germany GmbH	2,60	City district	Directly	Schönhauser Allee	10	1	1	Yes
153	Shopping Arkaden Bocholt	Bocholt	CIV City-Immobilien Verwaltungsgesellschaft mbH & Co. Betreuungs KG	2,94	City center	Walking distance	Neustraße	14	6	7	Yes

Number	Center	City	Management	OverallRanking	Location	Distanz Mainstreet	Main shopping street within walking distance	Distance highway in min	Distanz Bundesstraße in min	Distance S-, U-, and regional train in min	Public transport within walking distance
153	Shopping Arkaden Bocholt	Bocholt	CIV City-Immobilien Verwaltungsgesellschaft mbH & Co. Betreuungs KG	2,94	City center	Walking distance	Neustraße	14	6	7	Yes
154	Shopping Cité	Baden-Baden	MEC METRO-ECE Centermanagement GmbH & Co. KG	2,16	City district	Not within walking distance		5	2	15	Yes
155	Shopping Plaza Garbsen	Garbsen	CIV City-Immobilien Verwaltungsgesellschaft mbH & Co. Betreuungs KG	2,93	Innenstadt	Directly	Havelser Straße	5	3	17	Yes
156	Sieben Seen Center	Schwerin	MEC METRO-ECE Centermanagement GmbH & Co. KG	1,96	Green meadow	Not within walking distance		15	2	34	No
157	Skyline Plaza	Frankfurt am Main	ECE Projektmanagement GmbH & Co. KG	3,83	City district	Not within walking distance		4	2	6	Yes
158	SMC Spitzkrug Multi Center	Frankfurt/ Oder	MEC METRO-ECE Centermanagement GmbH & Co. KG	2,35	City district	Not within walking distance		11	1	46	No
159	Sophienhof	Kiel	ECE Projektmanagement GmbH & Co. KG	2,78	City center	Nearby	Holstenstraße	5	5	3	Yes
160	Spandau Arcaden	Berlin	Unibail-Rodamco Germany GmbH	2,83	City district	Walking distance	Breite Straße	15	7	3	Yes
161	StadtCenter Düren	Düren	Apleona GmbH	3,17	City center	Nearby	Wirtelstraße	10	5	5	Yes
162	Stadt-Galerie Hameln	Hameln	ECE Projektmanagement GmbH & Co. KG	3,20	City center	Nearby	Ritterstraße	21	1	18	nein
163	Stadtgalerie Heilbronn	Heilbronn	ECE Projektmanagement GmbH & Co. KG	3,18	City center	Directly	Fleinerstraße	12	5	4	Yes
164	Stadtgalerie Passau	Passau	ECE Projektmanagement GmbH & Co. KG	2,62	City center	Directly	Bahnhofstraße	9	1	5	Yes
165	Stadt-Galerie Plauen	Plauen	ECE Projektmanagement GmbH & Co. KG	2,63	City center	Nearby	Bahnhofstraße	11	3	15	No
166	Stadtgalerie Schweinfurt	Schweinfurt	ECE Projektmanagement GmbH & Co. KG	3,33	City center	Walking distance	Jägersbrunnen, Roßmarkt	3	1	6	Yes
167	Stern Center	Sindelfingen	MEC METRO-ECE Centermanagement GmbH & Co. KG	3,81	City center	Walking distance	Marktplatz	5	5	2	Yes
168	Stern-Center	Potsdam	ECE Projektmanagement GmbH & Co. KG	2,38	City center	Not within walking distance		2	1	28	No
169	Stern-Center Lüdenscheid	Lüdenscheid	ECE Projektmanagement GmbH & Co. KG	3,29	City center	Directly	Wilhelmsstraße	9	6	10	Yes
170	Südharz Galerie	Nordhausen	ROSCO Centermanagement und Immobilienverwaltung GmbH	2,65	City center	Walking distance	Engelsburg	6	1	3	Yes
171	Taunus Carré	Friedrichsdorf	ILG Holding GmbH	3,49	City center	Nearby	Hugenottenstrße	8	10	3	Yes
172	Tempelhofer Hafen	Berlin	ECE Projektmanagement GmbH & Co. KG	3,36	City district	Directly	Tempelhofer Damm	5	1	1	Yes
173	Thier-Galerie	Dortmund	ECE Projektmanagement GmbH & Co. KG	3,31	Innenstadt	Directly	Westenhellstraße	9	1	4	Yes
174	Thüringen-Park	Erfurt	ECE Projektmanagement GmbH & Co. KG	2,59	Green meadow	Not within walking distance		4	2	32	No
175	Tibarg Center	Hamburg	BCM Center Management GmbH	2,18	City district	Directly	Hamburg Tibarg	6	2	4	Yes
176	Warnow Park	Rostock	EDEKA Nord SB - Warenhaus GmbH	2,68	City district	Not within walking distance		15	2	6	Yes
177	Waterfront	Bremen	ECE Projektmanagement GmbH & Co. KG	3,03	City district	Not within walking distance		8	12	37	No
178	Weimar Atrium	Weimar	City- & Centermanagement Weimar GmbH	2,41	City center	Walking distance	Wielandstraße	13	1	13	Yes
179	Werre-Park	Bad Oeynhausen	ECE Projektmanagement G.m.b.H. & Co. KG	2,43	City center	Not within walking distance		3	1	18	No
180	Weserpark	Bremen	RME Retail Management Expertise Asset & Property Management GmbH	2,52	Green meadow	Not within walking distance		3	14	21	No
181	Westpark	Ingolstadt	WESTPARK Einkaufszentrum Verwaltungs-GmbH	2,10	City district	Not within walking distance		10	1	45	No
182	Wilmersdorfer Arcaden	Berlin Wilmersdorf	Unibail-Rodamco Germany GmbH	3,25	City district	Directly	Wilmersdorfer Straße	6	1	2	Yes
183	Zwickau Arcaden	Zwickau	ECE Projektmanagement GmbH & Co. KG	2,96	City center	Directly	Innere Plauensche Straße	14	3	17	No

Number	Center	City	Management	OverallRanking	Opening	Free Parking	Parking spaces	Level	Other shopping Center within 10 min drive	Rental space	Horizontal layout
1	A10 Center	Wildau	ECE Projektmanagement GmbH & Co. KG	2,30	1996	1	3000	2	0	66.000	O-Form
2	Aachen Arkaden	Aachen	Apleona GmbH	4,52	2008	0	832	3	1	19.350	k.A.
3	Alexa	Berlin	Sierra Germany GmbH	2,43	2007	0	1600	5	11	47.200	O-Form
4	Allee-Center Berlin	Berlin	Phoenix Property Consulting GmbH	2,98	1994	1	300	1	5	12.300	Y-Form
5	Allee-Center Essen	Essen	ECE Projektmanagement GmbH & Co. KG	3,24	1973	1	620	2	2	20.000	L-Form
6	Allee-Center Hamm	Hamm	ECE Projektmanagement GmbH & Co. KG	2,54	1992	0	1300	2	1	21.000	I-Form
7	Allee-Center Leipzig	Leipzig	ECE Projektmanagement GmbH & Co. KG	2,99	1996	1	1000	2	1	24.000	T-Form
8	Allee-Center Magdeburg	Magdeburg	ECE Projektmanagement GmbH & Co. KG	2,56	1998	0	750	3	3	35.000	I-Form
9	Allee-Center Remscheid	Remscheid	ECE Projektmanagement GmbH & Co. KG	3,24	1986	0	1000	2	1	30.000	Cluster
10	Alstertal Einkaufs-Zentrum	Hamburg	ECE Projektmanagement GmbH & Co. KG	2,96	1970	1	3000	3	1	59.000	Cluster
11	Altmarkt-Galerie	Dresden	ECE Projektmanagement GmbH & Co. KG	2,59	2002	0	500	3	2	44.000	L-Form
12	Arneken Galerie	Hildesheim	Klépierre Management Deutschland GmbH	3,80	2012	0	412	3	0	27.600	Offen
13	Arsenal	Wittenberg	GERMAN REAL Asset & Property Managament GmbH	2,87	2012	0	320	2	1	12.750	k.A.
14	Billstedt-Center	Hamburg	ECE Projektmanagement GmbH & Co. KG	2,94	1996	0	1500	2	1	40.000	L-Form
15	Blautal-Center	Ulm	IPH Handelsimmobilien GmbH	3,09	1997	1	2200	2	2	43.122	T-Form
16	Blechen-Carré	Cottbus	CBC Projekt GmbH	2,82	2008	0	465	3	3	19.600	I-Form
17	Boulevard Berlin	Berlin	Klépierre Management Deutschland GmbH	3,36	2012	0	875	4	8	87.500	Cluster
18	Breuningerland	Sindelfingen	ECE Projektmanagement GmbH & Co. KG	1,82	1980	1	3000	3	4	32.600	I-Form
19	Breuningerland	Ludwigsburg	ECE Projektmanagement GmbH & Co. KG	2,12	1973	1	3000	3	2	36.000	I-Form
20	Brücken-Center Ansbach	Ansbach	Brücken-Center Ansbach GmbH	2,01	1997	0	4200	1	0	45.000	L-Form
21	Buchholz Galerie	Buchholz	CEV Handelsimmobilien GmbH	3,66	2012	0	260	3	0	12.000	I-Form
22	Carré Bad Cannstatt	Stuttgart	JLL Jones Lang LaSalle GmbH	3,12	2006	0	750	2	3	20.568	k.A.
23	CCL City-Center Landshut	Landshut	4-RED GmbH Real Estate Development	3,01	2003	0	800	3	1	14.531	L-Form
24	Centrum-Galerie	Dresden	Klépierre Management Deutschland GmbH	2,57	2009	0	1048	3	3	52.000	Offen
25	Chemnitz Center	Chemnitz	CMC Center Management & Consulting	2,12	1992	1	4000	1	0	86.000	T-Form
26	Citti-Park Kiel	Kiel	CITTI Handelsgesellschaft mbH & Co. KG	1,64	2006	1	3250	2	4	53.770	I-Form
27	City Galerie Aschaffenburg	Aschaffenburg	DVI Deutsche Verwaltungsgesellschaft für Immobilien mbH	2,68	1974	0	1700	2	1	44.000	I-Form
28	City-Arkaden Wuppertal	Wuppertal	ECE Projektmanagement GmbH & Co. KG	2,97	2001	0	650	4	1	20.000	I-Form
29	City-Center Bergedorf	Hamburg	DVI Deutsche Verwaltungsgesellschaft für Immobilien mbH	2,72	2010	0	1300	2	1	30.000	L-Form
30	City-Galerie Augsburg	Augsburg	ECE Projektmanagement GmbH & Co. KG	2,25	2001	0	2000	2	2	25.000	I-Form
31	City-Galerie Siegen	Siegen	ECE Projektmanagement GmbH & Co. KG	2,40	1998	0	1200	3	1	23.500	O-Form
32	City-Galerie Wolfsburg	Wolfsburg	ECE Projektmanagement GmbH & Co. KG	2,44	2001	0	800	3	1	20.000	V-Form
33	City-Point Kassel	Kassel	ECE Projektmanagement GmbH & Co. KG	3,13	2002	0	220	5	3	20.000	I-Form
34	City-Point Nürnberg	Nürnberg	JLL Jones Lang LaSalle GmbH	3,63	1999	0	200	5	3	12.000	L-Form
35	City-Rondell Schwenningen	Villingen-Schwenningen	CIV City-Immobilien Verwaltungsgesellschaft mbH & Co. Betreuungs KG	3,30	1981	0	420	3	1	10.000	Cluster

Number	Center	City	Management	OverallRanking	Opening	Free Parking	Parking spaces	Level	Other shopping Center within 10 min drive	Rental space	Horizontal layout
36	Das Schloss	Berlin	WealthCap Real Estate Management GmbH	2,77	2006	0	563	3	5	43.000	U-Form
37	Der Clou	Berlin	JLL Jones Lang LaSalle GmbH	2,99	1988	0	527	2	8	19.653	Cluster
38	DEZ Kassel	Kassel	ECE Projektmanagement GmbH & Co. KG	2,53	1968	1	1400	1	3	30.000	U-Form
39	Die MEP	Meppen	RME Retail Management Expertise Asset & Property Management GmbH	4,19	2013	1	500	2	0	14.420	L-Form
40	Donau-Einkaufszentrum	Regensburg	Donau Einkaufszentrum GmbH	1,99	1967	1	3000	2	3	68.197	X-Form
41	Drehscheibe/ City-Point Bochum	Bochum	Kintyre Management GmbH	3,50	1984	1	700	k.A.	0	10.000	offen
42	Düsseldorf Bilk Arcaden	Düsseldorf	Unibail-Rodamco Germany GmbH	3,28	2008	0	820	3	5	34.300	I-Form
43	Eastgate	Berlin	ECE Projektmanagement GmbH & Co. KG	2,77	2005	1	1400	2	5	32.000	O-Form
44	Elbe-Einkaufszentrum	Hamburg	ECE Projektmanagement GmbH & Co. KG	2,79	1966	1	2200	2	0	43.000	Cluster
45	Elbepark Dresden	Dresden	CMC Center Management & Consulting	2,23	1995	1	k.A.	2	0	81.000	Cluster
46	Erlangen Arcaden	Erlangen	Unibail-Rodamco Germany GmbH	2,66	2007	0	660	3	1	30.900	Bogen
47	Ernst-August-Galerie	Hannover	ECE Projektmanagement GmbH & Co. KG	2,78	2008	0	1200	3	1	30.000	O-Form
48	Ettlinger Tor	Karlsruhe	ECE Projektmanagement GmbH & Co. KG	2,87	2005	0	900	3	3	33.000	T-Form
49	Europa-Galerie	Saarbrücken	ECE Projektmanagement GmbH & Co. KG	3,47	2010	0	1050	3	1	25.000	L-Form
50	Famila Einkaufsland Wechloy	Oldenburg	FAMILA Verbrauchermarkt Einkaufsstätte GmbH & Co. KG	1,85	1976	1	3500	1	1	28.940	Cluster
51	Flensburg Galerie	Flensburg	KOPRIAN IQ MANAGEMENT GmbH	2,76	2006	0	1000	3	2	24.800	Offen
52	Forum Allgäu	Kempten/Allgäu	ECE Projektmanagement GmbH & Co. KG	2,51	2003	0	1070	3	1	23.000	L-Form
53	Forum City Mülheim	Mülheim a. d. Ruhr	Multi Germany GmbH	3,59	1994	0	900	3	2	25.000	I-Form
54	Forum Duisburg	Duisburg	Klépierre Management Deutschland GmbH	2,90	2008	0	1164	3	1	57.300	O-Form
55	Forum Köpenick	Berlin	DVI Deutsche Verwaltungsgesellschaft für Immobilien mbH	2,66	1997	0	1250	3	0	32.839	k.A.
56	Forum Mittelrhein	Koblenz	ECE Projektmanagement GmbH & Co. KG	3,34	2012	0	k.A.	3	1	20.000	U-Form
57	Forum Steglitz	Berlin	Unibail-Rodamco Germany GmbH	3,59	1970	0	605	5	7	32.024	I-Form
58	Forum Wetzlar	Wetzlar	ECE Projektmanagement GmbH & Co. KG	2,66	2005	1	1700	2	1	23.500	I-Form
59	Franken-Center	Nürnberg	ECE Projektmanagement GmbH & Co. KG	2,97	1969	0	1400	3	0	40.000	I-Form
60	Galerie Neustädter Tor	Gießen	Prelios Immobilien Management GmbH	3,34	2005	0	1080	3	0	28.400	L-Form
61	Galerie Roter Turm	Chemnitz	IPH Handelsimmobilien GmbH	2,68	2000	0	457	4	3	28.400	T-Form
62	Gera Arcaden	Gera	Unibail-Rodamco Germany GmbH	2,57	1998	0	1309	2	4	32.000	L-Form
63	Gesundbrunnen-Center	Berlin	ECE Projektmanagement GmbH & Co. KG	3,04	1997	1	1000	3	6	25.000	I-Form
64	Glacis-Galerie	Neu-Ulm	ECE Projektmanagement GmbH & Co. KG	3,92	2015	0	k.A.	2	2	27.800	I-Form
65	Goethe Galerie	Jena	IPH Handelsimmobilien GmbH	2,52	1996	0	742	3	1	28.371	T-Form
66	Gropius Passagen	Berlin	Unibail-Rodamco Germany GmbH	3,20	1996	0	2014	4	0	90.000	Cluster
67	Hallen am Borsigturm	Berlin	ECE Projektmanagement GmbH & Co. KG	2,76	1999	0	1600	3	4	22.000	Cluster
68	Hallescher Einkaufspark HEP	Halle/ Saale	CMde CENTERMANAGER und IMMOBILIEN GmbH	2,87	1995	1	2000	2	0	33.283	I-Form
69	Hamburger Meile	Hamburg	ECE Projektmanagement GmbH & Co. KG	3,23	1970	1	2200	2	5	46.200	I-Form
70	HavelPark Dallgow	Dallgow-Döberitz	Unibail-Rodamco Germany GmbH	2,35	1995	1	k.A.	2	1	54.603	Cluster

