

8 Sprawling post-communist metropolis: Commercial and residential suburbanization in Prague and Brno, the Czech Republic

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Abstract: In this chapter, we review the development of suburbanization in Prague and Brno metropolitan areas in the Czech Republic with particular attention paid to specific features of suburbanization in post-communist cities. Residential deconcentration brought about the spatial redistribution of the population within metropolitan areas while the overall population stagnated. The suburbanization of non-residential functions in the form of out-of-town greenfield developments has been more dynamic, influenced by the massive inflow of foreign investments expanding on new markets. Employment in core cities is shrinking while it is expanding in suburban areas, particularly in retail, warehousing, and — in Brno— also in the industrial sectors.

Key words: Suburbanization, post-communist city, urban change, Prague, Brno

8.1 Introduction: Conditions for suburbanization in the Czech Republic

Suburbanization is the dominant process that is changing the spatial organization of post-communist cities and their metropolitan areas. Despite the brevity of the period from the beginning of the transition, suburbanization has already dramatically reshaped the physical morphology, functional land-use pattern, and socio-spatial structure. The process deserves attention not only as the subject of our interest in the transformation of urban areas, but also because suburbanization brings irreversible changes into settlement patterns and produces economic, social, and environmental consequences that will influence our society for several future generations (TCRP, 1998).

This chapter presents an overview of the development of suburbanization in the Prague and Brno metropolitan areas in the Czech Republic. Particular attention is paid to specific features of suburbanization in post-communist cities. We first outline the specific conditions for suburbanization in the context of settlement structure and the transition from a centrally-planned to a market economy. We begin our report of suburbanization in Prague and Brno with an introduction to these metropolitan areas and their spatial structure and follow with an account of the main aspects and trends of recent residential and non-residential suburbanization. Detailed analyses of the deconcentration of the population and employment are given.

The Czech Republic and the metropolitan areas of Prague and Brno are very special cases within the context of this book. In post-communist areas, the radical change of urban structures through suburbanization started only recently. During Communism and central planning, there was a strong preference for the concentration of investment and development into major urban centres and within their territories to high-density residential housing estates and industrial zones at the edge of cities (Musil & Ryšavý, 1983). The hinterland of large urban centres has received minimum investment and was characterized by stagnation and even decline, the concentration of people of lower socioeconomic status, and agrarian and associated industrial production.

It should, however, be noted that Czech cities and their surrounding areas experienced suburbanization in the interwar period of the 1920s and 1930s (Ullrich *et al.*, 1938). At that time, residential areas were springing up around railway stations on rail tracks radiating in all directions from central cities. These well-established residential settlements are now some of the most prestigious and sought-after addresses in the metropolitan regions. Such a development was observed in Prague and other smaller Czech cities as it was elsewhere in the region in Budapest or Tallinn, for instance (Berényi, 1994; Tammaru, 2001). At that time, spatial deconcentration did not include economic functions.

The character of urbanization is strongly shaped by historically-developed settlement patterns. The Czech Republic has a very dense network of small settlements. While the urbanization included the concentration of population and jobs to selected places, suburbanization does not mean a spatial expansion of cities into an unsettled hinterland, but rather to areas that have already been settled and used for a considerable time. Furthermore, besides the decentralization within the metropolitan areas, when compared with the overall country settlement and regional development, a continuing concentration into metropolitan areas can be seen. This is especially strong concerning employment, particularly in the service sector.

Suburbanization as experienced in the United States and West European countries did not develop in the post-Second World War period. The urbanization pattern in Communist countries was characterized by the concentration of investments and growth into medium and large cities and within their territories into large housing and industrial complexes at their urban edges. Suburbanization in the western sense has not developed (Enyedi, 1996: 117; Enyedi, 1998: 15). Széleányi (1996) uses the concept of under-urbanization to describe how the growth of the urban population was lower than the growth of jobs in the urban industrial and tertiary sector. Consequently, a sharp rise in commuting from the urban hinterland substituted for urban growth via residential suburbanization. A straightforward comparison of the spatial structures of capitalist and communist cities can reveal important differences in the character of the built environment, land-use patterns, and socio-spatial structures. The main differences are in the central cities and the suburban areas.

The spatial structure of cities and their metropolitan areas has gradually changed in the course of time. The relatively smooth process of urban change can sometimes

be interrupted by periods of radical spatial restructuring influenced by turbulent developments in society. One recent example of such change is the urban transformation in post-communist societies. With the decentralization of decision-making in a market economy, conditions become more favourable for the development of spatial deconcentration.

