

Shopping Centers as Elements of the Functional and Spatial Structures of Cities. Location, Impact, Change Tendencies, Development Perspectives

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Abstract

The appearance of large-surface complexes has led to the creation of new trade, service and entertainment centers in cities; these complexes have an impact on their surroundings. Due to the large scale of the phenomenon, it is important to determine the zones and nature of this influence, discuss the problem of the relationship between a shopping center and a city, and the tendencies and perspectives of development of shopping centers. A shopping center competes with its home city for the attractive urban and suburban areas and the dominating role, especially in terms of a trade, service and public space. On the other hand, it coexists with the city by releasing/regaining lands that have been degraded and contributes to improvements in transport. The development of shopping centers throughout the world occurs on a quantitative level—with varying dynamics, but still their number increases, and, importantly, on a qualitative level—since their new forms with altered offers emerge. Changes observed should be noteworthy to all Polish policy-makers when making well-thought-out decisions regarding locations. Local authorities need to realize that the permits they issue influence more than the changes in the functional and spatial structure of a city or commune.

Keywords: shopping center, impact, coexistence, rivalry, functional and spatial city structure

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Introduction

Shopping centers as specific service and entertainment forms with the main function of trade began to appear at the same time as the development of supermarkets and hypermarkets progressed, simultaneously being the result of the evolution of these types of trade forms. The first shopping centers began to appear in the United States in the early 20th century, modelled after small shops that made up spatial concentrations with common car parks, similar to housing districts. In time, they took on the form of independent architectural concepts—closed and isolated from the urban fabric. Shopping centers began to appear in the structure of Polish cities in the 1990s, which was associated with foreign trading networks entering our market. Changes in the development resulted in permanent structural elements, which left their marks on the modern image of cities or their parts being created within a given city space. According to the definition (for statistical purposes), a shopping center (S.C.) is a “commercial real estate which has been designed, built and managed as a single commercial entity, which consists of common elements, has a minimum gross leasable area (GLA) of five thousand square meters and contains at least 10 shops.”

The appearance of these large-surface complexes led to the creation of new trade and service centers, or even trade, service and entertainment centers that influenced their environment, in the cities. The large scale of the phenomenon makes it especially crucial to determine the zones and nature of this influence, ponder the issue of the relationship between a shopping center and a city, as well as the tendencies and perspectives of development of the former.

1 Location factors, impact

The research conducted in various Polish cities (e.g., Kaczmarek 2011; Kociuba 2006; Namyslak 2006; Rochmińska 2005, 2013; Więclaw 2000) shows that the complexes of modern trade have been found mainly in warehouse locations and post-industrial wastelands (due to low costs of purchase of land for new investments and the disposal of useless areas by unprofitable production plants). The important factors in the selection of location include also: accessibility by means of transport, location by the city exit roads (attracting customers from outside the city) and direct neighborhood of a ready market—close to large housing estates or the city center (densely populated) (Rochmińska 2016a, 526).

For example, Łódź has fourteen shopping centers and all of them match the above-mentioned definition. Their arrangement is mostly determined by: routes of main roads highly significant on the level of the country or voivodship, locations of residential estates as well as free investment areas (usually unused post-industrial areas). In relation to these main location determinants, the majority of Łódź shopping centers are situated near the city center or in the surrounding zone—between the Śródmieście district and the main housing estates (fig. 1) (Rochmińska 2013, 2016b).

The creation of a shopping center in a given area usually carries with it functional changes—e.g., industrial or agricultural areas become trade and service areas. Due to the previous functions of the area in which trade and service buildings are now located, the area can be considered a greenfield (agricultural areas), a brownfield (industrial wastelands) or a location with other commercial properties. The location of the shopping center, however, does not always cause functional changes—e.g., in case of the establishment of a new shopping center in an area that previously accommodated a similar complex (location in greyfield areas)¹ which either lost its attractiveness

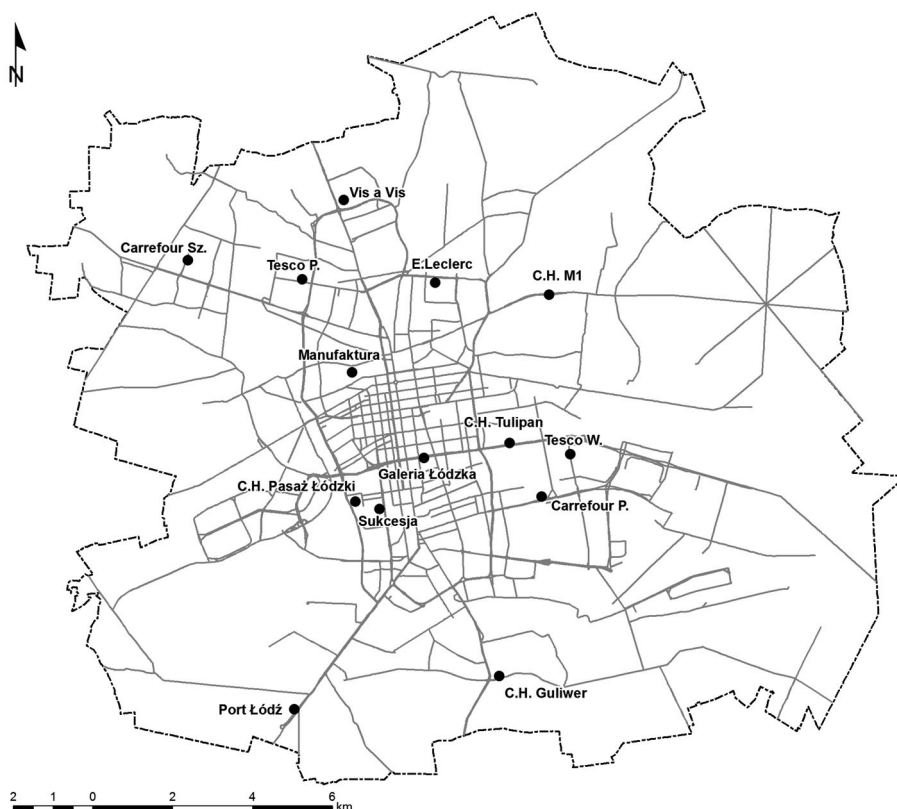


Fig. 1. Arrangement of shopping centers in Łódź in 2016, against the background of the road network