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71	Hessen-Center	Frankfurt am Main	ECE Projektmanagement GmbH & Co. KG	3,16	1971	0	2050	3	0	38.000	I-Form
72	Hirsch Center	Aachen	Retail Management Expertise Asset & Property Management GmbH	2,63	2008	1	850	1	2	13.500	I-Form
73	Höfe am Brühl	Leipzig	Unibail-Rodamco Germany GmbH	3,01	2012	0	820	4	3	44.000	I-Form
74	Huma Sankt Augustin	Sankt Augustin	Jost Hurler Beteiligungs- u. Verwaltungsgesellschaft	2,69	1977	1	1200	3	0	39.614	k.A.
75	Hürth-Park	Hürth	ECE Projektmanagement GmbH & Co. KG	2,84	1977	1	3000	3	0	50.500	Rundlauf
76	Isenburg-Zentrum	Neu-Isenburg	ECE Projektmanagement GmbH & Co. KG	3,21	1972	0	1600	2	3	44.000	L-Form
77	K in Lautern	Kaiserslautern	ECE Projektmanagement GmbH & Co. KG	3,62	2015	0	490	4	1	20.900	I-Form
78	Kamp-Promenade	Osnabrück	VÖLKEL COMPANY Asset Management GmbH & Co. KG	2,48	2004	0	250	1	1	11.900	Offen
79	KaufPark Dresden	Dresden	Unibail-Rodamco Germany GmbH	2,54	1996	1	k.A.	2	3	54.600	X-Form
80	KaufPark Eiche	Ahrensfeld	Unibail-Rodamco Germany GmbH	2,44	1994	1	k.A.	2	3	59.200	Cluster
81	Köln Arcaden	Köln	Unibail-Rodamco Germany GmbH	2,38	2005	0	1798	3	3	43.000	L-Form
82	KOMM	Offenbach	Apleona GmbH	3,28	2009	1	600	3	1	14.800	Rundlauf
83	Königsbau Passagen	Stuttgart	ECE Projektmanagement GmbH & Co. KG	3,11	2006	0	420	5	4	27.000	Cluster
84	Königsgalerie	Duisburg	Klépierre Management Deutschland GmbH	3,99	2011	0	320	2	3	12.300	L-Form
85	Königshof-Galerie	Mettmann	ILG Holding GmbH	4,09	2013	0	k.A.	3	0	13.730	I-Form
86	Kornmarkt-Center	Bautzen	ECE Projektmanagement GmbH & Co. KG	2,59	2000	0	330	3	0	10.000	I-Form
87	Lago Center	Konstanz	Prelios Immobilien Management GmbH	1,83	2004	0	930	3	0	19.953	V-Form
88	Lausitz Park	Cottbus	EDEKA-MIHA Immobilien Service GmbH	2,65	1993	1	2365	2	3	46.000	X-Form
89	Lausitz-Center	Hoyerswerda	MEC METRO-ECE Centermanagement GmbH & Co. KG	2,91	1995	1	500	1	0	15.100	L-Form
90	Leine-Center	Laatzen	Unibail-Rodamco Germany GmbH	3,08	1973	1	1400	2	0	32.000	L-Form
91	Leo-Center	Leonberg	ECE Projektmanagement GmbH & Co. KG	3,20	1973	0	1100	3	0	27.000	T-Form
92	Limbecker Platz	Essen	ECE Projektmanagement GmbH & Co. KG	3,01	2009	0	2000	3	5	70.000	Rundlauf
93	Linden-Center	Berlin	ECE Projektmanagement GmbH & Co. KG	2,92	1995	1	800	3	3	25.000	I-Form
94	Löhr-Center	Koblenz	ECE Projektmanagement GmbH & Co. KG	3,26	1984	0	1400	3	1	32.000	I-Form
95	Lookentor	Lingen / Ems	Hermann KLAAS Projektentwicklung GmbH	3,03	2007	0	650	2	0	16.494	U-Form
96	LOOP5	Weiterstadt	Sierra Germany GmbH	3,66	2009	1	3000	4	1	56.766	Rundlauf
97	Luisen-Center	Darmstadt	ECE Projektmanagement GmbH & Co. KG	3,13	1977	0	1100	3	1	16.000	I-Form
98	LuisenForum	Wiesbaden	OMEGA Immobilien GmbH	3,11	2008	0	800	4	1	20.000	Offen
99	Main-Taunus-Zentrum	Sulzbach (Taunus)	ECE Projektmanagement GmbH & Co. KG	2,04	1964	1	k.A.	1	1	91.000	Cluster
100	Marktplatz Bramfeld	Hamburg	BCM Center Management GmbH	2,82	2011	0	430	3	6	19.000	I-Form
101	Marktplatz-Center	Neubrandenburg	ECE Projektmanagement GmbH & Co. KG	2,38	1998	0	320	2	2	12.500	V-Form
102	Mercaden Böblingen	Böblingen	hkm Management AG	3,19	2014	1	k.A.	3	5	25.000	U-Form
103	Mercado Nürnberg	Nürnberg	KOPRIAN IQ MANAGEMENT GmbH	2,74	2003	1	1650	2	4	45.000	T-Form
104	Milaneo	Stuttgart	ECE Projektmanagement GmbH & Co. KG	3,79	2014	0	1680	3	4	43.000	Cluster
105	Minto	Mönchengladbach	Unibail-Rodamco Germany GmbH	2,80	2015	0	905	4	0	26.000	I-Form

Number	Center	City	Management	OverallRanking	Opening	Free Parking	Parking spaces	Level	Other shopping Center within 10 min drive	Rental space	Horizontal layout
106	Münster Arkaden	Münster	Sierra Germany GmbH	2,60	2006	0	250	3	0	23.568	I-Form
107	MyZeil	Frankfurt am Main	ECE Projektmanagement GmbH & Co. KG	3,39	2009	0	1400	5	3	44.000	L-Form
108	Neefepark	Chemnitz	JLL Jones Lang LaSalle GmbH	2,36	1994	1	2000	k.A.	4	30.231	k.A.
109	Neukölln Arcaden	Berlin	Unibail-Rodamco Germany GmbH	4,06	2000	0	650	5	8	27.000	I-Form
110	Neutor Galerie	Dinslaken	IPH Handelsimmobilien GmbH	3,74	2014	0	530	2	0	22.000	I-Form
111	Nova Eventis	Leuna	ECE Projektmanagement GmbH & Co. KG	2,92	1991	1	3500	2	1	76.000	Cluster
112	Oder-Center	Schwedt / Oder	MEC METRO-ECE Centermanagement GmbH & Co. KG	2,84	1994	1	1500	1	0	18.000	Y-Form
113	Olympia-Einkaufszentrum	München	ECE Projektmanagement GmbH & Co. KG	2,98	1972	0	2400	2	5	56.000	L-Form
114	Ostsee Park	Lambrechtshagen	MEC METRO-ECE Centermanagement GmbH & Co. KG	2,33	1994	1	2000	1	1	58.000	Cluster
115	Palais Vest	Recklinghausen	Unibail-Rodamco Germany GmbH	3,44	2014	0	970	3	1	41.700	Cluster
116	Pasing Arcaden	München	Unibail-Rodamco Germany GmbH	2,34	2011	0	942	3	0	39.000	L-Form
117	Paunsdorf Center	Leipzig	Unibail-Rodamco Germany GmbH	2,90	1994	1	4500	1	1	115.000	U-Form
118	PEP Einkaufs-Center	München	ECE Projektmanagement GmbH & Co. KG	2,77	1981	0	2500	3	0	53.000	Cluster
119	PEP Eisenach	Eisenach	CIV City-Immobilien Verwaltungsgesellschaft mbH & Co. Betreuungs KG	2,35	1994	1	1000	1	0	39.000	Cluster
120	Phoenix-Center	Hamburg	ECE Projektmanagement GmbH & Co. KG	2,75	2004	0	1400	3	2	26.500	O-Form
121	Post Galerie Karlsruhe	Karlsruhe	CEMAGG GmbH	3,03	2001	0	330	3	3	18.065	k.A.
122	Postgalerie	Speyer	IPH Handelsimmobilien GmbH	4,10	2012	0	350	3	0	10.750	k.A.
123	Quarree Wandsbek-Markt	Hamburg	Sierra Germany GmbH	2,65	1988	0	973	4	4	24.119	Cluster
124	Rahlstedt Center	Hamburg	ESTAma Gesellschaft für Real Estate Management mbH	3,40	1984	0	554	3	1	28.000	L-Form
125	Rathaus Galerie Essen	Essen	KOPRIAN IQ MANAGEMENT GmbH	3,80	1979	0	1600	1	5	31.000	Rundlauf
126	Rathaus-Center Ludwigshafen	Ludwigshafen	ECE Projektmanagement GmbH & Co. KG	2,99	1979	0	k.A.	1	4	28.000	T-Form
127	Rathaus-Galerie Hagen	Hagen	KOPRIAN IQ MANAGEMENT GmbH	3,80	2014	0	430	2	1	22.000	V-Form
128	Rathaus-Galerie Leverkusen	Leverkusen	ECE Projektmanagement GmbH & Co. KG	3,25	2010	0	500	3	2	22.600	U-Form
129	Rathauspassagen Halberstadt	Halberstadt	Webegemeinschaft Rathauspassage GbR mbH	2,50	1998	0	500	3	0	19.093	Offen
130	Ratio-Land	Baunatal	RME Retail Management Expertise Asset & Property Management GmbH	2,78	2012	1	1500	2	1	33.650	O-Form
131	Regensburg Arcaden	Regensburg	Unibail-Rodamco Germany GmbH	3,07	2002	1	1500	2	3	27.547	I-Form
132	Rhein Center	Weil am Rhein	CEV Handelsimmobilien GmbH	2,13	1991	1	1050	3	1	30.000	Cluster
133	RheinBerg Galerie	Bergisch Gladbach	Apleona GmbH	3,07	2009	1	550	3	1	15.700	I-Form
134	Rhein-Center	Köln	ECE Projektmanagement GmbH & Co. KG	2,91	1972	0	1500	3	1	40.000	U-Form
135	Rhein-Galerie	Ludwigshafen am Rhein	ECE Projektmanagement GmbH & Co. KG	3,42	2010	1	1400	2	4	30.000	I-Form
136	Rhein-Neckar-Zentrum	Viernheim	ECE Projektmanagement GmbH & Co. KG	2,50	1972	1	3800	2	1	60.000	T-Form
137	Rheinpark-Center	Neuss	ECE Projektmanagement GmbH & Co. KG	3,47	2011	1	1800	3	1	37.300	O-Form
138	Rhein-Ruhr-Zentrum	Mülheim a. d. Ruhr	ECE Projektmanagement GmbH & Co. KG	3,25	1973	1	5000	3	6	80.000	O-Form
139	Riem Arcaden	München	Unibail-Rodamco Germany GmbH	2,64	2004	1	2408	3	0	48.600	L-Form
140	Ring-Center	Berlin	ECE Projektmanagement GmbH & Co. KG	3,01	1995	1	1000	5	10	45.200	OFfen