8.2 Prague and Brno metropolitan areas

Prague and Brno are the country's two major metropolitan areas. They have the best preconditions for the development of suburbanization. The process is developing in both these regions, although differing in extent and dynamics. With a population of 1.2 million, Prague is the country's largest city and its capital. It is a dominant centre in the Czech settlement and regional systems, not only because of its population size, but also because it accommodates most of the government institutions and economic control and command functions. Prague is the gateway to the country for foreign investors (Drbohlav & Sýkora, 1997). It is situated in the middle of Bohemia, the western part of the Czech Republic (Figurc 8.1).

Brno is the country's second largest city; it is sometimes considered as the "capital" of Moravia, the eastern part of the country. With nearly 400,000 inhabitants, as a settlement centre it ranks second in the national urban hierarchy.

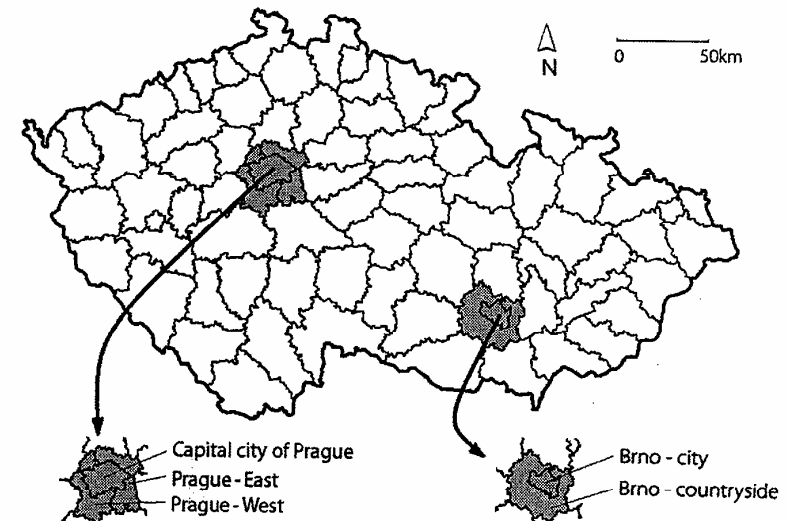


Fig. 8.1 Location of the case study areas within the territorial structure of districts

Brno is the seat of the Supreme Court; the city hosts the most important trade fairs in the country and is a major centre of university education.

Metropolitan regions do not exist as independent administrative units in the Czech Republic. They consist of core cities and a large number of smaller municipalities ranging from villages of a few hundred inhabitants to small towns with a population in tens of thousands. There is no single officially declared delimitation of a metropolitan area. In this chapter, we use the term *metropolitan area (MA)* to refer to a core city and the adjacent districts (Figure 8.1). This description allows us to use statistical information that is only available at the district level for the analysis of employment deconcentration. The Prague Metropolitan Area (PMA) covers an area of 1666 square kilometres and has 1.35 million inhabitants living in the city of Prague and the two surrounding districts of Prague-East and Prague-West. The Brno Metropolitan Area (BMA; 1338 sq. km) consists of the two districts of Brno-city and Brno-countryside with a total population of 535,000 people. Basic data from the 2001 Census are presented in Table 8.1.

The analysis of the spatial deconcentration processes within the metropolitan areas is based on their division into four main zones: (1) centre; (2) inner city; (3) first (inner) suburban zone; (4) second (outer) suburban zone (Figure 8.2). The subdivision of the Prague and Brno metropolitan areas respects urban morphology and takes into account the boundaries of local government territorial units. Both Prague and Brno are municipalities. Therefore, from the point of view of local government, their rights and responsibilities are on the same level as those of the small municipalities around them. They are, however, municipalities of a special kind and can be divided (at their own discretion) into boroughs, each with its own elected local government. The spatial delimitation of metropolitan zones uses borough and municipal boundaries. The suburban zone is delimited as the area outside the compact city and within the metropolitan area. The administrative boundary of a Czech city extends far beyond its compact built-up area; the city's administrative territory contains part of the suburban zone. Therefore, the suburban

Table 8.1 Prague and Brno - basic data from Census 2001 (1.3.2001)

Region	Area (sq. km)	No. of municipalities	Population	Density of population
Prague				
City	496	1 (57)*	1169106	2357
Hinterland	1170	171	179150	153
Total PMA	1666	172 (228)*	1348256	810
Brno				
City	230	1 (29)*	376172	1636
Countryside	1108	137	159169	144
Total BMA	1338	138 (166)*	535341	400