1. Greyfield—trade properties that require a public or private intervention to prevent their collapse. Greyfields are the developed areas, which are economically and physically prepared for a large redevelopment (see: Greyfields into Goldfields. Greyfield Mall Characteristics Revitalization Success Stories. From Failing Shopping Centers to Great Neighborhoods. A Study by Congress for the New Urbanism, Pricewaterhousecoopers and Lee S. Sobel, Revised June 2001, [[:] http://cnu.civicaactions.net/sites/www.cnu.org/files/Greyfield_Goldfields_vol2.pdf).

or went bankrupt and was closed.² Therefore, the fact that such investments change the image/appearance of the location area, thus becoming an area competitive to other city areas, including city centers, needs to be taken into consideration (Rochmińska 2016a, 526).

A shopping center is located in a certain functional space, which it influences to a greater or lesser extent. Building a structure changes its location not only in terms of functionality, but also visually. By influencing their surroundings, shopping centers shape an altered and still changing city space. At first, the image/appearance of a given location area changes and the change in the function of the place is also possible. Examples of suitable and unsuitable locations can be found in various places in the world. In a successful shopping center, modernization and renovation works may be performed after some time or a rebranding due to a change in ownership may occur. If an owner/a manager does not authorize any actions that aim to make a shopping center more attractive, its appeal or rivalry may decrease, even leading to its closing down (fig. 2).

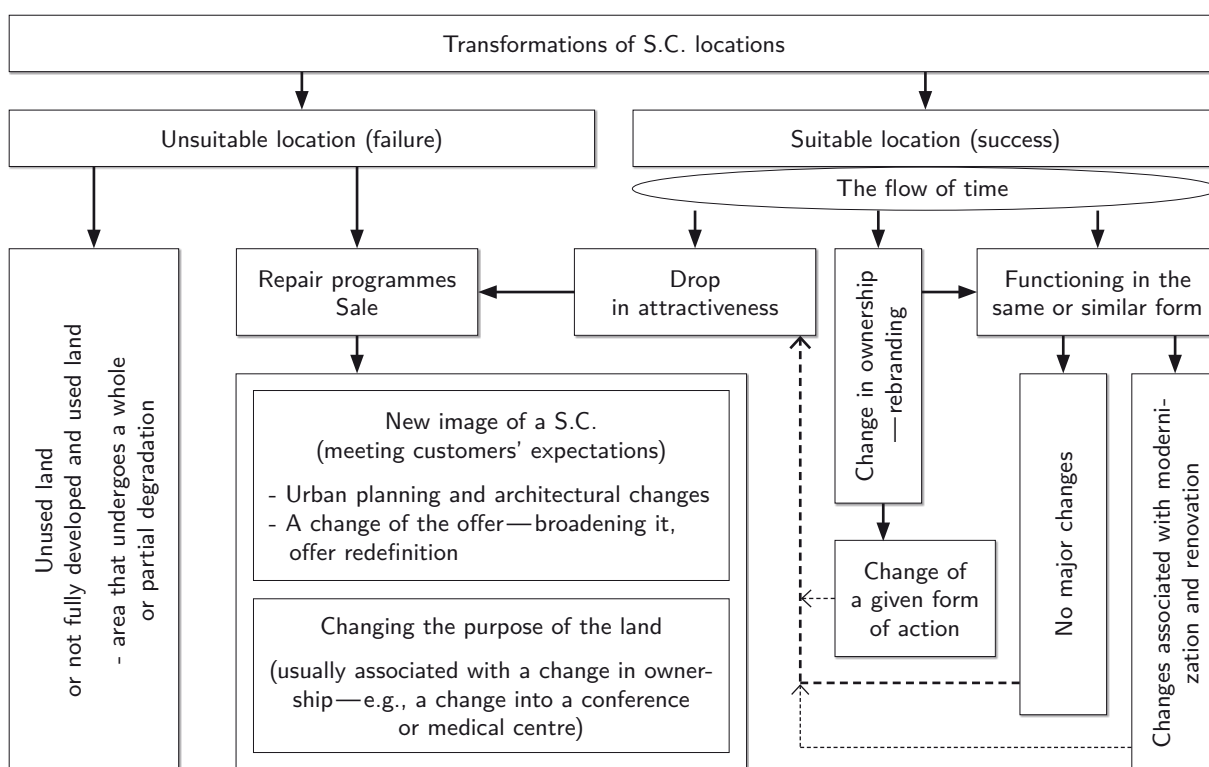


Fig. 2. Transformations of shopping centers locations

Source: Rochmińska (2015, 235)

Even the smallest of complexes are big enough to create areas of influence and shape urban or even non-urban areas. The range, power and type of the influence of a given shopping center on its environment is dependent on its characteristics: location, accessibility, time of functioning, size, type and form of offers (fig. 1). Neither of these features can be assessed separately, some of them are inter-reliant and sometimes only as a group can they influence the type of changes in S.C. locations and environment. This influence extends to both the material (physical) and the non-material (social, psychological) level (fig. 3).

Shopping centers have an impact not only on their location, but also their surroundings. Shopping centers that constitute large or very large complexes with clusters of various service venues (including, mostly, trade), but also culture or entertainment, frequently significantly influence the space surrounding them and the people, and leave their mark, both in material and immaterial ways. Moreover, the changes can bring various benefits, but also disadvantages to local development

2. These types of transformations take place, for instance, in the USA—e.g., the transformation of the closed Plaza Pasadena shopping centre with an open structure, modelled after the traditional layout of the city, located in Paseo Colorado.