Number	Center	City	Management	OverallRanking	Opening	Free Parking	Parkplätze	Level	Other shopping Center within 10 min drive	Rental space	Horizontal layout
141	Roland-Center	Bremen	ECE Projektmanagement GmbH & Co. KG	2,91	1972	1	1700	2	1	30.000	I-Form
142	Rotmain-Center	Bayreuth	ECE Projektmanagement GmbH & Co. KG	2,43	1997	0	k.A.	2	0	20.000	I-Form
143	Ruhr-Park	Bochum	Unibail-Rodamco Germany GmbH	2,18	1964	1	4500	1	3	115.570	k.A.
144	Saarpark-Center	Neunkirchen (Saar)	ECE Projektmanagement GmbH & Co. KG	2,61	1989	0	k.A.	2	0	33.500	L-Form
145	Sachsen-Allee	Chemnitz	ECE Projektmanagement GmbH & Co. KG	2,65	1997	1	2000	2	2	32.000	I-Form
146	Sankt Annen Galerie	Brandenburg a. d. Havel	HGHI Holding GmbH	3,20	2009	0	400	2	2	13.727	I-Form
147	Schloss Arkaden	Heidenheim	CIV City-Immobilien Verwaltungsgesellschaft mbH & Co. Betreuungs KG	3,35	2004	0	300	2	0	17.000	Cluster
148	Schloss-Arkaden	Braunschweig	ECE Projektmanagement GmbH & Co. KG	2,28	2007	0	k.A.	3	1	30.000	U-Form
149	Schlosshöfe	Oldenburg	ECE Projektmanagement GmbH & Co. KG	3,61	2011	0	k.A.	3	1	12.500	Cluster
150	Schlössle-Galerie	Pforzheim	Apleona GmbH	2,63	2005	0	374	3	1	15.372	I-Form
151	Schlosspark-Center	Schwerin	ECE Projektmanagement GmbH & Co. KG	2,46	1998	0	1100	3	1	20.000	I-Form
152	Schönhauser Allee-Arcaden	Berlin	Unibail-Rodamco Germany GmbH	2,60	1999	0	325	3	6	23.000	I-Form
153	Shopping Arkaden Bocholt	Bocholt	CIV City-Immobilien Verwaltungsgesellschaft mbH & Co. Betreuungs KG	2,94	2000	0	1300	2	0	25.700	I-Form
154	Shopping Cité	Baden-Baden	MEC METRO-ECE Centermanagement GmbH & Co. KG	2,16	2006	1	800	1	0	17.900	I-Form
155	Shopping Plaza Garbsen	Garbsen	CIV City-Immobilien Verwaltungsgesellschaft mbH & Co. Betreuungs KG	2,93	1996	1	k.A.	2	3	12.000	Cluster
156	Sieben Seen Center	Schwerin	MEC METRO-ECE Centermanagement GmbH & Co. KG	1,96	1995	1	1600	1	3	30.000	k.A.
157	Skyline Plaza	Frankfurt am Main	ECE Projektmanagement GmbH & Co. KG	3,83	2013	1	k.A.	2	5	38.000	O-Form
158	SMC Spitzkrug Multi Center	Frankfurt/ Oder	MEC METRO-ECE Centermanagement GmbH & Co. KG	2,35	1993	1	2000	1	3	32.710	Cluster
159	Sophienhof	Kiel	ECE Projektmanagement GmbH & Co. KG	2,78	1988	0	1000	2	3	32.000	I-Form
160	Spandau Arcaden	Berlin	Unibail-Rodamco Germany GmbH	2,83	2001	0	1800	3	1	38.700	I-Form
161	StadtCenter Düren	Düren	Apleona GmbH	3,17	2005	1	700	2	0	17.000	I-Form
162	Stadt-Galerie Hameln	Hameln	ECE Projektmanagement GmbH & Co. KG	3,20	2008	0	0	3	1	19.000	I-Form
163	Stadtgalerie Heilbronn	Heilbronn	ECE Projektmanagement GmbH & Co. KG	3,18	2008	0	660	3	1	13.000	I-Form
164	Stadtgalerie Passau	Passau	ECE Projektmanagement GmbH & Co. KG	2,62	2008	0	500	3	0	21.000	L-Form
165	Stadt-Galerie Plauen	Plauen	ECE Projektmanagement GmbH & Co. KG	2,63	2001	1	k.A.	3	0	14.000	I-Form
166	Stadtgalerie Schweinfurt	Schweinfurt	ECE Projektmanagement GmbH & Co. KG	3,33	2009	1	1300	2	0	22.500	I-Form
167	Stern Center	Sindelfingen	MEC METRO-ECE Centermanagement GmbH & Co. KG	3,81	1999	1	1039	3	4	30.000	k.A.
168	Stern-Center	Potsdam	ECE Projektmanagement GmbH & Co. KG	2,38	1996	1	2100	1	4	35.000	T-Form
169	Stern-Center Lüdenscheid	Lüdenscheid	ECE Projektmanagement GmbH & Co. KG	3,29	1993	0	450	4	0	30.000	V-Form
170	Südharz Galerie	Nordhausen	ROSCO Centermanagement und Immobilienverwaltung GmbH	2,65	1995	0	560	2	1	22.000	k.A.
171	Taunus Carré	Friedrichsdorf	ILG Holding GmbH	3,49	2013	1	450	1	1	15.300	U-Form
172	Tempelhofer Hafen	Berlin	ECE Projektmanagement GmbH & Co. KG	3,36	2009	0	590	2	7	21.000	L-Form

173	Thier-Galerie	Dortmund	ECE Projektmanagement GmbH & Co. KG	3,31	2011	0	730	4	3	33.000	Cluster
174	Thüringen-Park	Erfurt	ECE Projektmanagement GmbH & Co. KG	2,59	1995	1	1500	3	1	22.000	I-Form
175	Tibarg Center	Hamburg	BCM Center Management GmbH	2,18	2002	0	420	3	3	12.743	I-Form
176	Warnow Park	Rostock	EDEKA Nord SB - Warenhaus GmbH	2,68	1995	1	1200	2	0	23.151	L-Form
177	Waterfront	Bremen	ECE Projektmanagement GmbH & Co. KG	3,03	2008	1	4000	1	3	44.000	O-Form
178	Weimar Atrium	Weimar	City- & Centermanagement Weimar GmbH	2,41	2005	1	0	4	1	19.203	k.A.
179	Werre-Park	Bad Oeynhausen	ECE Projektmanagement G.m.b.H. & Co. KG	2,43	1998	1	2300	1	2	29.500	L-Form
180	Weserpark	Bremen	RME Retail Management Expertise Asset & Property Management GmbH	2,52	1990	1	k.A.	2	1	66.000	O-Form
181	Westpark	Ingolstadt	WESTPARK Einkaufszentrum Verwaltungs-GmbH	2,10	1996	1	3300	2	0	34.851	I-Form
182	Wilmersdorfer Arcaden	Berlin Wilmersdorf	Unibail-Rodamco Germany GmbH	3,25	2007	0	303	3	12	33.200	U-Form
183	Zwickau Arcaden	Zwickau	ECE Projektmanagement GmbH & Co. KG	2,96	2000	0	430	3	0	13.000	Y-Form

Number	Center	City	Management	OverallRanking	Tenant	Number of branches	Restaurants	Anchor tenant	Small - Medium Drugstore	Major Drugstore	Medium size Grocery	Major Grocery	Self service department store	Digitall Mall 1 = Yes
1	A10 Center	Wildau	ECE Projektmanagement GmbH & Co. KG	2,30	150	11	22	6	2			1		1
2	Aachen Arkaden	Aachen	Apleona GmbH	4,52	46	10	4	3	1		1			
3	Alexa	Berlin	Sierra Germany GmbH	2,43	166	10	19	3	1		1			
4	Allee-Center Berlin	Berlin	Phoenix Property Consulting GmbH	2,98	41	10	3	5	1		2			
5	Allee-Center Essen	Essen	ECE Projektmanagement GmbH & Co. KG	3,24	73	11	9	5	2		1	1		1
6	Allee-Center Hamm	Hamm	ECE Projektmanagement GmbH & Co. KG	2,54	88	10	11	4	1					1
7	Allee-Center Leipzig	Leipzig	ECE Projektmanagement GmbH & Co. KG	2,99	90	11	6	3	2		2			
8	Allee-Center	Magdeburg	ECE Projektmanagement GmbH & Co. KG	2,56	139	10	11	5	2		2			1
9	Allee-Center	Remscheid	ECE Projektmanagement GmbH & Co. KG	3,24	92	11	10	4	2					1
10	Alstertal Zentrum	Hamburg	ECE Projektmanagement GmbH & Co. KG	2,96	263	11	23	7	2		2			1
11	Altmarkt-Galerie	Dresden	ECE Projektmanagement GmbH & Co. KG	2,59	197	10	24	7	2		2			1
12	Arneken Galerie	Hildesheim	Klépierre Management Deutschland GmbH	3,80	55	10	6	5	1					
13	Arsenal	Wittenberg	GERMAN REAL Asset & Property Managament	2,87	53	10	10	5	1		1			
14	Billstedt-Center	Hamburg	ECE Projektmanagement GmbH & Co. KG	2,94	103	11	13	5	2	1	2			1
15	Blautal-Center	Ulm	IPH Handelsimmobilien GmbH	3,09	77	11	12	5		1	1			
16	Blechen-Carré	Cottbus	CBC Projekt GmbH	2,82	76	10	8	6	1		1			
17	Boulevard Berlin	Berlin	Klépierre Management Deutschland GmbH	3,36	92	10	12	4	1		1			
18	Breuningerland	Sindelfingen	ECE Projektmanagement GmbH & Co. KG	1,82	120	11	14	7	1		1			
19	Breuningerland	Ludwigsburg	ECE Projektmanagement GmbH & Co. KG	2,12	117	11	12	4	1	1				
20	Brücken-Center Ansbach	Ansbach	Brücken-Center Ansbach GmbH	2,01	64	11	7	5		1				
21	Buchholz Galerie	Buchholz	CEV Handelsimmobilien GmbH	3,66	46	10	6	4	1					
22	Carré Bad Cannstatt	Stuttgart	JLL Jones Lang LaSalle GmbH	3,12	33	10	3	5		1	1	1		
23	CCL City-Center	Landshut	4-RED GmbH Real Estate Development	3,01	41	10	6	5	1		1			
24	Centrum-Galerie	Dresden	Klépierre Management Deutschland GmbH	2,57	57	10	8	5	1	1	1			
25	Chemnitz Center	Chemnitz	CMC Center Management & Consulting	2,12	91	8	9	4	2			1		
26	Citti-Park Kiel	Kiel	CITTI Handelsgesellschaft mbH & Co. KG	1,64	85	10	8	5	1		1			
27	City Galerie	Aschaffenburg	DVI Deutsche Verwaltungsgesellschaft	2,68	73	11	10	5	1	1	1			
28	City-Arkaden Wuppertal	Wuppertal	ECE Projektmanagement GmbH & Co. KG	2,97	83	11	8	3	1					1
29	City-Center	Hamburg	DVI Deutsche Verwaltungsgesellschaft	2,72	75	11	7	5			1	1		
30	City-Galerie	Augsburg	ECE Projektmanagement GmbH & Co. KG	2,25	109	10	13	5	1					1
31	City-Galerie Siegen	Siegen	ECE Projektmanagement GmbH & Co. KG	2,40	95	11	5	4	1	1	1			1
32	City-Galerie	Wolfsburg	ECE Projektmanagement GmbH & Co. KG	2,44	97	10	11	3	1		1			1
33	City-Point Kassel	Kassel	ECE Projektmanagement GmbH & Co. KG	3,13	55	10	6	4	1		1			1
34	City-Point Nürnberg	Nürnberg	JLL Jones Lang LaSalle GmbH	3,63	52	9	10	1						
35	City-Rondell Schwenningen	Villingen-Schwenningen	CIV City-Immobilien Verwaltungsgesellschaft mbH & Co. Betreuungs KG	3,30	34	11	3	4		1				

Number	Center	City	Management	OverallRanking	Tenant	Number of branches	Restaurants	Anchor tenant	Small - Medium Drugstore	Major Drugstore	Medium size Grocery	Major Grocery	Self service department store	Digitall Mall 1 = Yes
36	Das Schloss	Berlin	WealthCap Real Estate Management GmbH	2,77	82	10	8	5	1		1			
37	Der Clou	Berlin	JLL Jones Lang LaSalle GmbH	2,99	34	8	4	5	1		1			
38	DEZ Kassel	Kassel	ECE Projektmanagement GmbH & Co. KG	2,53	84	11	9	5	1		1			1
39	Die MEP	Meppen	RME Retail Management Expertise Asset & Property Management GmbH	4,19	35	10	4	5	1					
40	Donau-Einkaufszentrum	Regensburg	Donau Einkaufszentrum GmbH	1,99	137	11	16	5	1	1	1			
41	Drehscheibe/ City-Point Bochum	Bochum	Kintyre Management GmbH	3,50	27	10	2	1			1			
42	Düsseldorf Bilk Arcaden	Düsseldorf	Unibail-Rodamco Germany GmbH	3,28	96	10	11	3	1		1			
43	Eastgate	Berlin	ECE Projektmanagement GmbH & Co. KG	2,77	147	10	16	5	1		1			1
44	Elbe-Einkaufszentrum	Hamburg	ECE Projektmanagement GmbH & Co. KG	2,79	171	10	14	7	1		1			1
45	Elbepark Dresden	Dresden	CMC Center Management & Consulting	2,23	163	11	16	5	1			1		
46	Erlangen Arcaden	Erlangen	Unibail-Rodamco Germany GmbH	2,66	104	10	15	6	1		1			
47	Ernst-August-Galerie	Hannover	ECE Projektmanagement GmbH & Co. KG	2,78	150	10	15	5	1		1			1
48	Ettlinger Tor	Karlsruhe	ECE Projektmanagement GmbH & Co. KG	2,87	103	10	8	7	1	1				1
49	Europa-Galerie	Saarbrücken	ECE Projektmanagement GmbH & Co. KG	3,47	97	10	17	3	1		1			
50	Famila Einkaufsland Wechloy	Oldenburg	FAMILA Verbrauchermarkt Einkaufsstätte GmbH & Co. KG	1,85	58	11	9	5		1				
51	Flensburg Galerie	Flensburg	KOPRIAN IQ MANAGEMENT GmbH	2,76	56	10	10	4		1	2			
52	Forum Allgäu	Kempten/Allgäu	ECE Projektmanagement GmbH & Co. KG	2,51	85	11	11	4	1	1				1
53	Forum City Mülheim	Mülheim a. d. Ruhr	Multi Germany GmbH	3,59	83	11	12	6	1		2			
54	Forum Duisburg	Duisburg	Klépierre Management Deutschland GmbH	2,90	67	11	8	5	1		1			
55	Forum Köpenick	Berlin	DVI Deutsche Verwaltungsgesellschaft für Immobilien mbH	2,66	98	11	1	5	1		1			
56	Forum Mittelrhein	Koblenz	ECE Projektmanagement GmbH & Co. KG	3,34	78	10	14	2	1					1
57	Forum Steglitz	Berlin	Unibail-Rodamco Germany GmbH	3,59	63	10	8	4	1		1			
58	Forum Wetzlar	Wetzlar	ECE Projektmanagement GmbH & Co. KG	2,66	110	11	13	3	1			1		1
59	Franken-Center	Nürnberg	ECE Projektmanagement GmbH & Co. KG	2,97	110	11	9	6	1	1	2			1
60	Galerie Neustädter Tor	Gießen	Prelios Immobilien Management GmbH	3,34	53	11	8	5		1	2			
61	Galerie Roter Turm	Chemnitz	IPH Handelsimmobilien GmbH	2,68	54	10	6	5	1					
62	Gera Arcaden	Gera	Unibail-Rodamco Germany GmbH	2,57	85	11	6	5	1			1		
63	Gesundbrunnen-Center	Berlin	ECE Projektmanagement GmbH & Co. KG	3,04	109	11	14	4	2		2			1
64	Glacis-Galerie	Neu-Ulm	ECE Projektmanagement GmbH & Co. KG	3,92	77	10	13	5	1		2			1
65	Goethe Galerie	Jena	IPH Handelsimmobilien GmbH	2,52	70	10	7	5	1		1			
66	Gropius Passagen	Berlin	Unibail-Rodamco Germany GmbH	3,20	125	11	13	5	1	1		1		
67	Hallen am Borsigturm	Berlin	ECE Projektmanagement GmbH & Co. KG	2,76	93	11	16	4	1		1			1
68	Hallescher Einkaufspark	Halle/ Saale	CMde CENTERMANAGER und IMMOBILIEN	2,87	59	11	5	6	1		1	1		
69	Hamburger Meile	Hamburg	ECE Projektmanagement GmbH & Co. KG	3,23	152	11	24	5	1		2			1
70	HavelPark Dallgow	Dallgow-Döberitz	Unibail-Rodamco Germany GmbH	2,35	63	10	10	3	1			1		