Note: * number of boroughs in the cities of Prague and Brno

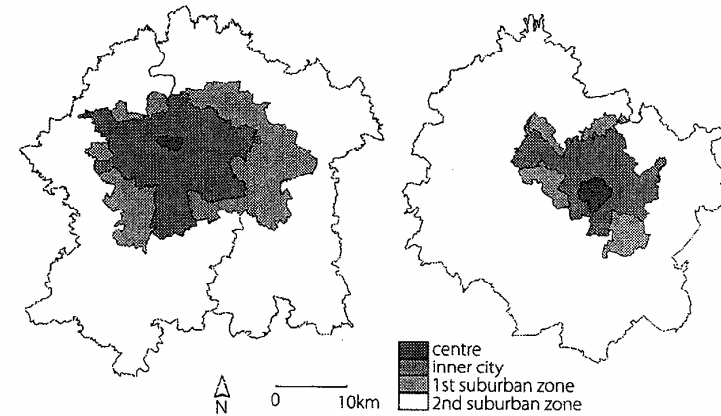


Fig. 8.2 Zones of Prague (left) and Brno (right) metropolitan areas

zone in a metropolitan area consists of a zone within the administrative boundary of the core city together with areas outside it. We use the city administrative boundary as the division line between the first and second or the inner and outer suburban zones. The second (outer) suburban zone is defined as the districts around the core city (or municipalities within these districts). In the case of Prague, there are two districts Prague-West and Prague-East; in the case of Brno, there is the Brno-countryside district.

The division of city territory into centre, inner city, and inner suburban zone reflects the historical development of the intra-urban spatial structure. Both cities have medieval cores in which government and commercial functions are now concentrated; these cores play the role of a city centre. A historic core/city centre is encircled by an inner city made up of densely-built-up residential neighbourhoods and old industrial zones dating from the industrialization and rural-to-urban migration of the 19th century. In the inter-war period of the 1920s and 1930s, low-rise and low-density residential areas consisting of detached and terraced single-family houses were constructed around the inner city in both cities. During the communist period, zones were constructed consisting of housing estates with high-rise prefabricated apartment blocks and new industrial districts spatially separated from the residential areas. In both cities, these zones form compact built-up areas. We separate the essential city centres from the rest of what is termed the inner city and consists of a heterogeneous urban environment. Beyond the compact city, but still within the administrative boundaries, is a zone characterized by a rural landscape with small villages and agricultural land. This zone is now the subject of intensive transformation through both residential and non-residential suburbanization; we define the area as the first (or inner) suburban zone.

In our analyses, we depend on two levels of metropolitan territory division. The first is a rough division between the core city and the surrounding districts. This division is used in the analysis of employment deconcentration, since the data are only available at the district level. Unfortunately, the developments in the inner suburban zone are then not depicted. The second division provides a more detailed spatial distribution of the lowest tier of administrative areas in the Czech Republic, namely the municipalities in the city hinterlands and the boroughs within the core cities.

8.3 Suburbanization in Prague and Brno

Although the main trends in intra-urban change have been similar, post-communist urban restructuring has been more dynamic in Prague than in Brno. In both cities, the most important processes of urban change since the beginning of the post-communist transition have been the commercialization of the historic cores and adjacent areas of the inner cities, the commercial and residential suburbanization in the outer city and urban hinterland, and selective revitalization in inner city areas (Sýkora *et al.*, 2000). While most of the 1990s were characterized by a huge investment inflow to city centres to bring about their commercialization and physical upgrading, suburbanization has been the most dynamic process changing metropolitan landscapes since the late 1990s (Sýkora, 1999).

Until the mid 1990s, residential suburbanization was only marginal, restricted by the population's limited purchasing power. During the second half of the 1990s, residential and commercial suburbanization developed quickly in the outer parts of Prague and Brno and the adjacent zone of their metropolitan regions. By the turn of the century, commercial suburbanization had become the most important process of urban change in both cities. New residential districts and reconstructed village properties have been accompanied by new shopping centres, hypermarkets, warehousing, and industrial properties. Importantly, while in the West residential suburbanization preceded non-residential deconcentration, commercial developments are currently changing suburban areas of post-communist cities more radically than the suburbanization of homes. Grimm (1995), Nuisl and Rink (2003), and Lisowski and Wilk (2002) have observed this reversed sequence for Leipzig and Warsaw respectively.