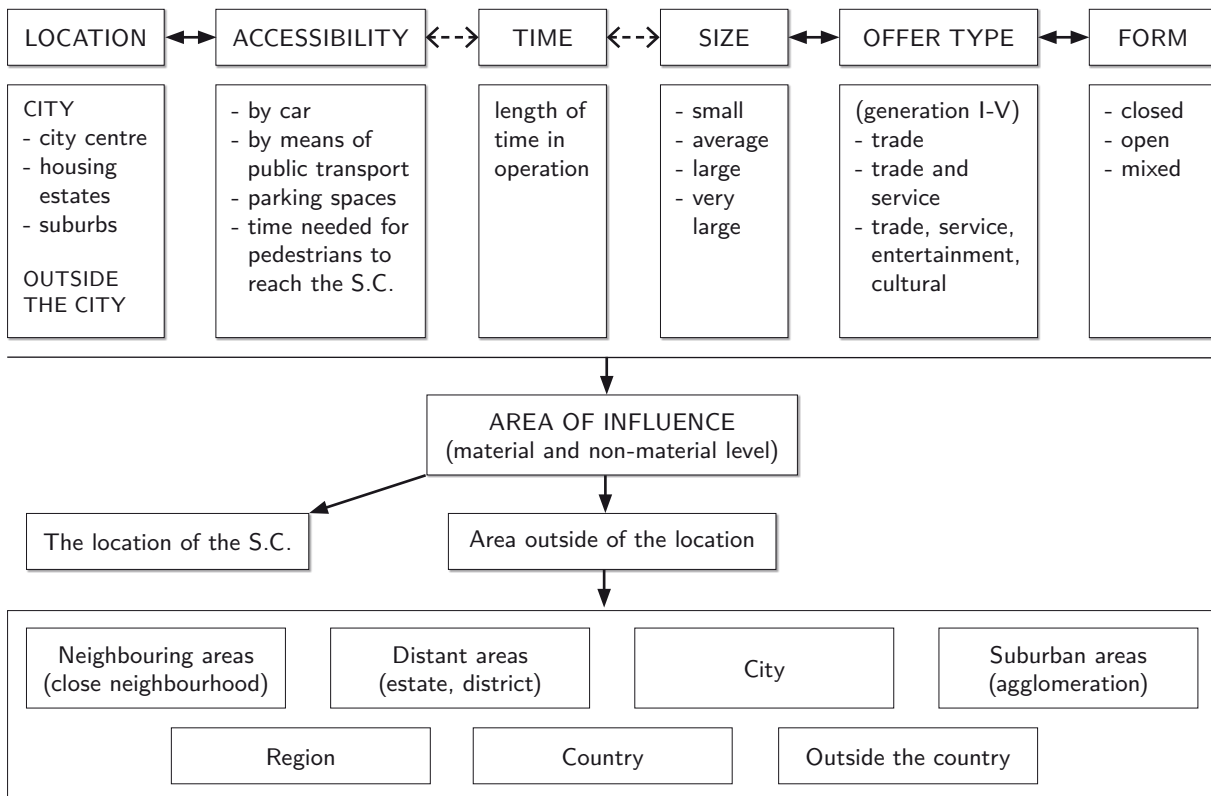


Fig. 3. The features of S.C. determining the power and size of the area of influence
Source: Rochmińska (2016a, 525)