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71	Hessen-Center	Frankfurt am Main	ECE Projektmanagement GmbH & Co. KG	3,16	107	11	12	5	1			1		1
72	Hirsch Center	Aachen	Retail Management Expertise Asset & Property Management GmbH	2,63	30	10	4	k.A		1	1	1		
73	Höfe am Brühl	Leipzig	Unibail-Rodamco Germany GmbH	3,01	102	11	16	5	1	1	2			
74	Huma Sankt Augustin	Sankt Augustin	Jost Hurler Beteiligungs- u. Verwaltungsgesellschaft	2,69	29	11	3	4	1	1			1	
75	Hürth-Park	Hürth	ECE Projektmanagement GmbH & Co. KG	2,84	110	11	12	6	1	1	1			
76	Isenburg-Zentrum	Neu-Isenburg	ECE Projektmanagement GmbH & Co. KG	3,21	126	11	11	7	1	1	2			1
77	K in Lautern	Kaiserslautern	ECE Projektmanagement GmbH & Co. KG	3,62	96	11	15	5	1		1			1
78	Kamp-Promenade	Osnabrück	VÖLKEL COMPANY Asset Management GmbH & Co. KG	2,48	22	7	3	4		1				
79	KaufPark Dresden	Dresden	Unibail-Rodamco Germany GmbH	2,54	67	11	8	4		1		1		
80	KaufPark Eiche	Ahrensfeld	Unibail-Rodamco Germany GmbH	2,44	93	11	9	5	2			1		
81	Köln Arcaden	Köln	Unibail-Rodamco Germany GmbH	2,38	107	11	9	5	1	1	2			
82	KOMM Einkaufscenter	Offenbach	Apleona GmbH	3,28	38	11	5	4		1	1			
83	Königsbau Passagen	Stuttgart	ECE Projektmanagement GmbH & Co. KG	3,11	51	8	11	1			1			
84	Königsgalerie	Duisburg	Klépierre Management Deutschland GmbH	3,99	29	10	1	5	1					
85	Königshof-Galerie	Mettmann	ILG Holding GmbH	4,09	37	10	4	4	1		1			
86	Kornmarkt-Center	Bautzen	ECE Projektmanagement GmbH & Co. KG	2,59	67	10	8	1	1					1
87	Lago Shopping-Center	Konstanz	Prelios Immobilien Management GmbH	1,83	54	10	3	4	1		1			
88	Lausitz Park	Cottbus	EDEKA-MIHA Immobilien Service GmbH	2,65	61	11	9	5	1				1	
89	Lausitz-Center	Hoyerswerda	MEC METRO-ECE Centermanagement GmbH & Co. KG	2,91	60	11	3	4			1			
90	Leine-Center	Laatzen	Unibail-Rodamco Germany GmbH	3,08	97	11	10	4	2		1			
91	Leo-Center	Leonberg	ECE Projektmanagement GmbH & Co. KG	3,20	82	11	10	3	1		1			1
92	Limbecker Platz	Essen	ECE Projektmanagement GmbH & Co. KG	3,01	183	11	18	6	2		1			1
93	Linden-Center	Berlin	ECE Projektmanagement GmbH & Co. KG	2,92	93	11	13	4	2		2			1
94	Löhr-Center	Koblenz	ECE Projektmanagement GmbH & Co. KG	3,26	111	10	7	4	1		1			1
95	Lookentor	Lingen / Ems	Hermann KLAAS Projektentwicklung GmbH	3,03	51	10	7	5	1					
96	LOOP5	Weiterstadt	Sierra Germany GmbH	3,66	154	10	20	6	1					
97	Luisen-Center	Darmstadt	ECE Projektmanagement GmbH & Co. KG	3,13	53	10	5	2	1		1			
98	LuisenForum	Wiesbaden	OMEGA Immobilien GmbH	3,11	50	11	6	6	1		1			
99	Main-Taunus-Zentrum	Sulzbach (Taunus)	ECE Projektmanagement GmbH & Co. KG	2,04	169	11	18	5	1					1
100	Marktplatz Galerie Bramfeld	Hamburg	BCM Center Management GmbH	2,82	54	11	4	5	2		2			
101	Marktplatz-Center	Neubrandenburg	ECE Projektmanagement GmbH & Co. KG	2,38	70	10	10	2	1		1			1
102	Mercaden Böblingen	Böblingen	hkm Management AG	3,19	78	11	12	5		1	1			
103	Mercado Nürnberg	Nürnberg	KOPRIAN IQ MANAGEMENT GmbH	2,74	61	11	8	6	1	1			1	
104	Milaneo	Stuttgart	ECE Projektmanagement GmbH & Co. KG	3,79	185	10	28	7	1		1			1
105	Minto	Mönchengladbach	Unibail-Rodamco Germany GmbH	2,80	100	11	13	5	1	1	2			

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106	Münster Arkaden	Münster	Sierra Germany GmbH	2,60	38	8	5	5	1		1			
107	MyZeil	Frankfurt am Main	ECE Projektmanagement GmbH & Co. KG	3,39	82	10	14	4	1		1			1
108	Neefepark	Chemnitz	JLL Jones Lang LaSalle GmbH	2,36	48	11	2	4				1		
109	Neukölln Arcaden	Berlin	Unibail-Rodamco Germany GmbH	4,06	43	11	3	4	2		1	1		
110	Neutor Galerie	Dinslaken	IPH Handelsimmobilien GmbH	3,74	52	10	8	4	1		1			
111	Nova Eventis	Leuna	ECE Projektmanagement GmbH & Co. KG	2,92	190	11	23	7	1	1	1			1
112	Oder-Center	Schwedt / Oder	MEC METRO-ECE Centermanagement GmbH & Co. KG	2,84	62	11	5	5	1				1	
113	Olympia-Einkaufszentrum	München	ECE Projektmanagement GmbH & Co. KG	2,98	140	11	16	5	1	1			1	1
114	Ostsee Park	Lambrechtshagen	MEC METRO-ECE Centermanagement GmbH & Co. KG	2,33	66	11	6	6	1				1	
115	Palais Vest	Recklinghausen	Unibail-Rodamco Germany GmbH	3,44	91	11	15	5	1		1	1		
116	Pasing Arcaden	München	Unibail-Rodamco Germany GmbH	2,34	146	11	17	6	1	1	1			
117	Paunsdorf Center	Leipzig	Unibail-Rodamco Germany GmbH	2,90	143	11	15	6	1	1	1	1		
118	PEP Einkaufs-Center	München	ECE Projektmanagement GmbH & Co. KG	2,77	115	11	11	6	1	1	1	1		1
119	PEP Eisenach	Eisenach	CIV City-Immobilien Verwaltungsgesellschaft mbH & Co. Betreuungs KG	2,35	30	10	2	4		1		1		
120	Phoenix-Center	Hamburg	ECE Projektmanagement GmbH & Co. KG	2,75	108	10	14	7	1		1			1
121	Post Galerie Karlsruhe	Karlsruhe	CEMAGG GmbH	3,03	43	11	10	4	1		1			
122	Postgalerie	Speyer	IPH Handelsimmobilien GmbH	4,10	25	8	2	4						
123	Quarree Wandsbek-Markt	Hamburg	Sierra Germany GmbH	2,65	95	10	9	5			1			
124	Rahlstedt Center	Hamburg	ESTAma Gesellschaft für Real Estate Management mbH	3,40	42	10	5	5	1		1			
125	Rathaus Galerie Essen	Essen	KOPRIAN IQ MANAGEMENT GmbH	3,80	47	11	8	2	1				1	
126	Rathaus-Center Ludwigshafen	Ludwigshafen	ECE Projektmanagement GmbH & Co. KG	2,99	64	10	6	5						
127	Rathaus-Galerie Hagen	Hagen	KOPRIAN IQ MANAGEMENT GmbH	3,80	66	11	9	5	1		1			
128	Rathaus-Galerie Leverkusen	Leverkusen	ECE Projektmanagement GmbH & Co. KG	3,25	118	11	12	4	1		2			1
129	Rathauspassagen Halberstadt	Halberstadt	Webegemeinschaft Rathauspassage GbR mbH	2,50	69	11	11	5	1		1			
130	Ratio-Land	Baunatal	RME Retail Management Expertise Asset & Property Management GmbH	2,78	54	10	11	5	1					
131	Regensburg Arcaden	Regensburg	Unibail-Rodamco Germany GmbH	3,07	89	11	12	4	1			1		
132	Rhein Center	Weil am Rhein	CEV Handelsimmobilien GmbH	2,13	52	10	10	5	1				1	
133	RheinBerg Galerie	Bergisch Gladbach	Apleona GmbH	3,07	43	10	5	5		1	1			
134	Rhein-Center	Köln	ECE Projektmanagement GmbH & Co. KG	2,91	177	11	15	4	1		3			1
135	Rhein-Galerie	Ludwigshafen am Rhein	ECE Projektmanagement GmbH & Co. KG	3,42	120	11	16	5	1	1				1
136	Rhein-Neckar-Zentrum	Viernheim	ECE Projektmanagement GmbH & Co. KG	2,50	123	11	17	5	1	1	1			1
137	Rheinpark-Center	Neuss	ECE Projektmanagement GmbH & Co. KG	3,47	131	11	15	5	1		1		1	1
138	Rhein-Ruhr-Zentrum	Mülheim a. d. Ruhr	ECE Projektmanagement GmbH & Co. KG	3,25	155	11	22	4	1		1			1
139	Riem Arcaden	München	Unibail-Rodamco Germany GmbH	2,64	124	11	15	4	1	1	2			
140	Ring-Center	Berlin	ECE Projektmanagement GmbH & Co. KG	3,01	105	11	11	4	1		1	1		

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141	Roland-Center	Bremen	ECE Projektmanagement GmbH & Co. KG	2,91	88	11	6	3	2		2			1
142	Rotmain-Center	Bayreuth	ECE Projektmanagement GmbH & Co. KG	2,43	81	11	10	4		1				1
143	Ruhr-Park	Bochum	Unibail-Rodamco Germany GmbH	2,18	107	11	16	4	1			1		
144	Saarpark-Center	Neunkirchen (Saar)	ECE Projektmanagement GmbH & Co. KG	2,61	125	11	17	5	1					1
145	Sachsen-Allee	Chemnitz	ECE Projektmanagement GmbH & Co. KG	2,65	89	11	9	4	1			1		
146	Sankt Annen Galerie	Brandenburg a. d. Havel	HGHI Holding GmbH	3,20	43	9	4	5	1		1			
147	Schloss Arkaden	Heidenheim	CIV City-Immobilien Verwaltungsgesellschaft mbH & Co. Betreuungs KG	3,35	41	10	3	5	1					
148	Schloss-Arkaden	Braunschweig	ECE Projektmanagement GmbH & Co. KG	2,28	141	10	14	4	2		1			1
149	Schlosshöfe	Oldenburg	ECE Projektmanagement GmbH & Co. KG	3,61	73	10	14	2			1			1
150	Schlössle-Galerie	Pforzheim	Apleona GmbH	2,63	44	11	6	5		1				
151	Schlosspark-Center	Schwerin	ECE Projektmanagement GmbH & Co. KG	2,46	122	11	10	2	2		1			1
152	Schönhauser Allee-Arcaden	Berlin	Unibail-Rodamco Germany GmbH	2,60	89	10	8	5	2		2			
153	Shopping Arkaden Bocholt	Bocholt	CIV City-Immobilien Verwaltungsgesellschaft mbH & Co. Betreuungs KG	2,94	42	11	3	5		1				
154	Shopping Cité	Baden-Baden	MEC METRO-ECE Centermanagement GmbH & Co. KG	2,16	34	10	7	4		1				
155	Shopping Plaza Garbsen	Garbsen	CIV City-Immobilien Verwaltungsgesellschaft mbH & Co. Betreuungs KG	2,93	41	11	3	4		1				
156	Sieben Seen Center	Schwerin	MEC METRO-ECE Centermanagement GmbH & Co. KG	1,96	50	11	4	5	1			1		
157	Skyline Plaza	Frankfurt am Main	ECE Projektmanagement GmbH & Co. KG	3,83	154	10	28	4	1		1			
158	SMC Spitzkrug Multi Center	Frankfurt/ Oder	MEC METRO-ECE Centermanagement GmbH & Co. KG	2,35	57	11	7	4	1			1		
159	Sophienhof	Kiel	ECE Projektmanagement GmbH & Co. KG	2,78	86	10	17	4	2		2			
160	Spandau Arcaden	Berlin	Unibail-Rodamco Germany GmbH	2,83	109	11	11	5	2		2		1	
161	StadtCenter Düren	Düren	Apleona GmbH	3,17	49	10	4	5						
162	Stadt-Galerie Hameln	Hameln	ECE Projektmanagement GmbH & Co. KG	3,20	91	11	9	2	1					1
163	Stadtgalerie Heilbronn	Heilbronn	ECE Projektmanagement GmbH & Co. KG	3,18	77	11	11	2	1					1
164	Stadtgalerie Passau	Passau	ECE Projektmanagement GmbH & Co. KG	2,62	92	10	7	2	1					1
165	Stadt-Galerie Plauen	Plauen	ECE Projektmanagement GmbH & Co. KG	2,63	72	11	5	3	1					1
166	Stadtgalerie Schweinfurt	Schweinfurt	ECE Projektmanagement GmbH & Co. KG	3,33	89	11	11	3	1					1
167	Stern Center	Sindelfingen	MEC METRO-ECE Centermanagement GmbH & Co. KG	3,81	54	11	7	5	1					
168	Stern-Center	Potsdam	ECE Projektmanagement GmbH & Co. KG	2,38	96	11	12	7	1				1	1
169	Stern-Center Lüdenscheid	Lüdenscheid	ECE Projektmanagement GmbH & Co. KG	3,29	99	11	12	5	1	1	1			1
170	Südharz Galerie	Nordhausen	ROSCO Centermanagement und Immobilienverwaltung GmbH	2,65	46	10	4	4	1		1			
171	Taunus Carré	Friedrichsdorf	ILG Holding GmbH	3,49	27	10	3	5		1			1	
172	Tempelhofer Hafen	Berlin	ECE Projektmanagement GmbH & Co. KG	3,36	55	11	9	4	1		1			