Residential suburbanization takes several forms. There are districts of speculative housing development. Developers also acquire land, add infrastructure, and sell plots for housing construction, often on a turn-key basis. Both forms create new residential districts for prosperous owner occupiers. These estates are usually spatially attached to existing settlements. There are also some individual developments that transform existing villages. Households purchase vacant lots within villages and build new homes; or they purchase existing properties that they then reconstruct and expand, or demolish them and replace them with new luxurious homes. The suburban zone is now acquiring a better-educated population with

high incomes (Ouředníček, 2003). Suburban settlements with emergent residential districts consist of two distinct types with contrasting populations: prosperous newcomers versus the lower income, less well-educated, indigenous inhabitants of the former rural villages. In general, residential suburbanization is changing the spatial distribution of the population according to socioeconomic status. It contributes to a reversal of the traditional sociospatial pattern of the socialist city in which the socio-economic status of the residents declined with distance from the centre. Residential suburbanization is more developed around Prague than Brno or other smaller cities and towns. This is the result of a higher share of households with high incomes and a larger total number of such households in Prague Metropolitan Area. The process is spatially very selective. New districts of suburban housing emerge in areas with a good physical environment (such as the south-east of Prague and north of Brno) and transport connections to the city centre. During most of the 1990s, the development of residential suburbanization was very slow, limited by the population's limited purchasing power. However, with the increasing prosperity, particularly of the Prague population, and with the introduction of mortgages supported by a state subsidy, more dynamic development of suburban family housing started at the turn of this century.

While there is a tradition of residential suburbanization predating the Second World War, non-residential suburbanization is a completely new and very recent phenomenon in the Czech Republic. While residential suburbanization is driven by the investments of Czech households, the motor for non-residential suburbanization is the demand of international firms expanding onto Czech markets. After a few years of experience, we can observe that non-residential suburbanization has had more important impacts on the transformation of outer urban areas. Commercial projects are concentrated in complexes built along major highways and at important transport intersections. In Prague, another important location factor is the underground transport system extending to the city outskirts. Non-residential developments include retail, warehousing, and distribution and, in Brno, industry. The deconcentration does not involve offices unless they are an integral part of a retail or warehousing facility.

8.3.1 Residential deconcentration

During the communist period, there was some deconcentration of population within urban areas, although it was quite different in nature from the developments in Western cities. Almost all the houses and apartments constructed by the state were built on housing estates with large prefabricated apartment blocks at the edge of cities. These areas were characterized by high densities; they were linked by public transportation to the city centre and other places with a concentration of jobs. The construction of housing estates could be seen as a continuation of urbanization through compact urban morphology and high density construction.

The situation changed with the transition and the reestablishment of the market economy. The private ownership of land and houses formed necessary preconditions on the supply side. The growth in the prosperity of some segments of the population in large cities and their preference for suburban living created a demand for the development of residential suburbanization. This demand was further accelerated with the establishment of a mortgage system that included state financial contributions to mortgages used to finance newly-built housing.

The suburbanization process in Prague and Brno has not been as intensive as it was after the 2nd World War in North America or Western Europe. There is a general decrease of population in the Czech Republic and a stagnation of population in the metropolitan areas (Table 8.2). The deconcentration of population has occurred mainly through the spatial redistribution of the population within metropolitan areas with declining central and inner cities and growing suburban areas (Ouředníček & Sýkora, 2002). This process of residential suburbanization started to develop from the beginning of the 1990s. However, from the late 1990s, residential suburbanization gained a new dynamic that can be seen in particular around Prague and, to a lesser extent, in the metropolitan areas around Brno. This spurt is mirrored in the dynamics of population change observed when the periods 1991–96 and 1996–2001 are compared (Table 8.2).

Detailed representations of population growth and decline in Prague and Brno metropolitan areas according to municipalities and boroughs show that, while

Table 8.2 Population in Prague and Brno metropolitan areas and their respective zones in 1991–2001

Area	1991	1996	2001	2001/91	1996/91	2001/96
Prague						
Centre	42590	37953	34581	81.20	89.11	91.12
Inner city	1065401	1058771	1018396	95.59	99.38	96.19
First suburban zone	106183	108229	116129	109.37	101.93	107.30
Second suburban zone	167421	167721	179150	107.01	100.18	106.81
Prague City	1214174	1204953	1169106	96.29	99.24	97.03
Prague Metropolitan Area	1381595	1372674	1350257	97.73	99.35	98.37
Brno						
Centre	78631		67395	85.71		
Inner city	295730	387570*	293528	99.26	103.03*	97.06*
First suburban zone	13935		15249	109.43		
Second suburban zone	156189	157042	159169	101.91	100.55	101.35
Brno City	388296	387570	376172	96.88	99.81	97.06
Brno metropolitan area	544485	544612	535341	98.32	100.02	98.30
Czech Republic	10302215	10309137	10230060	99.30	100.07	99.23

Notes: Data from Census (March 3rd, 1991 and March 1st, 2001) and population register (December 31st, 1996).