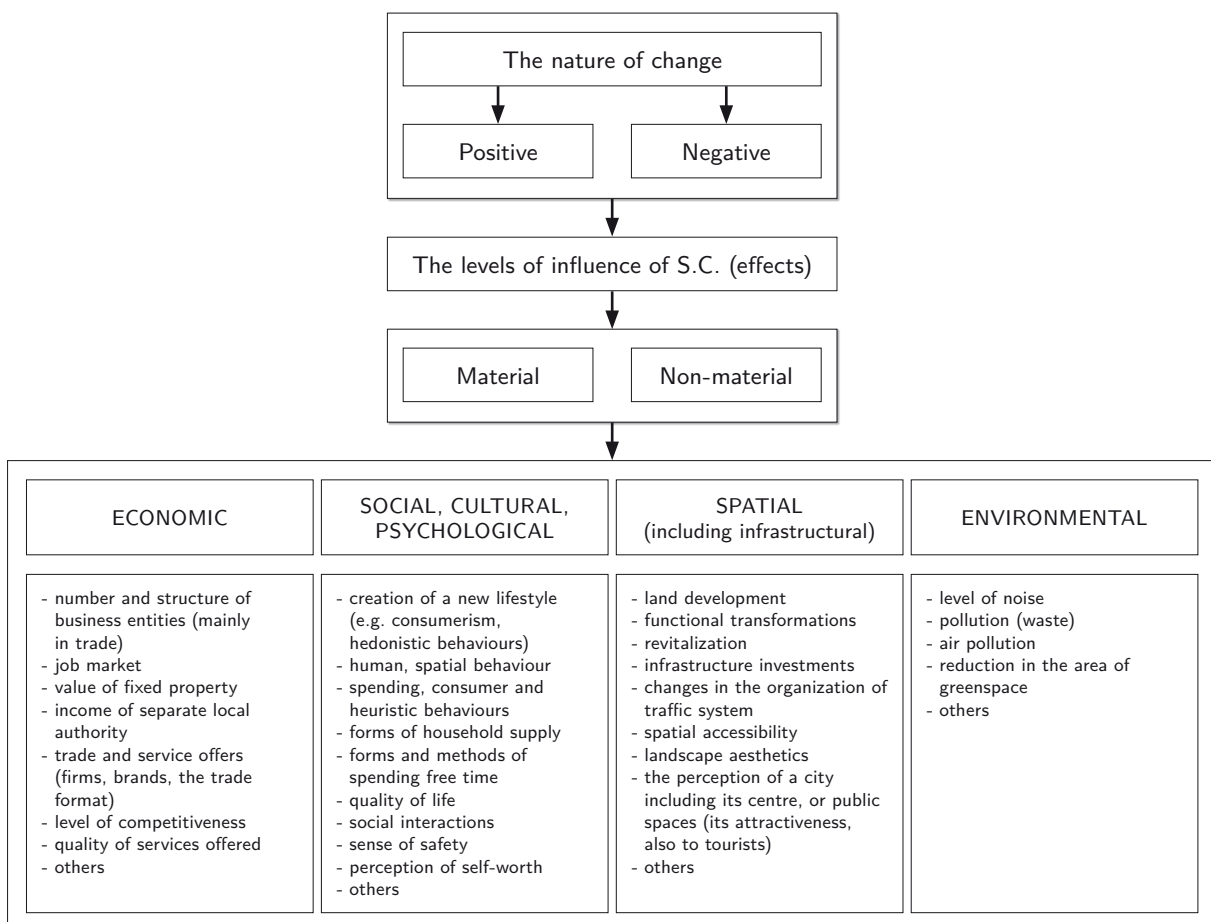


Fig. 4. Zones of influence of shopping centers
Source: Rochmińska (2016a, 527)

and residents. The results of the functioning of these modern trade and service centers may occur in various zones, therefore they should be analyzed multi-dimensionally, from a holistic perspective. The economic, social, cultural, psychological, spatial (including infrastructural) and environmental zones need to be taken into consideration (fig. 4).

2 Shopping centers as elements of the functional and spatial city structure

Shopping centers are a key element of the functional and spatial city structure. Therefore, a question of whether these large-scale investments coexist or compete with a city should be asked. Is there an unequivocal answer to the above-mentioned question? It does not seem likely. Another question on the subject that arises is whether answers to this question can be generalized, or if each case should be examined individually. When discussing rivalry and coexistence, it should be remembered that they occur on different planes.

On a spatial level, new forms of land development appear, carrying with them functional changes, for example, tearing down old fixed properties and building new facilities with a different spatial role in their place. A presence of a shopping center also influences modernization (aesthetic) works in its vicinity. Locating such complexes in city centers (e.g., the Śródmieście area in Łódź) often contributes to enlivening them, giving them a second life, reactivating them, supplementing the general urban functions or even bringing back or creating new endogenous and exogenous ones. Shopping centers in the vicinity of a city center are often located in squalid, post-industrial areas, wastelands, which regain their splendor only thanks to such investments.

A location of a city center leads to the revitalization of areas and buildings and, above all, to the improvement of technical infrastructure (e.g., road repairs, better organization of traffic), thus improving the attractiveness of lands and increasing the value of fixed properties in the area. On the other hand, locating a trade complex in such an area increases communication difficulties—e.g., results in a heavier traffic on access roads (congestion) or creating a space that rivals the city center (influence on the perception of the latter, or a depreciation). Consequences that are spatial (but also social) in nature include processes associated with suburbanization or an urban sprawl, which can be caused by the appearance of shopping centers in suburban zones (commercialization of space).

According to Gwizdak, shopping centers, due to their commercial and functional attractiveness “steal cities.” American shopping centers often house crèches, schools, universities, medical clinics, therapist’s offices. Aside from the already standard venues such as cinemas or fitness clubs, retirement homes, offices and libraries also began to be incorporated into shopping centers. The original purpose of shopping arcades (in the form of passages)—communication, is no longer only that, but begins to resemble city streets and squares by taking on their functions. There are shows, concerts, art exhibitions, gardens, ice rinks. The resemblance does not only mean becoming formally similar to cities. The shopping arcade network is constructed to make it possible to take walks and window shop, thus copying the proven methods of communing with the given city. Boards with street names and street lamps are only some of the methods of making shopping arcades resemble streets and squares. Miniature private cities become a competition to social, self-governing, democratic cities (Gwizdak 2006, 45). In this perspective, the notions of “a city within a city” or the creation of a “perfect” city can be discussed.

It is hard to determine the relationship between city centers and urban spaces unambiguously. On the one hand, these are complexes that take over public space, adopt the functions so far fulfilled only by city centers, change the trade and leisure city maps, etc. On the other, they enrich city space with new offers and frequently raise the quality of urban space (e.g., thanks to revitalization). Therefore, it should be noted that shopping centers can coexist with the urban space and compete with it simultaneously. Both phenomena can manifest themselves on various levels, including functional, economic, social or investment ones (fig. 5).

Managing urban space is the task of local governments, while shopping centers are managed by private entities. It depends on them whether cooperation or rivalry forms. Possibly, competing for the best location can be then turned into an efficient coexistence. Urban authorities (of a community) should play a major role in this aspect, since they are the main creators of urban space (fig. 6).