173	Thier-Galerie	Dortmund	ECE Projektmanagement GmbH & Co. KG	3,31	161	10	23	4	1					1
174	Thüringen-Park	Erfurt	ECE Projektmanagement GmbH & Co. KG	2,59	95	11	10	4	1			1		1
175	Tibarg Center	Hamburg	BCM Center Management GmbH	2,18	47	10	7	5	1		2			
176	Warnow Park	Rostock	EDEKA Nord SB - Warenhaus GmbH	2,68	50	10	6	3	1		1			
177	Waterfront	Bremen	ECE Projektmanagement GmbH & Co. KG	3,03	114	11	21	5	1	1	1			1
178	Weimar Atrium	Weimar	City- & Centermanagement Weimar GmbH	2,41	49	10	5	4	1		1			
179	Werre-Park	Bad Oeynhausen	ECE Projektmanagement G.m.b.H. & Co. KG	2,43	78	10	11	5	1	1	1			1
180	Weserpark	Bremen	RME Retail Management Expertise Asset & Property Management GmbH	2,52	144	11	23	5	2	1	1		1	
181	Westpark	Ingolstadt	WESTPARK Einkaufszentrum Verwaltungs-GmbH	2,10	135	11	16	5	1	1	1			
182	Wilmersdorfer Arcaden	Berlin Wilmersdorf	Unibail-Rodamco Germany GmbH	3,25	104	10	10	5	1	1	3			
183	Zwickau Arcaden	Zwickau	ECE Projektmanagement GmbH & Co. KG	2,96	68	10	5	4	1					1

Dataset Center Testbericht

Number	Center	City	Test 2022	1 = bigger than 4,2 / 0 = smaller 4,2
1	A10 Center	Wildau	4,4	1
2	Aachen Arkaden	Aachen	4,13	0
3	Alexa	Berlin	4,3	1
4	Allee-Center Berlin	Berlin	4	0
5	Allee-Center Essen	Essen	4,2	1
6	Allee-Center Hamm	Hamm	4,2	1
7	Allee-Center Leipzig	Leipzig	4,1	0
8	Allee-Center Magdeburg	Magdeburg	4,3	1
9	Allee-Center Remscheid	Remscheid	4	0
10	Alstertal Einkaufs-Zentrum	Hamburg	4,4	1
11	Altmarkt-Galerie	Dresden	4,5	1
12	Arneken Galerie	Hildesheim	4	0
13	Arsenal	Wittenberg	4,1	0
14	Billstedt-Center	Hamburg		
15	Blautal-Center	Ulm		
16	Blechen-Carré	Cottbus	4,2	1
17	Boulevard Berlin	Berlin	4,1	0
18	Breuningerland	Sindelfingen	4,4	1
19	Breuningerland	Ludwigsburg	4,4	1
20	Brücken-Center Ansbach	Ansbach	4,3	1
21	Buchholz Galerie	Buchholz	4,1	0
22	Carré Bad Cannstatt	Stuttgart	4,1	0
23	CCL City-Center Landshut	Landshut		
24	Centrum-Galerie	Dresden	4,4	1
25	Chemnitz Center	Chemnitz	4,4	1
26	Citti-Park Kiel	Kiel	4,4	1
27	City Galerie Aschaffenburg	Aschaffenburg	4,3	1
28	City-Arkaden Wuppertal	Wuppertal	4,2	1
29	City-Center Bergedorf	Hamburg	4,2	1
30	City-Galerie Augsburg	Augsburg	4,4	1
31	City-Galerie Siegen	Siegen	4,2	1
32	City-Galerie Wolfsburg	Wolfsburg	4,2	1
33	City-Point Kassel	Kassel	4,3	1
34	City-Point Nürnberg	Nürnberg		
35	City-Rondell Schwenningen	Villingen-Schwenningen	4	0
36	Das Schloss	Berlin	4,3	1
37	Der Clou	Berlin	3,8	0
38	DEZ Kassel	Kassel	4,3	1
39	Die MEP	Meppen		
40	Donau-Einkaufszentrum	Regensburg	4,5	1
41	Drehscheibe/ City-Point Bochum	Bochum	4	0
42	Düsseldorf Bilk Arcaden	Düsseldorf	4,2	1
43	Eastgate	Berlin	4,3	1
44	Elbe-Einkaufszentrum	Hamburg	4,3	1
45	Elbepark Dresden	Dresden	4,4	1
46	Erlangen Arcaden	Erlangen	4,3	1
47	Ernst-August-Galerie	Hannover	4,3	1
48	Ettlinger Tor	Karlsruhe	4,4	1
49	Europa-Galerie	Saarbrücken	4,2	1

Number	Center	City	Test 2022	1 = bigger than 4,2 / 0 = smaller 4,2
50	Familia Einkaufsland Wechloy	Oldenburg	4,4	1
51	Flensburg Galerie	Flensburg	4,1	0
52	Forum Allgäu	Kempten/Allgäu	4,3	1
53	Forum City Mülheim	Mülheim a. d. Ruhr	3,8	0
54	Forum Duisburg	Duisburg	4,2	1
55	Forum Köpenick	Berlin	4,2	1
56	Forum Mittelrhein	Koblenz	4,2	1
57	Forum Steglitz	Berlin	3,8	0
58	Forum Wetzlar	Wetzlar	4,3	1
59	Franken-Center	Nürnberg	4,3	1
60	Galerie Neustädter Tor	Gießen	3,7	0
61	Galerie Roter Turm	Chemnitz	4,3	1
62	Gera Arcaden	Gera	4,1	0
63	Gesundbrunnen-Center	Berlin	4,1	0
64	Glacis-Galerie	Neu-Ulm	4,2	1
65	Goethe Galerie	Jena	4,3	1
66	Gropius Passagen	Berlin	4,1	0
67	Hallen am Borsigturm	Berlin	4,2	1
68	Hallescher Einkaufspark HEP	Halle/ Saale	4	0
69	Hamburger Meile	Hamburg	4,3	1
70	HavelPark Dallgow	Dallgow-Döberitz	4,2	1
71	Hessen-Center	Frankfurt am Main	4,1	0
72	Hirsch Center	Aachen	4,3	1
73	Höfe am Brühl	Leipzig	4,4	1
74	Huma Sankt Augustin	Sankt Augustin	4,3	1
75	Hürth-Park	Hürth	4,3	1
76	Isenburg-Zentrum	Neu-Isenburg	4,3	1
77	K in Lautern	Kaiserslautern	4,1	0
78	Kamp-Promenade	Osnabrück	4,2	1
79	KaufPark Dresden	Dresden	4,2	1
80	KaufPark Eiche	Ahrensfeld	4,4	1
81	Köln Arcaden	Köln	4,2	1
82	KOMM Einkaufscenter	Offenbach	3,9	0
83	Königsbau Passagen	Stuttgart	4,2	1
84	Königsgalerie	Duisburg		
85	Königshof-Galerie	Mettmann		
86	Kornmarkt-Center	Bautzen	4,2	1
87	Lago Shopping-Center	Konstanz	4,2	1
88	Lausitz Park	Cottbus	4,2	1
89	Lausitz-Center	Hoyerswerda	4,2	1
90	Leine-Center	Laatzen	4,1	0
91	Leo-Center	Leonberg	4,1	0
92	Limbecker Platz	Essen	4,3	1
93	Linden-Center	Berlin	4,1	0
94	Löhr-Center	Koblenz	4,3	1
95	Lookentor	Lingen / Ems	4,4	1
96	LOOP5	Weiterstadt	4,3	1
97	Luisen-Center	Darmstadt	4,1	0
98	LuisenForum	Wiesbaden	4,1	0

Number	Center	City	Test 2022	1 = bigger than 4,2 / 0 = smaller 4,2
99	Main-Taunus-Zentrum	Sulzbach (Taunus)	4,4	1
100	Marktplatz Galerie Bramfeld	Hamburg	4,3	1
101	Marktplatz-Center	Neubrandenburg	4,3	1
102	Mercaden Böblingen	Böblingen	4,1	0
103	Mercado Nürnberg	Nürnberg	4,3	1
104	Milaneo	Stuttgart	4,2	1
105	Minto	Mönchengladbach	4,3	1
106	Münster Arkaden	Münster	4,3	1
107	MyZeil	Frankfurt am Main	4,3	1
108	Neefepark	Chemnitz	4	0
109	Neukölln Arcaden	Berlin	3,9	0
110	Neutor Galerie	Dinslaken	4	0
111	Nova Eventis	Leuna	4,4	1
112	Oder-Center	Schwedt / Oder	4,2	1
113	Olympia-Einkaufszentrum	München	4,3	1
114	Ostsee Park	Lambrechtshagen	4,3	1
115	Palais Vest	Recklinghausen	4,1	0
116	Pasing Arcaden	München	4,4	1
117	Paunsdorf Center	Leipzig	4,5	1
118	PEP Einkaufs-Center	München	4,3	1
119	PEP Eisenach	Eisenach	4,3	1
120	Phoenix-Center	Hamburg	4,2	1
121	Post Galerie Karlsruhe	Karlsruhe	4,3	1
122	Postgalerie	Speyer		
123	Quarree Wandsbek-Markt	Hamburg	4,1	0
124	Rahlstedt Center	Hamburg	4	0
125	Rathaus Galerie Essen	Essen	4,1	0
126	Rathaus-Center Ludwigshafen	Ludwigshafen		
127	Rathaus-Galerie Hagen	Hagen	4,1	0
128	Rathaus-Galerie Leverkusen	Leverkusen	4,2	1
129	Rathauspassagen Halberstadt	Halberstadt	4	0
130	Ratio-Land	Baunatal	4,3	1
131	Regensburg Arcaden	Regensburg	4,3	1
132	Rhein Center	Weil am Rhein		
133	RheinBerg Galerie	Bergisch Gladbach	4,2	1
134	Rhein-Center	Köln	4,3	1
135	Rhein-Galerie	Ludwigshafen am Rhein	4,2	1
136	Rhein-Neckar-Zentrum	Viernheim	4,4	1
137	Rheinpark-Center	Neuss	4,2	1
138	Rhein-Ruhr-Zentrum	Mülheim a. d. Ruhr	4,2	1
139	Riem Arcaden	München	4,4	1
140	Ring-Center	Berlin	4	0
141	Roland-Center	Bremen	4,1	0
142	Rotmain-Center	Bayreuth	4,3	1
143	Ruhr-Park	Bochum	4,5	1
144	Saarpark-Center	Neunkirchen (Saar)	4,3	1
145	Sachsen-Allee	Chemnitz	4,5	1
146	Sankt Annen Galerie	Brandenburg a. d. Havel	4,2	1
147	Schloss Arkaden	Heidenheim	4,3	1
148	Schloss-Arkaden	Braunschweig	4,3	1
149	Schlosshöfe	Oldenburg	4,2	1
150	Schlössle-Galerie	Pforzheim	4,2	1
151	Schlosspark-Center	Schwerin	4,4	1
152	Schönhauser Allee-Arcaden	Berlin	4,1	0
153	Shopping Arkaden Bocholt	Bocholt	4,2	1
154	Shopping Cité	Baden-Baden	4,3	1
155	Shopping Plaza Garbsen	Garbsen	4,2	1
156	Sieben Seen Center	Schwerin	4,3	1
157	Skyline Plaza	Frankfurt am Main	4,3	1
158	SMC Spitzkrug Multi Center	Frankfurt/ Oder		
159	Sophienhof	Kiel	4,2	1
160	Spandau Arcaden	Berlin	4,2	1
161	StadtCenter Düren	Düren	4	0
162	Stadt-Galerie Hameln	Hameln	4,2	1
163	Stadtgalerie Heilbronn	Heilbronn	4,2	1
164	Stadtgalerie Passau	Passau	4,4	1
165	Stadt-Galerie Plauen	Plauen	4,2	1
166	Stadtgalerie Schweinfurt	Schweinfurt	4,1	0
167	Stern Center	Sindelfingen	3,7	0
168	Stern-Center	Potsdam	4,3	1
169	Stern-Center Lüdenscheid	Lüdenscheid	4,1	0
170	Südharz Galerie	Nordhausen	3,9	0
171	Taunus Carré	Friedrichsdorf	4,2	1
172	Tempelhofer Hafen	Berlin	4,2	1
173	Thier-Galerie	Dortmund	4,2	1
174	Thüringen-Park	Erfurt	4,3	1
175	Tibarg Center	Hamburg	4,2	1
176	Warnow Park	Rostock	4,4	1
177	Waterfront	Bremen	4,3	1
178	Weimar Atrium	Weimar	4,2	1
179	Werre-Park	Bad Oeynhausen	4,3	1
180	Weserpark	Bremen	4,4	1
181	Westpark	Ingolstadt	4,4	1
182	Wilmersdorfer Arcaden	Berlin Wilmersdorf		
183	Zwickau Arcaden	Zwickau	4,2	1

Further Analysis

Which key factors of the previous analysis have the greatest influence on the performance assessment? In order to investigate which of the key factors from the previous analysis have the greatest influence on the performance assessment, a stepwise regression was calculated on the basis of the key factors identified above. In a stepwise regression, the predictors are selected in a data-driven manner, i.e. those that can best predict the dependent variable ("overall ranking") are statistically selected. Predictors that do not make a significant contribution to clarifying the overall ranking are excluded from the analysis. The significance level is set at $\alpha = .05$. Of 183 cases, a total of 162 were included in the study for which a rating was available for all items. Of the predictors tested, centrality (item "centrality index"), location (item "location grouped greenfield vs rest"), accessibility (operationalized using the items "distance to main road in min" and "public transport within walking distance"), age (items "new opening by group" and "old vs new"), parking facilities (items "free parking spaces" and "number of parking spaces"), number of floors and rental space (item "rental space"), only the two items "number of parking spaces" and "distance to main road in minutes" are included as significant predictors in the model for predicting the overall ranking.

Model summary[c]

Model	R	R-Quad-rat	Corr. R-quad-rat	Std. error	Change statistical values					Durbin-Watson statistics
					Change to R-quad-rat	Change to F	df1	df2	Sig. Change to F	
1	0,36[a]	0,13	0,12	0,47	0,13	23,47	1	160	0,00	
2	0,40[b]	0,16	0,15	0,46	0,03	6,04	1	159	0,02	2,02

a. Influence variables : (constant), number of parking spaces

b. Influence variables: (constant), number of parking spaces, distance to main road in min.

c. Dependent variable: Overall ranking

In the first model, only the variable "number of parking spaces" is initially included; in the second model, the variable "distance to the main road in minutes" is also included. This second model can explain 15 % of the variance in the overall ranking. The model therefore has a medium goodness of fit (corrected R2 = 0.15).

ANOVA[a]

Model		Square sum	df	Mean of the squares	F	Sig.
1	Regression	5,17	1	5,17	23,47	<0,001[b]
	Non-standardized residuals	35,27	160	0,22		
	Total	40,45	161			
2	Regression	6,47	2	3,23	15,13	<0,001[c]
	Non-standardized residuals	33,98	159	0,21		
	Total	40,45	161			

a. Dependent variable: Overall ranking

b. Influence variables : (constant), number of parking spaces

c. Influence variables: (constant), number of parking spaces, distance to main road in min.

The significance of the regression model is $p < 0.001$. The model therefore has coefficients that have an influence on the dependent variable.

Coefficients[a]

Model		Non-standardized coefficients		Standardized coefficients	T	Sig.
		Regression coefficientB	Std. error	Beta		
1	(constant)	3,14	0,06		51,65	0,00
	Number of parking spaces	0,00	0,00	-0,36	-4,84	0,00
2	(constant)	3,04	0,07		41,74	0,00
	Number of parking spaces	-0,0002	0,00	-0,36	-4,97	0,00
	Distance to the main road in min	0,03	0,01	0,18	2,46	0,02

a. Dependent variable: Overall ranking

The performance rating improves by 0.0002 per additional parking space and by 0.03 per minute less distance from the main road.

From the customer perspective, the age of a shopping center plays the biggest role alongside the number of parking spaces:

first, the same predictors as for the analysis of the tenant perspective were tested using a stepwise regression. The significance level is again set at $\alpha = .05$. A total of 152 out of 183 cases were included in the study. For these 152 cases, an assessment is available for all items.

In the first model, only the variable "number of parking spaces" is initially included; in the second model, the variable "old vs new" is also included. This second model can explain 26 % of the variance in the overall ranking. The model therefore has a high goodness of fit (corrected R2 = 0.26).

Model summary[c]

Model	R	R-Quad-rat	Corr. R-quad-rat	Std. error	Change statistical values					Durbin-Watson statistics
					Change to R-quad-rat	Change to F	df1	df2	Sig. Change to F	
1	0,48[a]	0,21	0,21	0,14	0,21	39,51	1	150	<0,001	
2	0,52[b]	0,27	0,26	0,14	0,06	11,52	1	149	<0,001	2,14

a. Influence variables : (constant), number of parking spaces

b. Influence variables : (constant), number of parking spaces, Alt_vs_Neu

c. Dependent variable: Rating Testberichte.de according to Google Maps

The significance of the regression model is $p < 0.001$. The model therefore has coefficients that have an influence on the dependent variable.

ANOVA[a]

Model		Square sum	df	Mean of the squares	F	Sig.
1	Regression	0,74	1	5,17	23,47	<0,001[b]
	Non-standardized residuals	2,81	150	0,22		
	Total	3,55	151			
2	Regression	0,94	2	3,23	15,13	<0,001[c]
	Non-standardized residuals	2,61	149	0,21		
	Total	3,55	151			

a. Dependent variable: Rating Testberichte.de according to Google Maps

b. Influence variables : (constant), number of parking spaces

c. Influence variables : (constant), number of parking spaces, Alt_vs_Neu

As shown below, the valuation per additional parking space improves by 0.00008 and if it is a shopping center that opened in 2000 or later, the valuation improves by 0.08 compared to a shopping center that opened before 2000.

Coefficients[a]

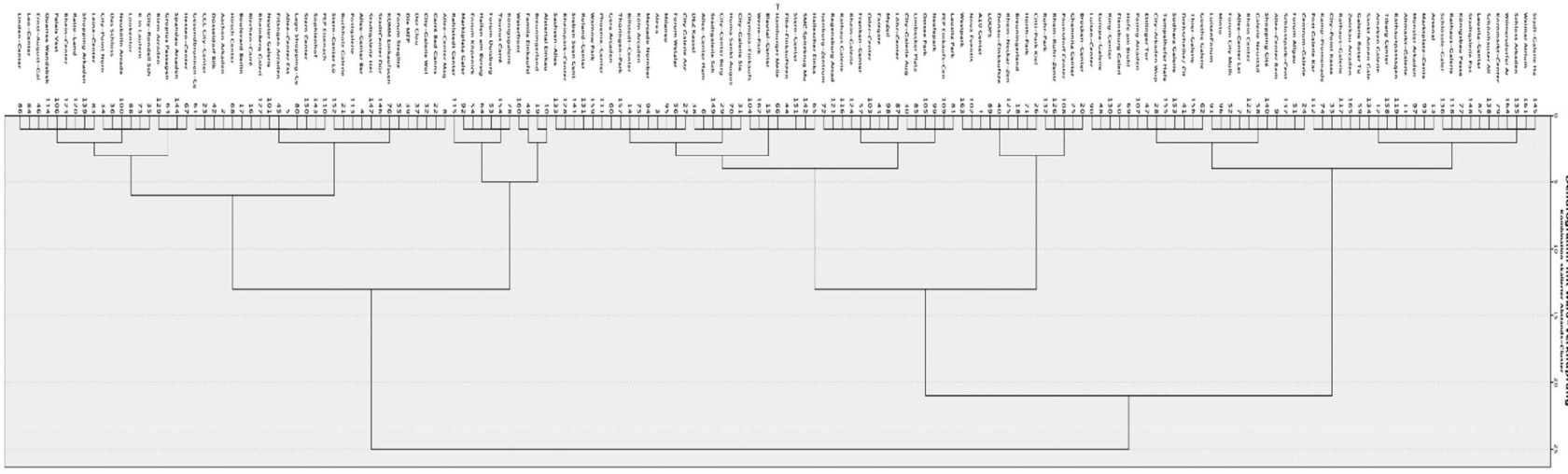
Model		Non-standardized coefficients		Standardized coefficients	T	Sig.
		Regression coefficientB	Std. error	Beta		
1	(constant)	4,123	0,02		224,30	<0,001
	Number of parking spaces	0,00007	0,00	0,46	6,29	<0,001
2	(constant)	4,06	0,03		159,68	<0,001
	Number of parking spaces	0,00008	0,00	0,57	7,31	<0,001
	Old_vs_New	0,08	0,02	0,26	3,40	<0,001

a. Dependent variable: Rating Testberichte.de according to Google Maps

In summary, it should be noted that the predictors examined only make a low to medium contribution to the performance assessment of tenants (14%) and the assessment by customers (26%) and that a complex interplay of numerous factors flows into the performance assessment of tenants in shopping centers/customers. Of the predictors examined, the number of parking spaces exerts the greatest influence in both target groups.

What are the best and worst shopping centers from the perspective of tenants and customers?

A hierarchical cluster analysis was carried out to investigate which shopping centers perform best and worst from the perspective of tenants and customers. This involved examining whether the properties under investigation could be grouped into natural groups, i.e. clusters, based on their characteristics. Each of these clusters should be as homogeneous as possible, while differing as much as possible from the other clusters. The analysis was carried out according to the Ward method using the Euclidean distance as a measure of proximity. Furthermore, the values were z-transformed in order to standardize the variables. As the number of parking spaces and the distance to the main road have proven to be the most meaningful predictors (at least of the performance assessment by the tenants) in the analysis to date, the clustering is based on these two variables. The following dendrogram (see Figure 24) shows the grouping of the shopping centers into six clusters:



Dendrogram for clustering the shopping centers according to the Ward method

Clustering (N = 165)					
Cluster 1 (N = 14)	**Cluster 2 (N = 28)**	**Cluster 3 (N = 44)**	**Cluster 4 (N = 49)**	**Cluster 5 (N = 11)**	**Cluster 6 (N = 19)**
A10 Center (Wildau)	Aachen Arcades	Alexa (Berlin)	Allee-Center Leipzig	Alstertal Shopping Center (Hamburg)	City-Point Nuremberg
Breuningerland (Sindelfingen)	Allee-Center Berlin	Allee-Center Hamm	Allee-Center Remscheid	Breuningerland (Ludwigsburg)	City-Rondell Schwenningen
Bridge Center Ansbach	Allee-Center Essen	Billstedt-Center (Hamburg)	Altmarkt-Galerie (Dresden)	Famila Einkaufsland Wechloy (Oldenburg)	The Castle (Berlin)
Chemnitz Center	Allee-Center Magdeburg	Blautal-Center (Ulm)	Arneken Gallery (Hildesheim)	Forum Duisburg	Ernst-August-Gallery (Hanover)
Citti-Park Kiel	Blechen-Carrée (Cottbus)	City-Galerie Aschaffenburg	Arsenal (Wittenberg)	Forum Köpenick (Berlin)	Gropius Passagen (Berlin)
Danube Shopping Center (Regensburg)	Boulevard Berlin	City-Center Bergedorf	Centrum-Galerie (Dresden)	Hallen am Borsig (Berlin)	Hessen-Center (Frankfurt am Main)
Hürth Park	Buchholz Gallery	City-Galerie Augsburg	City-Arkaden Wuppertal	Königsgalerie (Duisburg)	K in Lautern (Kaiserslautern)
LOOP5 (Weiterstadt)	Carrée Bad Cannstadt (Sttugart)	City-Galerie Siegen	City-Point Kassel	Marketplace Gallery Bramfeld (Hamburg)	Leine-Center (Laatzen)
Nova Eventis (Leuna)	CCL City-Center Landshut	DEZ Kassel	Turntable/ City-Point Bochum	Rahlstedt Center (Hamburg)	Leo-Center (Leonberg)
Paunsdorf Center (Leipzig)	City-Galerie Wolfsburg	Eastgate (Berlin)	Ettlinger Tor (Karlsruhe)	Taunus Carrée (Friedrichsdorf)	Linden-Center Berlin)

Rhine-Neckar Center (Viernheim)	The Clou (Berlin)	Elbe-Einkaufszentrum (Hamburrg)	Europa-Galerie (Saarbrücken)	Waterfront (Bremen)	Lookentor (Lingen/Ems)
Rhine-Ruhr Center (Mühlheim a. d. Ruhr)	The MEP (Meppen)	Forum Wetzlar	Flensburg Gallery		Neukölln Arcaden (Berlin)
Ruhr-Park Bochum	Düsseldorf Bilk Arcaden	Franken-Center (Nuremberg)	Forum Allgäu (Kempten/Allgäu)		Palais Vest
Westpark (Ingolstadt)	Erlangen Arcades	Gera Arcades	Forum City Mülheim		Quarree Wandsbek
	Forum Steglitz (Berlin)	Halle Shopping Park HEP (Halle/Saale)	Gallery Neustädter Tor (Giessen)		Ratio country
	Gesundbrunnen-Center (Berlin)	Hamburg Mile	Gallery Roter Turm (Chemnitz)		Rhine Center
	Hirsch Center (Aachen)	Huma Sankt Augustin	Goethe Gallery (Jena)		Riem Arcaden
	KOMM Shopping Center (Offenbach)	Isenburg Center	Höfe am Brühl (Leipzig)		Shopping arcades
	Lago Shopping Center (Constance)	Cologne Arcades	Kamp-Promenade (Osnabrück)		Spandau Arcades
	Neutor Gallery (Dinslaken)	Lausitz Park (Cottbus)	Königsbau Passagen (Stuttgart)		
	PEP Eisenach	Limbecker Platz (Essen)	Kornmarkt-Center (Bautzen)		

	Postgalerie (Speyer)	Löhr-Center (Koblenz)	Lausitz-Center (Hoyerswerda)		
	RheinBerg Gallery (Bergisch Gladbach)	Mercado Nuremberg	Luisen-Center (Darmstadt)		
	Sophienhof (Kiel)	Milaneo (Stuttgart)	LuisenForum (Wiesbaden)		
	CityCenter Düren	MyZeil (Frankfurt am Main)	Marktplatz-Center (Neubrandenburg)		
	Heilbronn City Gallery	Neefepark (Chemnitz)	Minto (Mönchengladbach)		
	Stern Center (Sindelfingen)	Oder-Center (Schwedt/Oder)	Münster Arcades		
	Stern-Center Lüdenscheid	Olympia Shopping Center (Munich)	Pasing Arcaden (Munich)		
		Ostsee Park (Lambrechts-hagen)	Post Gallery Karlsruhe		
		PEP Shopping Center (Munich)	Town Hall Gallery (Hagen)		
		Phoenix-Center (Hamburg)	Rathaus-Galerie (Leverkusen)		

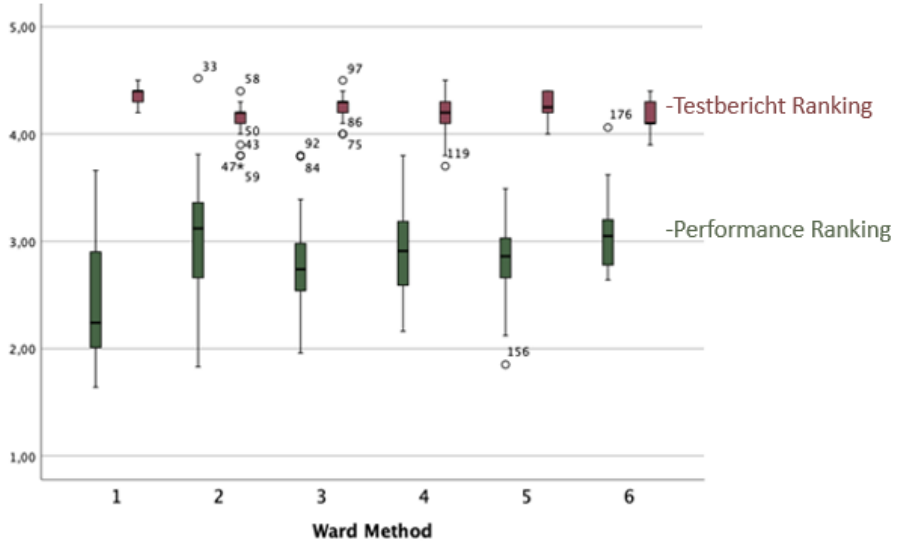
		Town Hall Gallery Essen	Town Hall Passages Halberstadt		
		Regensburg Arcaden	Rhein Center (Weil am Rhein)		
		Rhein-Galerie (Ludwigshafen am Rhein)	Ring-Center (Berlin)		
		Rheinpark-Center (Neuss)	Sankt Annen Gallery (Brandenburg a. d. Havel)		
		Roland-Center (Bremen)	Castle Arcades (Heidenheim)		
		Sachsen-Allee (Chemnitz)	Schlössle Gallery (Pforzheim)		
		Seven Lakes Center (Schwerin)	Schlosspark-Center (Schwerin)		
		SMC Spitzkrug Multi Center (Frankfurt/Oder)	Schönhauser Allee (Berlin)		
		Schweinfurt City Gallery	Shopping Cité (Baden-Baden)		
		Stern-Center (Potsdam)	Stadt-Galerie Hameln		
		Thuringia Park (Erfurt)	Passau City Gallery		

		Warnow Park (Rostock)	Südharz Gallery (Nordhausen)		
		Werre Park (Bad Oeynhausen)	Tempelhof Harbor (Berlin)		
			Thier-Galerie (Dortmund)		
			Tibarg Center (Hamburg)		
			Weimar Atrium		
			Wilmersdorfer Arcaden (Berlin)		
			Zwickau Arcaden		

At the beginning (far left), each shopping center is in its own cluster; at the end (far right), all shopping centers are in one large cluster. The vertical lines in the dendrogram illustrate that cases (shopping centers) are combined into larger clusters. Heterogeneity increases with each step of the merging process. In order to keep the clusters as homogeneous as possible, a division into six clusters was chosen for the study.