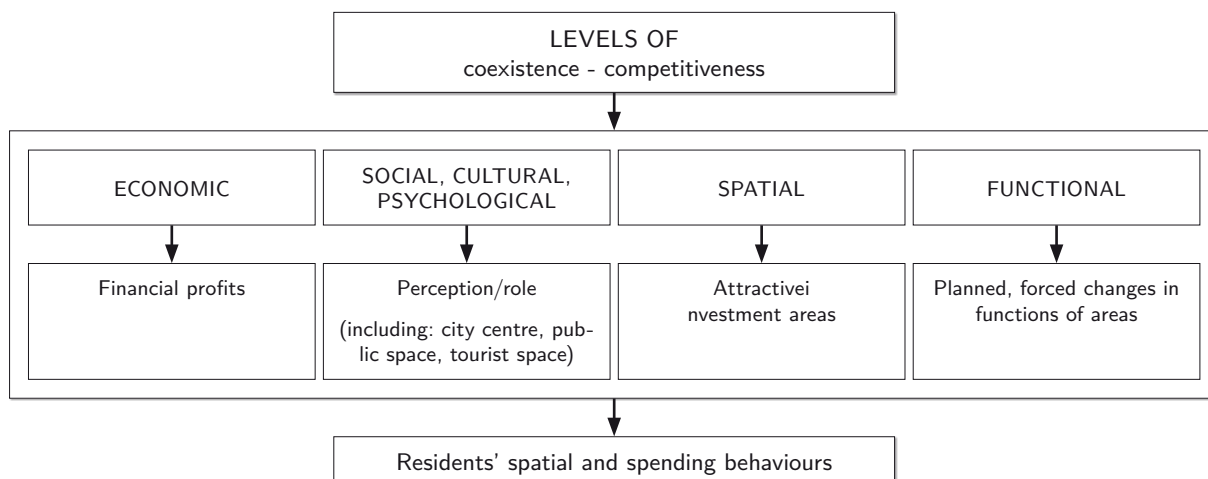


Fig. 5. Levels of coexistence and rivalry between shopping centers and cities

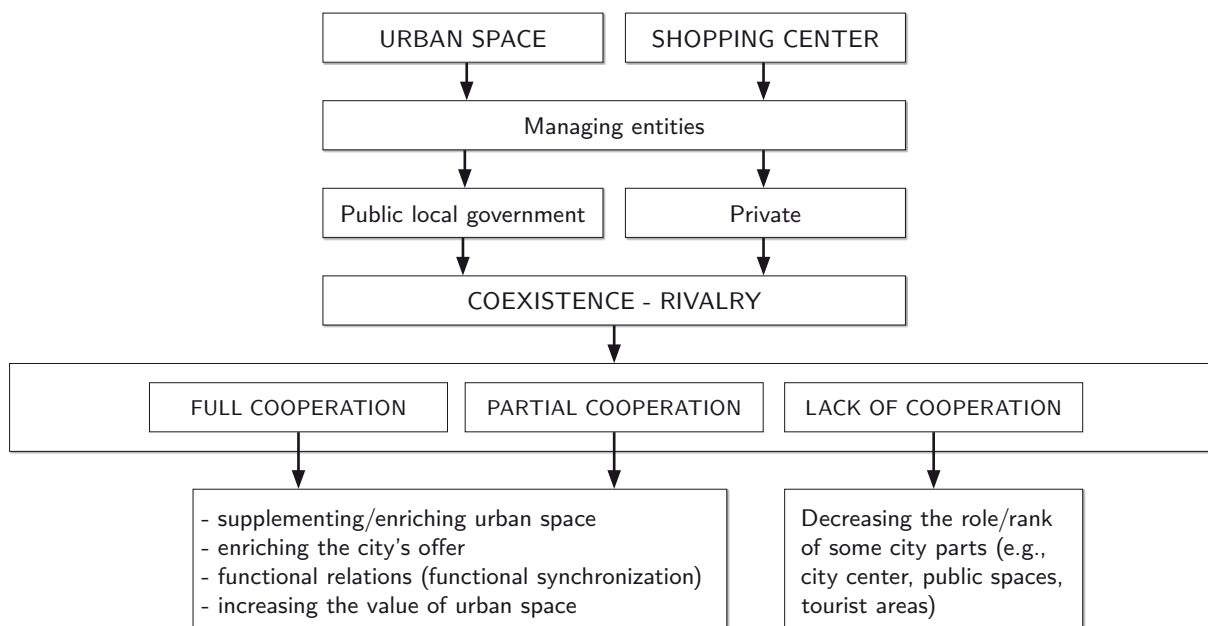


Fig. 6. Relationship between city authorities and shopping centers

The rivalry includes:

- fighting about attractive urban/suburban spaces—when selecting a location
- taking over the role of a city center—competing for a dominant role in a city
- competing with other trade spaces (e.g., with commercial streets in a given city) leading to their transformations in terms of function
- taking over public spaces within a city—the creation of quasi-public spaces
- creating isolated and closed (or partially closed) enclaves within a city, often situated with their “back” turned to the city—the so-called “city within a city”—creating a perfect city

Coexistence includes:

- broadening the offer of urban public space by an offer of quasi-public spaces—with features of public spaces
- the revitalization of areas (including post-industrial, railway areas)—bringing back their usefulness to a given city
- increasing the attractiveness of cities for tourists—including the creation of new tourist attractions in cities
- shaping better infrastructural (road) connections—better city transport, for instance, within the range of public transport

3 Change tendencies, development perspectives

According to Lowry (1997) the life cycle of a shopping center consists of four stages: innovativeness, accelerated development, maturity and decline. This concept is a useful explanation of the rise and fall of shopping centers. In the decline phase, retail sales decrease due to high competition, retailers decide not to renew property leases, the number of vacant buildings increases. At certain point, the owner has to either sell a shopping center or take remedial actions (Khoshbakht 2015, 9) (tab. 1).