This resulted in the following allocation of shopping centers to the six clusters:

The following figure shows that the first cluster was rated best by both tenants and customers (tenants: M = 2.46, SD = 0.61, customers: M = 4.39, SD = 0.09)1 . Cluster 1 is therefore a high performer. In the other clusters, the assessment by tenants and customers is more divergent, so that it is not clear which cluster was rated worst overall.

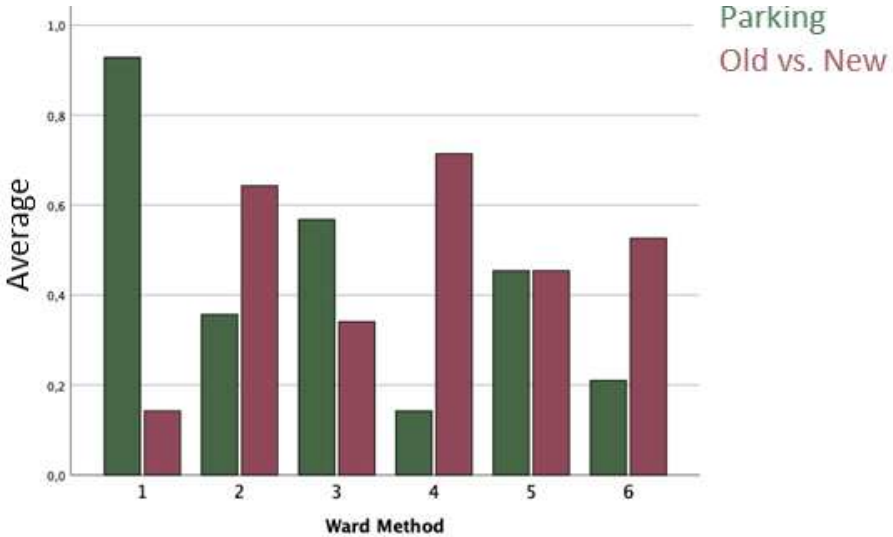


Performance assessment of tenants and customer ratings based on the six clusters

Further investigation into the common characteristics of the shopping centers belonging to the first cluster and thus to the high performers revealed

[1] *M* = mean value, *SD* = standard deviation

that the majority have free parking (92.9%) and were opened before the year 2000 (85.7%)[2] :

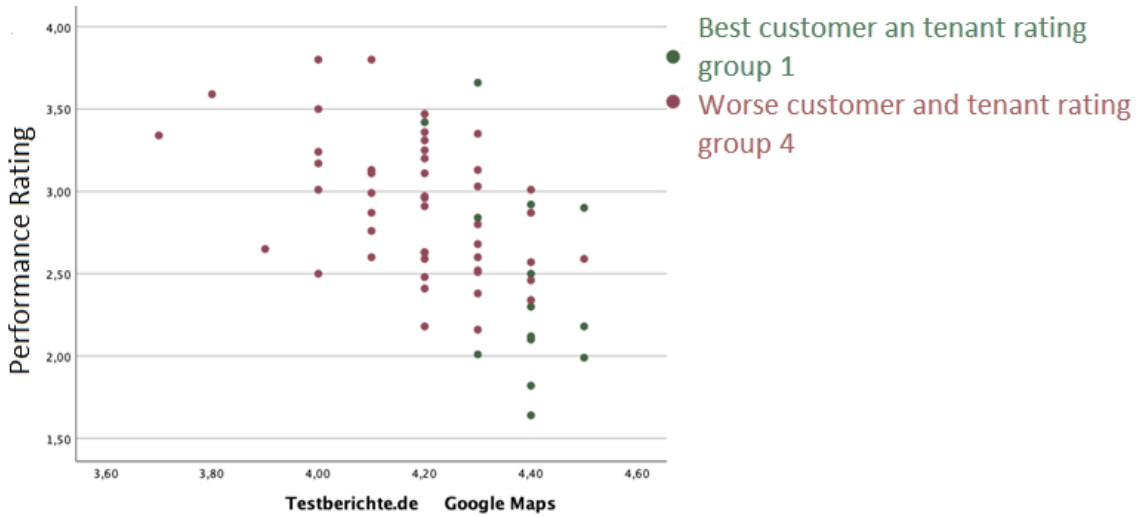


Cluster comparison based on the variables "free parking spaces" and "old vs. new"

Conversely, the chart might suggest that Cluster 4, in which only 14.3% of shopping centers have free parking but 71.4% have opened since 2000, should be the worst in the assessment by tenants and customers, but this impression cannot be

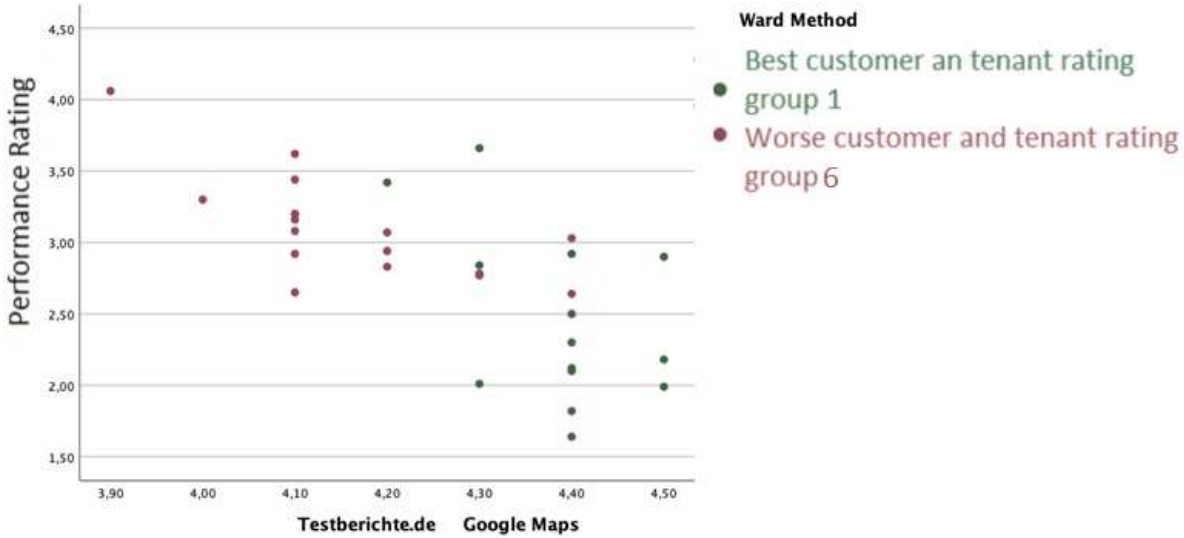
[2] The red bar illustrates the number of shopping centers opened between 2000 and 2015.

confirmed on the basis of following :



Performance assessment of tenants and customer ratings in a direct comparison of clusters 1 and 4

However, if we compare Group 1 as a high performer with Group 6, which at 21.1% has the second lowest number of centers with free parking spaces and an equally high number of centers opened after the year 2000 (52.6%), it can be seen - despite a certain overlap between the groups - that Group 6 tends to perform the worst from a tenant and customer perspective:



Performance assessment of tenants and customer ratings in a direct comparison of clusters 1 and 6

This confirms the assumption made in the previous section that the factors influencing tenant and customer satisfaction interact in so many ways that the formulation of clear cause-and-effect relationships in the form of a comprehensive model for predicting the satisfaction of both target groups is only possible to a limited extent.

Nach Lockerung: Einzelhändler sind verunsichert und verärgert

Thomas Stoyke ist Manager im Chemnitz-Center. Er hofft darauf, dass es die Sächsische Staatsregierung auch Geschäften in Einkaufszentren ermöglicht, ab Montag wieder zu öffnen. Hunderttausende sicher ist das aber noch nicht. FOTO: ANDREAS SEIDEL

Auch in Chemnitz dürfen ab Montag bestimmte Geschäfte wieder öffnen – welche genau, ist zum Teil noch unklar. Die Reaktionen aus den Einkaufszentren sind eindeutig.

VON SWEN UHLIG

Jörg Knöfel findet klare Worte. „Das wäre eine Katastrophe für uns", sagt der Centermanager den eine möglichen Einkaufszentrum Galerie Roter Turm. Was Knöfel meint, ist der Umstand, dass die Lockerung der bisher geltenden Ehne bislang nur im Einzelhandel wesentlich für Einkaufszentren wie die Galerie Roter Turm nicht gelte n werden. Sachsens Wirtschaftsminister Martin Dulig (SPD) hatte am Mittwoch erklärt, Einkaufscenter sollten weiß nen bleiben geschlossen bleiben.

Das aber wollen Knöfel und seine Kollegen aus anderen Chemnitzer Einkaufszentren nicht hinnehmen. Es dürfe im Einzelhandel keine Zwei-Klassen-Gesellschaft geben, sagt auch Thomas Stoyke vom Chemnitz-Center. Es gäbe sogar, dass ein möglicher Ansturm der Einkaufszentren ein „künstliches Nadelöhr" schaffen werde, das dann den Andrang in den Geschäften und Läden außerhalb der Malls noch verstärkt. Es gehe im Moment le ine große Nachfrage nach Gütern, so Stoyke. Wenn dann nur die wenigen Läden öffnen dürften, die sich au ßerhalb der Einkaufszentren befinden, wäre der Andrang dort dann u nmengleich – mit allen Risiken, was die Verbreitung des Virus betrifft.

Die Schlussfolgerung ist dennoch aber die Verunsicherung, sagt Jörg Knöfel von der Galerie Roter Turm. Falls die Geschäfte in seinem Haus doch am Montag öffnen dürften, brauche man einen gewissen Vorlauf. Personal müsse geplant, der Wa re hatte aktiviert, die Infrastruktur hochgefahren werden. Wenn die Staatsregierung die Verfügung oder Verordnung aber erst am Freitagabend erlasse, die alle Details regelt, bliebe kaum noch Zeit dafür, erklärt er. „Die Sache ist vertrackt, weil wir in der Luft hängen", fügt er hinzu.

Auch außerhalb der Center wünscht man sich, dass die großen Malls öffnen dürfen. Es nütze ja nichts, wenn die Magneten fehlen, sagt Sven Hornung, Geschäftsführer des Handelsverbands Sachsen der „Freien Presse". Was die Einkaufszentren betrifft, sei er aber optimistisch. Es sei ja bereits jetzt möglich, dass bestimmte Läden in Einkaufszentren geöffnet sind – Drogerien zum Beispiel, Lebensmittelmärkte und Tierbedarfsgeschäfte. Es wäre ein Widerspruch, wenn jetzt die Einkaufszentren ganz geschlossen werden müssten, so Glaser. Er gehe daher davon aus, dass auch die großen Malls öffnen dürften. „Wir wissen es aber nicht genau", fügt er hinzu.

Optimistisch ist Glaser auch in der Frage der künftigen Verkaufsregelung der Ladenfläche. Thüringens Minister präsident Bodo Ramelow hatte am Donnerstag angekündigt, dass dies möglich sei. „Wenn es in Thüringen geht, warum soll es dann in Sachsen nicht gehen?" fragt er.

Bei der Industrie- und Handelskammer (IHK) in Chemnitz ist man zunächst einmal froh, dass es überhaupt Lockerungen gibt. „Wir begrüßen jeden Schritt in Richtung Öffnung", sagte der Referatsleiter Handel, Bert Rothe, der „Freien Presse". Allerdings bemerkt er die gesamte 800-Quadratmeter-Regel als willkürlich. „Diese Grenze macht keinen Sinn", erklärt er. Schließlich hätten auch Lebensmittelmärkte, die zum Teil deutlich größer sind, bereits bewiesen, dass die Einhaltung der Abstands- und Hygienevorgaben möglich ist. Die IHK ist dafür, dass alle Geschäfte öffnen dürfen, die Zutrittsbeschränkungen garantieren und Hygienemaßnahmen einhalten. Ein Vorschlag sei, auf 20 Quadratmeter Verkaufsfläche einen Kunden zuzulassen. Rothe: „Wenn das garantiert werden kann, ist die Lage tragbar für unsere Sicht egal."

„Die Sache ist vertrackt, weil wir in der Luft hängen."

Jörg Knöfel Centermanager

Gold für Citti-Park Kiel

Modernisierter Eingang: Breuninger Land in Kiel

» Fortsetzung von Seite 1

Auch nach der Wiedereröffnung hatte mancher Mode- oder Schuhhändler nur mühsam Trit: Eine durch Konjunkturkrise und Kurzarbeit getrübte Kaufkraft sei ein mit einer Verlagerung des Modeeinkaufs ins vermeintlich Internet vermeintlich vor allem stationären Textil- oder Schuhhändlern die Geschäfte.

Die Maskenpflicht dürfte dann beigetragen haben, dass so manches modebetonte Einkaufszentrum dieses Jahr eine teils deutlich schlechtere Note erhielt. Ein Indiz dafür: In den beiden Vorjahren bewerteten noch jeweils rund zwei Drittel der Umfrageteilnehmer die allgemeine Geschäftsausstattung ihrer Filialen in Shoppingcentern im Vergleich zu ihren Läden in Einkaufsstraßen als gleich gut oder besser. Im Jahr 2020 das umgekehrte Bild: Über 54% sagen, die Centershops machen schlechtere oder sogar sehr viel schlechtere Geschäfte als die Läden in den Innenstädten. Die Bessere von Einkaufszentren mildern die Masse auch in den Ladenstraßen aufbehalten. In Einkaufsstraßen dagegen können sie sie zwischen Laden A und B absetzen.

Beispiele für Wills Beobachtung, dass modernisierte Center besonders unter der Corona-Krise leiden, sind u.a. die beiden Breuninger Land in Sindelfingen und Ludwigsburg und das Main-Taunus-Zentrum (MTZ) in Sulzbach bei Frankfurt. Nicht, dass diese Center hinten reingerutscht wären. Im Gesamtranking mit 238 Centern findet sich Sindelfingen auf einem guten 19. Platz, Ludwigsburg auf Rang 68 gehört immerhin zum vorderen Drittel. Aber: Das Breuninger land Sindelfingen hat sich notentechnisch von 1,64 (in Schulnoten ausgedrückt: 2+) auf 2,15 (2-) verschlechtert. Ludwigsburg sackte sogar fast um einen ganzen Notenpunkt ab (von 1,78 auf 2,69). Das MTZ belegt mit einer Note von 2,42 einen respektablen 41. Platz. Im vergangenen Jahr bewerteten es seine Mieter allerdings noch mehr als eine halbe Note besser (2019: 1,87).

Was nicht hofft, dass Mode ein Rohkreperrer wäre. Auch der diesjährige Goldmedaillengewinner, der Citti-Park Kiel, hat einen erklecklichen Modeanteil von rund 30%. Weitere ca. 30% entfallen auf Nahversorgung wie Lebensmittelvollsortimenter und Drogerie. Hinzu kommt laut Citti-Immobilienleiter Harald Hottes „ein großer Spielwarenbereich", etwa 10% Gastronomie, ein großes Kinozentrum, 5% für Kleinmöbel/Wohnaccessoires usw. Beim diesjährigen Drittplatzierten, dem Südring-Center Paderborn, hat sich sogar ein Vollsortimenter von Combi, der zwischen einer Aldi-Filiale und einem real-Markt eingeklemmt war, vorzeitig aus seinem Mietvertrag verabschiedet. Ersetzt wurde er u.a. durch Filialen der Modeketten New Yorker und Jeans Fritz.

Kiel, Gerlinwald, Paderborn, diese Reihe scheesbit sich fort. Berlin, München, Frankfurt, Düsseldorf oder Stuttgart sucht man in den Top Twenty vergeblich. Nur Hamburg hält das Fähnchen der A-Städte hoch. Dafür dominiert der [Nord-]Osten: Chemnitz, Magdeburg, Wittenberg, Schwerin, Lübeck, Bentwisch, Oldenburg, Halberstadt.

Das überrascht einerseits, weil die Kaufkraft in den nord- und ostdeutschen Bundesländern nicht die höchste ist. Andererseits sind die Mieten günstig. „In den vergangenen Jahren haben wir das Mietniveau konsequent gesteigert, wir sind aber immer noch günstiger als der Wettbewerb", sagt der Paderborner Centermanager Richert. Außerdem besitzen Einkaufszentren in der gefühlten Provinz einen Standortvorteil. „Die Leute müssen 30 km bis 50 km fahren, um ins nächste Center zu kommen", hält Richert fest. „Dieser Wettbewerb befindet sich in Bielefeld, Dortmund oder Kassel." Um die hohe Kaufkraft z.B. in Berlin-Steglitz dagegen buhlen mit dem Schloss Steglitz, dem Schloss Straßdorf-Center und dem Boulevard Berlin gleich mehrere Zentren, die hinsten weniger Jahre eröffnet haben.

Das vielleicht renommierteste deutsche Flaggschiff-Center, das Centro in Oberhausen, kommt weiterhin nicht vom Fleck. Mit einer Note von 2,96 (Vorjahr: 3,00) bleibt es im Mittelfeld kleben und gehört zu den zehn Objekten, die seit 2015 am meisten an Boden verloren haben.

„Wenn sie sich die großen Center in Berlin, Hamburg oder München angucken, das sind schon tolle Konzepte", schwärmt Citti-Immobilienchef Hottes. „Vom Branchenmix her sind sie mindestens so gut aufgestellt wie wir, und sie haben sicher auch so viel Frequenz wie wir. Aber der eine oder andere Mieter kommt anscheinend nicht so gut zurecht." Bei einem Belegungsquotient von 60%, 70% brauche es auch schon viele Kunden im Center, dass für jeden Modemieter genug hängen bleibt. Zur Erinnerung: Beim SCPR wird rein die Wirtschaftlichkeit, die Performance eines Ladens bewertet (vgl. „Methode des SCPR" auf dieser Seite)

Ein bisschen durchexandergeworkelt hat Corona das Ranking dieses Jahr übrigens doch. So ist das Lago, das in den neun bisherigen SCPR-Erhebungen viermal Erster und zweimal Zweiter wurde, mit einer Note von 2,27 diesmal nur auf Rang 27 gelandet (2018: 1,60). „Unsere Vermutung ist, dass dieses Center aufgrund der direkten Grenzlage extrem stark von der Schweizer Kaufkraft profitiert hat. Einen fast identischen Effekt stellen wir beim Rheincenter in Weil am Rhein fest", sagt Will. Das Rheincenter ist fast um eine ganze Note abgewertet worden. Gelitten hat auch der Citti-Park Pforzheim an der dänischen Grenze. Das Fehlen von 30% Dänen, die hier sonst shoppen, machte sich bemerkbar.

Harald Thomczek

Methode des SCPR

Beim Shoppingcenter Performance Report (SCPR) bewerten Einkäufer Mieter die Ertragsstärke ihrer Läden in 400 deutschen Einkaufscentern und Verkehrsstandorten. Die zentrale Frage lautet: „Wie zufriedenstellend ist die wirtschaftliche Performance ihres Stores in den folgenden Centern im Vergleich zu anderen Shoppingcentern, in denen Sie vertreten sind?" Das Notenspektrum reicht von 1 (sehr gut) bis 5 (mangelhaft). Teilnahmeberechtigt sind nur Unternehmen, die in mindestens drei deutschen Einkaufscentern vertreten sind. Ins Ranking im engeren Sinne werden nur Center mit mindestens fünf Bewertungen aufgenommen. Auch die wichtigsten Centerbetreiber müssen sich dem Urteil der Mieter stellen. **Harald Thomczek**

Die Fachredaktionen von Immobilien Zeitung und TextilWirtschaft arbeiten bei diesem Thema zusammen. Artikel zum Shoppingcenter Performance Report erscheinen mit unterschiedlichen Schwerpunkten in beiden Medien.

Ein Beitrag aus dem

RECHERCHE-NETZWERK DER IZ.

„Ein Indikator für die Praxis"

Thomas Stoyke

Der Shoppingcenter Performance Report (SCPR) von ecostra steht in der Kritik. Das nicht ganz zu Unrecht: Wie bei jeder Umfrage und jedem Ranking kann eine komplexe Realität nur vereinfacht und idealtypisch abgebildet werden. Wünschenswert ist daher eine verstärkte Teilnahme von Mietern je Center, um ein realistischeres oder sogar repräsentatives Bild zu erhalten. Sonst könnten einige wenige unzufriedene Filialisten ein zu negatives Bild von einem Center zeichnen – oder umgekehrt ein zu positives. Zudem wäre eine Performance-Messung von Shopping-centern aussagekräftiger, wenn nicht nur Mieter, sondern auch Investoren, Kunden, Städte etc. befragt würden.

So weit die Theorie. In der Praxis wäre eine solche Studie in dem oben skizzierten Ausmaß aufgrund ihrer Komplexität und der Verweigerung sensibler Daten kaum durchführbar. Kurz gesagt: Bislang gibt es kein Modell, welches mit einer nachvollziehbaren, wissenschaftlichen Methode die bisher doch intransparente Shoppingcenter-Landschaft nur annähernd ähnlich beleuchtet wie der SCPR.

Vergangenes Jahr hat der Lehrstuhl für Immobilienwirtschaft und Bauzeitmanation der TU Dortmund in einer Feldanalyse 25 Center nach 48 Faktoren bewertet. U.a. wurden auch der Standort, der Wettbewerb, die architektonische Gestaltung und das Management im Bereich bewertet. Die Ergebnisse stehen von der SCPR-Liste ab. Jedoch muss jedem Einzelnder klar sein: Die schönste Architektur oder die beste EinlV-Konzeption sind nicht zielführend, wenn sich die Mafinahmen nicht positiv auf die Wirtschaftlichkeit des Mieters, auf das Verhältnis zwischen Vermietungsmutual und Centerkosten, auswirken.

Und genau hierin liegt eine praktische Erkenntnis des SCPR: Er zeigt auf, ob die jeweiligen Maßnahmen des Betreibers oder Eigentümers – eine stets gleiche Leistungsfähigkeit des Mietern unterstellt – zu einem positiven Cashflow beitragen. Der SCPR bewertet also die Ertragsaussichten aus Mietersperspektive und eben nicht die architektonisch ansprechende Wohlfühlatmosphäre nach DGNB-Standard oder andere Stakeholder-Interessen. Was die jährliche Mietersumfrage Erzschreiben dafür bieten kann, ist eine Einschätzung von Trends und Ertragspotenzialen. Nicht das Ranking ist entscheidend, vielmehr sind es die Aussagen einer nicht zu unterschätzenden Anzahl von Mietern zum Geschäftsklima und zur Zukunftsfähigkeit eines Objekts.

Der Autor: Thomas Stoyke ist Centermanager des Chemnitz-Centers. Dies ist ein Auszug seines Beitrags für die Druckfassung des SCPR 2020.

Wie der Einkaufsbummel durch Schnelltests möglich werden soll

Bis zu 300 Personen können sich pro Stunde im neuen Testzentrum im Chemnitz-Center auf das Coronavirus testen lassen. Die Einrichtung ist montags bis samstags in der Zeit von 10 bis 18 Uhr geöffnet. FOTO: ANDREAS SEIDEL

Im Chemnitz-Center sind ab sofort Coronatests möglich. Damit soll nicht nur die Ausbreitung des Virus bekämpft werden.

VON SANDRA HÄFNER UND RAMONA NAGEL

Es ist Minutensache: Mit dem Smartphone ein Kundenkonto angelegt, den im Konto angezeigten QR-Code an der Anmeldung scannen lassen, und danach in der Testkabine Platz nehmen. Dort wird ein Abstrich aus Nase oder Rachen vorgenommen. Anschließend kann man das vom Unternehmen Be Safe betriebene Testzentrum, verlassen. Nach r.t Minuten kommt das Ergebnis per Mail auch Handy. Ist es negativ, steht dem Einkaufsbummel nichts mehr im Wege. Ein positiver Test wird über die App an das Gesundheitsamt geschickt, erklärt Tobias Gärtner, Mitarbeiter im neuen Testzentrum im Chemnitz-Center. Einmal wöchentlich kann sich jeder kostenlos testen lassen.

Nun ist es mit dem Einkaufsbummel so eine Sache. Ausgerechnet an dem Tag, dem gestrigen Donnerstag, als das Testzentrum in der Ladenstraße nach der Abnahme durch das Gesundheitsamt erstmals öffnete, luden gleichzeitig die Geschäfte in der Stadt und demzufolge auch im Chemnitz-Center zum vorerst letzten Mal zum Shoppen ein. Natürlich nur mit Termin, versteht sich. Nicht einmal zwei Wochen dauerte die Zeit, die zum Einkaufen in der Stadt blieb, in der man mit dem Laden seiner Wahl ein Date ausmachte und anschließend einkaufen durfte. „Click & meet ist schon wieder vorbei", erklärte Centermanager Thomas Stoyke. Ab dem heutigen Freitag dürfen aufgrund der gestiegenen Fallzahlen nur noch Geschäfte der Grundversorgung, also etwa Supermärkte und Drogerien, öffnen.

Dennoch soll das Testzentrum im Chemnitz-Center offen bleiben. Von Montag bis Samstag ist es täglich to bis 18 Uhr geöffnet. Zum einem gibt es mehrere Läden der Grundversorgung im Center. Zum anderen will Stoyke mit einem Modellversuch innerhalb der nächsten zwei Wochen zeigen, dass Einkaufsbummel trotz Corona funktionieren können. Gemeinsam mit einem Ankermieter, also einem der größeren Geschäfte, sollen über die Kundendatenbank Menschen zum Einkaufen eingeladen werden. Sie sollen, mit Hilfe des vorherigen Schnelltests, ausprobieren können, wie Einkaufen trotz Pandemie möglich sein kann, erklärt Stoyke. Er verspricht sich davon Erkenntnisse, wie die Laden im Normalbetrieb offen können. Strenge Hygienemaßnahmen wie Maske tragen und Abstand halten, würden dabei vorausgesetzt. Mit der Stadtverwaltung sei das Vorhaben abgestimmt, nun müsste noch das sächsische Sozialministerium zustimmen, sagt der Centermanager. Sollte der Versuch klappen, könnte sich Stoyke vorstellen, das Center wieder zu öffnen. „Das sehe ich heute aber noch nicht", schränkte er ein. Er steht unter Druck. „Ein halbes Dutzend Insolvenzen wurde bereits angekündigt", sagt er. Sie betreffen Läden im Center. Click & meet reiche für eine nachhaltige Betriebsführung der Geschäfte nicht aus. Nur der vergangene Samstag sei kostendeckend für die Läden gelaufen, so der Manager.

Thomas Stoyke
Manager Chemnitz- Center

FOTO: ANDREAS SEIDEL

„Ein halbes Dutzend Insolvenzen wurde bereits angekündigt."

Das Einkaufen soll laut Stoyke zugleich Anreiz für die Menschen sein, sich testen zu lassen. Es gehe darum, durch die Tests Infizierte oh ne Symptome zu identifizieren und Ansteckungsketten zu unterbinden. Ziel sei, diejenigen zu erreichen, die sich sonst nicht testen lassen wir den, weil sie e aus schulischen oder beruflichen Gründen nicht müssen. Als Belohnung winkt ihnen ein Einkaufsbummel.

Sabine Fritzsch, Inhaberin der Boutique Sabine im Zentrum, glaubt nicht, dass ein Schnelltest vor dem Einkaufen funktioniert: „Wer will das durchführen und was soll das kosten?" Zumal könnte solch ein aufwendiges Prozedere Kundinnen abhalten. In den vergangenen Tagen hat sie mit Terminvergabe die Frühjahr- und Sommerkollektionen verkauft. Für jede Kundin wurden zwei Stunden für Ansprobe und Beratung einkalkuliert. Das habe gut funktioniert. Ihre Kundschaft möchte aktuelle Mode. „Auf Winterware bleibt man mehr oder weniger sitzen", sagt die Boutiquechefin.

Auch die Boutique der Stollberger Firma Modee hat gute Erfahrungen mit Mert & Collect gemacht. Nur eine Kundin wurde eingelassen, danach gelüftet und desinfiziert. So konnte gut die aktuelle Ware verkauft werden, vereinzelt Winterware mit Rabatt. Belebidung werde oft spontan gekauft, mit möglichen Schnelltests gebe Spontanität je doch verloren.