Since the 1990s, shopping centers which (as shown by numerous examples of traditional shopping centers in the United States) did not react on time to changes in customer expectations or the competitive environment, underwent a decline, or even were closed down. The main reasons for the decrease in regional attractiveness of shopping centers in the US include:

- decrease in the purchasing power in a direct market area:
 - population changes in a direct market area (e.g., rise in unemployment), demographic changes (e.g., ageing of the society), area depopulation
 - changes in preferences: the desire to shop faster, more comfortably; changes in people's shopping preferences — offer not matched to preferences; higher expectations — not only shopping
- decrease in visual attractiveness (old-fashioned design):
 - lack of investments in a complex — the shopping center becomes visually and functionally outdated
 - lack of adjustment to new trends (e.g., no natural light, entertainment offer or social space)
- change of lessees:
 - the pulling out of attractive lessees — moving to newer rival shopping centers

Tab. 1. Shopping Centre Life Cycle

	Important considerations	Innovation	Accelerated development	Maturity	Decline
Market factors	Number of competing centers	Very few	Rapid growth	Many of the same type of center	Many same and newer types
	Amount of shopper traffic generated	Increases	Steadily increases	Stable amount	Steadily decreases
	Rate of sales growth	Very rapid	Rapid	Moderate to slow	Slow or negative
	Vacancy rate	Low	Very low	Moderate	High
	Control exerted by developers	Extensive	Moderate	Extensive	Moderate
Shopping center developer strategies	Advertising and promotional activities	Extensive	Moderate	Extensive	Moderate
	Renovation of facilities	None	Minor modification	Maintenance of existing facilities	Neglect Or extensive reformatting
	Efforts to attract New retail tenants	Extensive	Moderate	Moderate	Extensive
	Rental rates	High	High	Competitive	Low
	Length of lease	Long	Long	Moderate	Short
Retailer tenant strategies	Advertising and promotional activities	Extensive, to create awareness	Moderate, to draw greater interest	Extensive, to compete on price	Moderate, to remind of sale price
	Special sales and price discounts	Few	Moderate	Extensive	Extensive
	Merchandise offerings	Pre-planned variety and assortment	Variety and assortment to the market	Stable variety and assortment	Reduced variety and assortment
	Store size and layout	Prototype model	Adjusted to meet market demand	Stable size	Scaled down
	Type of store	Entrepreneurial	Aggressive	Professional	Caretaker

Source: Khoshbakht (2015, 59)

- appearance of lessees with low-quality products (e.g., “flea markets”)
- change in the transportation system:
 - a change in the transportation system (new roads evading the S.C., changes in public transport), old shopping centers built in the suburbs—no connection to motorways
 - traditional S.C.—with the back facing main roads (closed layout); new centers are connected to the road system better
- change in ownership:
 - no ideas for development
 - no investments

In some cases, actions that make complexes more attractive and various remedial programmes were introduced in the so-called “de-malling” process:³

- external—abandoning the closed form of shopping centers, constructing them with the front facing a street, return to the layout modelled after traditional city structures (integrated with the outside environment better), etc., and
- internal—new lessees, introducing non-trade items to the offer (e.g., entertainment items), letting natural light in, etc. (fig. 7).

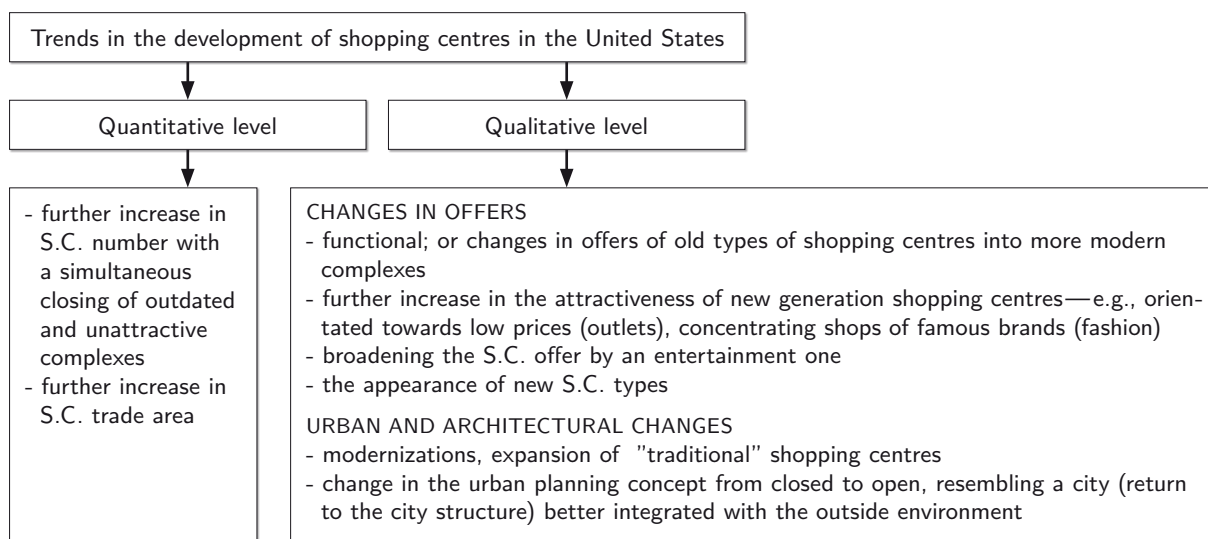


Fig. 7. Main trends in the development of shopping centers in the United States

The first commercial buildings, including shopping centers, that appeared in Poland in the 1990s are the ones that after a dozen or so years of functioning, now require not only renovations, but also modernization on a major scale (Foryś 2014b, 22). The oldest complexes are especially technically and/or functionally worn. Technical wear is the wear that is the result of the age of the building, the durability of materials applied, the quality of workmanship and design flaws. Functional wear is the result of the comparison of functional design solutions applied in a given case to the currently preferred ones, so, in a sense, it is an assessment of the building’s modernity. Some of the above-mentioned complexes could have also been subject to environmental or architectural wear. Environmental wear is the result of changes in the vicinity of the fixed property, influenced by, for instance, an unfavorable neighborhood (e.g., industrial plant, unregulated watercourse), finalized or planned changes in the surroundings of the property. Architectural wear concerns only buildings officially listed as vintage or the ones overseen by a conservator-restorer; this type of wear regards only elements that determine the historic values of a building (Foryś 2014a, 57–60).

The ageing of commercial buildings, the growing and more demanding competition, the developing spectrum of trade networks, the increasing aspirations and needs of customers, development of e-commerce and the necessity to relocate complexes are the main factors that influence the developing trend of modernizing the existing shopping centers. The main management strategies

3. See: Greyfields into Goldfields, op. cit.

implemented individually or together include: a complete redevelopment or a less invasive remodeling, an expansion, an extension, re-commercialization, restoration.⁴

One of the current characteristic features of Polish shopping centers is the ongoing modernization of buildings from the 1990s. Shopping centers in Łódź may serve as an example. Out of all complexes of the so-called traditional shopping centers in Łódź, 9 out of 14 (64%) has been part of the city space for more than 16 years, therefore these are complexes which have already been or will be subjected to various modernizations. Changes in individual complexes in Łódź included the expansion of Galeria Łódzka and Pasaż Łódzki or the changes in lessee structure observable in all shopping centers (although not resulting from their functional wear). Galeria Łódzka is to be expanded even further. Since its opening in 2002, the building has undergone a modernization, but to fulfil the potential that is the result of its central location, it is to be expanded by a further 11 000 m² of GLA.⁵

Despite the issues of shopping centers, closing down some of them and transforming others on each continent, an increase in their commercial space is still observable, although the economic crisis (since year 2010) has slowed down the dynamic increase in commercial space. In the United States, the “traditional” shopping centers may be gradually closed down, but still new ones are being built. The Asian market is particularly dynamic in terms of a supply of new commercial space (tab. 2). In Europe, similarly to other continents, the amount of commercial space systematically increases, although the dynamic has visibly dropped since 2009 (fig. 8). In the first half of 2016 approximately 1,3 million m²(⁶) of new surface areas for shopping centers has been released for use. Since July 2016, shopping centers take up 156,3 million m². Turkey and Russia were, again, the most active in terms of their development, which constituted more than 40% of all completed investments in all of Europe in the first half of 2016.⁷

Tab. 2. Global shopping center development

Continent/Country	Current inventory		New inventory 2014–2016		
	GLA (millions of m ²)	Number of shop. centers	New GLA (millions of m ²)	Number of new shop. centers	Percentage increase
Americas					2
US	618,3	35 590	11,2	758	2
Canada	34,2	1 320	1,5	42	3
Latin America	34,3	1 167	3,8	115	10
Subtotal	686,8	38 077	16,5	915	—
Europe					4
all countries	153,8	7 178	9,7	306	4
Subtotal	153,8	7 178	9,7	306	—
Asia					38
China	53,2	621	49,2	504	81
other countries	30,7	970	4,0	106	11
Subtotal	83,9	1 591	53,2	610	—
Total	924,5	46 846	79,4	1 831	4 ^a

Source: Global Shopping Center Development Report. Americas, Europe, Asia. A Cushman & Wakefield Research Publication, Spring 2014, pages 5-6, [a:] <http://www.renews.pl/uploads/Raporty/cwglobalshopping2014.pdf>; Retail Development and Investment: Tier One Countries vs. Growing Markets. By M. Rodda et. al., Real Estate Forum Toronto, December 2014, page 8, [a:] http://www.realestateforums.com/ref/old/globalproperty/docs/GPM14_MichaelRodda.pdf.

^aGenreal percentage increase in the years 2014–2016

4. See: Odnowa, przebudowa, rozbudowa. Kierunki rozwoju polskich centrów handlowych, Jesień 2012. Report by Jones Lang LaSalle, pages 7–9.

5. Information about the expansion of Galeria Łódzka taken from: Łódzki rynek nieruchomości 2015 [Łódź Real Estate Market], Cushman & Wakefield, page 11, [a:] <http://www.invest.lodz.pl/wgrane-pliki/2015-cw-real-estate-lodz-final.pdf>

6. [In the journal European practice of number notation is followed — for example, 36 333,33 (European style) = 36 333.33 (Canadian style) = 36,333.33 (US and British style).—Ed.]

7. See: European Retail Park Development Report. A Cushman & Wakefield Research Publication, August 2016, page 3, [a:] http://www.cushmanwakefield.com/~media/reports/poland/european_retail_park_development_report.pdf.

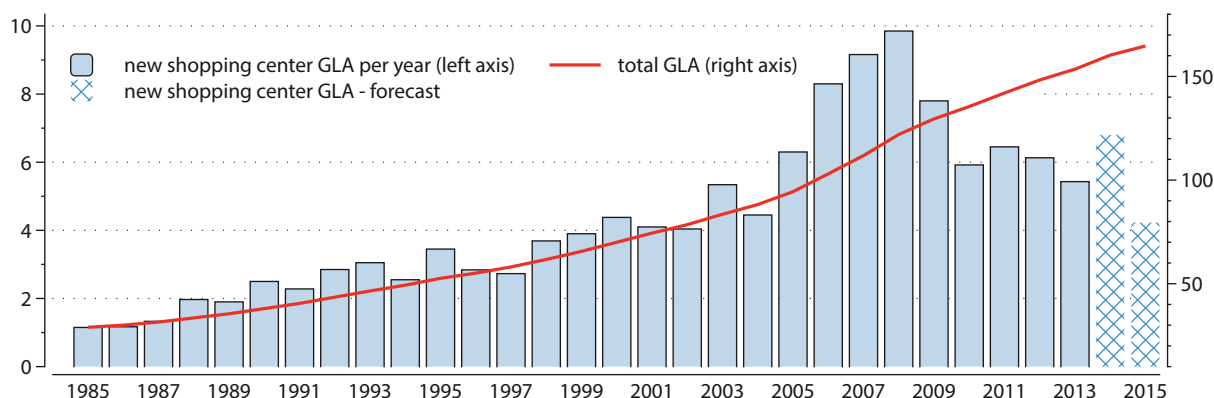


Fig. 8. European shopping center growth (million square meters)

Source: Global Shopping Center Development..., op. cit., page 16

At the end of 2015, there were 482 functioning shopping centers in Poland (traditional shopping centers, commercial parks and outlet centers) with a joint surface area of approximately 11 million m² of GLA. More than half (55%) of commercial space supply originated in the greatest agglomerations. In the structure of the modern supply of commercial space traditional shopping centers still predominated, both in terms of number (420 altogether) and surface area (almost 9,9 million m²). The percentage of shopping centers, 90%, has remained on a constant level for several years. A major diversity is visible in the section of shopping centers dominated by small buildings, up to 20 000 m² (225 out of 420 all shopping centers), and another 31% are centers with the surface area of 20 000–40 000 m². The statistics are different when not the number, but the GLA of complexes is taken into account: the GLA of shopping centers, in the ones spread over up to 20 000 m² amounts approximately to 27% out of almost 9,9 million m², another 37% are buildings with rental areas between 20 000 m² and 40 000 m². The largest buildings (more than 80 000 m²), in the number of only 6, are approximately 6% of all sources of commercial space.⁸

Conclusions

The evolution of shopping centers went in a direction where a center resembles a town that could fulfil all our needs being created under a single roof. Each subsequent generation of shopping centers offers richer interiors and more interesting functions available inside; that is why a shopping center has a tendency to cut itself off from a given city, creating an inside structure that competes with it. In the United States, where shopping centers first appeared, the outdated complexes undergo various remedial processes or are simply closed down. At the same time more modern commercial complexes, with layouts often based on city structure, appear.

Shopping centers are an important and permanent element of city structure and play a major role in its functional and spatial structure. These large-surface complexes should coexist with a given city, instead of competing with it. The location policy of city or commune authorities needs to be thought through carefully, and the authorities should realize how such complexes influence the city and its inhabitants on multiple levels, the permanence of land development, and the fact that shopping centers go through different development stages and the location of a shopping center, especially an old-type center, carries with it serious consequences, for instance the problem of utilizing abandoned buildings.

References

FORYŚ, I. 2014a. "Obiekt handlowy w przestrzeni miejskiej." In *Zarządzanie nieruchomościami handlowymi*, edited by I. Foryś. Warszawa: Wydawnictwo Poltext.

8. See: PRCH Retail Research Forum. Raport H2 2015. Polska Rada Centrów Handlowych, page 7, [[:]] <http://prch.org.pl/pl/baza-wiedzy/24-retail-research-forum/14-prch-rrf-report-h2-2015-english-version>.

- . 2014b. "Otoczenie społeczno-gospodarcze polskiego handlu." In *Zarządzanie nieruchomościami handlowymi*, edited by I. Foryś, 13–44. Warszawa: Wydawnictwo Poltext.
- GWIZDAK, W. 2006. "Oddziaływanie centrów handlowych na strukturę miast." *Zeszyty Naukowe. Architektura/Politechnika Śląska* (44): 41–48.
- KACZMAREK, T. 2011. "Handel detaliczny w rozwoju funkcjonalnym i przestrzennym miast w Polsce." In *Problemy rozwoju lokalnego i regionalnego na początku XXI wieku*, edited by M. Wdowicka and L. Mierzejewska, 67–83. Poznań: Bogucki Wydawnictwo Naukowe.
- KHOSHBAKHT, B. 2015. *Fragmented Ownership in Shopping Centres. The Influence of Fragmented Ownership on the Value of Retail Units*. Amsterdam: Eindhoven University of Technology.
- KOCIUBA, D. 2006. "Nowe przestrzenie handlowe Lublina." In *Nowe przestrzenie w miastach, ich organizacja i funkcje. XIX Konwersatorium Wiedzy o Mieście*, edited by I. Jażdżewska, 231–244. Łódź: Wydawnictwo Uniwersytetu Łódzkiego.
- LOWRY, J. 1997. "The Life Cycle of Shopping Centres." *Business Horizons* (Jan-Feb): 77–86.
- NAMYŚLAK, B. 2006. "Rozwój wielkopowierzchniowych obiektów handlowych we Wrocławiu." In *Nowe przestrzenie w miastach, ich organizacja i funkcje. XVIII Konwersatorium Wiedzy o Mieście*, edited by I. Jażdżewska, 265–276. Łódź: Wydawnictwo Uniwersytetu Łódzkiego.
- ROCHMIŃSKA, A. 2005. "Rozwój sieci handlowych z udziałem kapitału z agranicznego." In *Usługi rynkowe w dobie transformacji*, edited by J. Dzieciuchowicz, 65–92. Łódź: Wydawnictwo Uniwersytetu Łódzkiego.
- . 2013. *Atrakcyjność łódzkich centrów handlowych oraz zachowania nabywcze i przestrzenne ich klientów*. Łódź: Wydawnictwo Uniwersytetu Łódzkiego.
- . 2015. "Centra handlowe — kreatorzy nowych przestrzeni miejskich." In *XXVIII Konwersatorium Wiedzy o Mieście, Współczesne czynniki i bariery rozwoju miast*, edited by A. Wolaniuk, 229–245. Łódź: Wydawnictwo Uniwersytetu Łódzkiego.
- . 2016a. "Shopping Centres as the Subject of Polish Geographical Research." *Geographia Polonica* 89 (4): 521–535.
- . 2016b. "Zachowania przestrzenne klientów centrów handlowych: przykład Łodzi." *Acta Universitatis Lodziensis. Folia Geographica Socio-Oeconomica* (23): 5–23.
- WIĘCŁAW, J. 2000. "Nowe centra handlowe w strukturze przestrzenno-funkcjonalnej Krakowa." In *Miasto postsocjalistyczne. Organizacja przestrzeni miejskiej i jej przemiany. XIII Konwersatorium Wiedzy o Mieście*, edited by I. Jażdżewska, 175–177. Łódź: Wydawnictwo Uniwersytetu Łódzkiego.