* In 1996, data are available only for Brno city as one spatial unit.

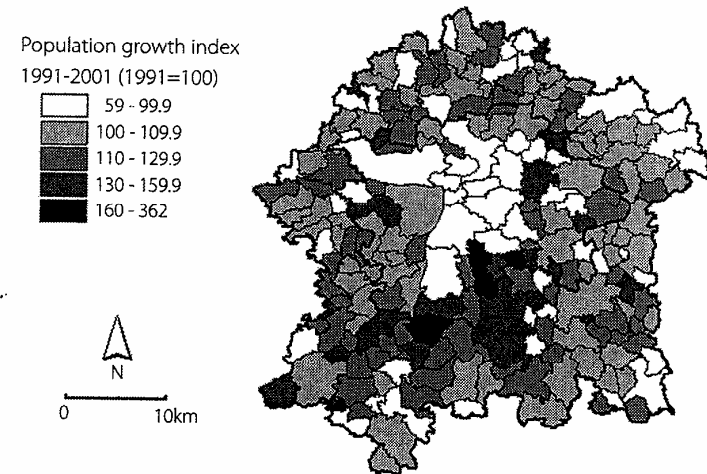


Fig. 8.3 Population change in the boroughs (city parts) and municipalities of Prague Metropolitan Area in 1991–2001

declining in most units in the inner city, the population is increasing in the majority of the suburban (outside the compact city) boroughs and municipalities (Figures 8.3 and 8.4). The patterns of growth in Prague and Brno and within their metropolitan areas differ. Growth is concentrated in areas with the best natural environment and good transport accessibility. The population of some municipalities in Prague MA doubled in the period 1991–2001, while around Brno growth was quite modest. According to Mulíček and Olšová (2002), most of the new residential construction and population growth in Brno has taken place in the outer areas of the city of Brno that still lie within the administrative boundary (that is, within the first suburban zone), with only some municipalities beyond the Brno administrative boundary registering growth.

A more precise method of evaluating population deconcentration is to divide the total population increase into its migration and natural change components. The whole of the metropolitan areas and all their zones are affected by natural population decrease, with the greatest decline in the city centres. Migration is the key factor that contributes to the spatial redistribution of population and can indicate suburbanization and population deconcentration trends. During the 1990s, the inner cities started to lose population by migration, while city hinterlands became the most important destinations of migrants (Figure 8.5). At present, city centres and inner cities are losing population by natural decrease and migration, while both suburban zones are gaining population through migration. The rate of growth is especially strong in areas located just outside the city's administrative boundaries. Prague's second suburban zone now has the highest rates of net migration registered in the whole Czech Republic during the last forty years.

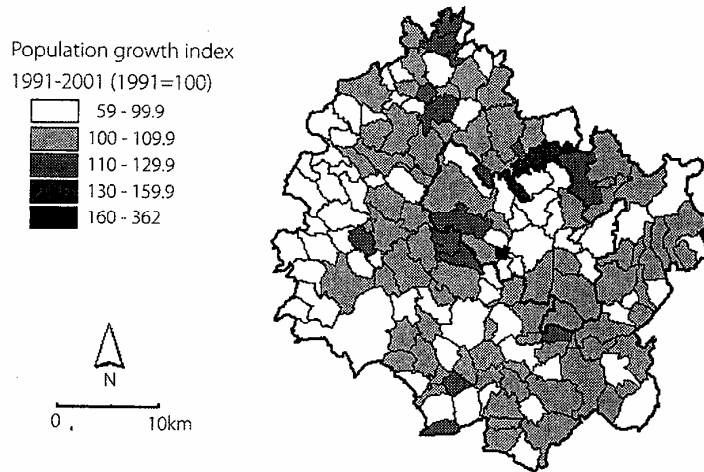


Fig. 8.4 Population change in city parts and municipalities of Brno Metropolitan Area in 1991-2001

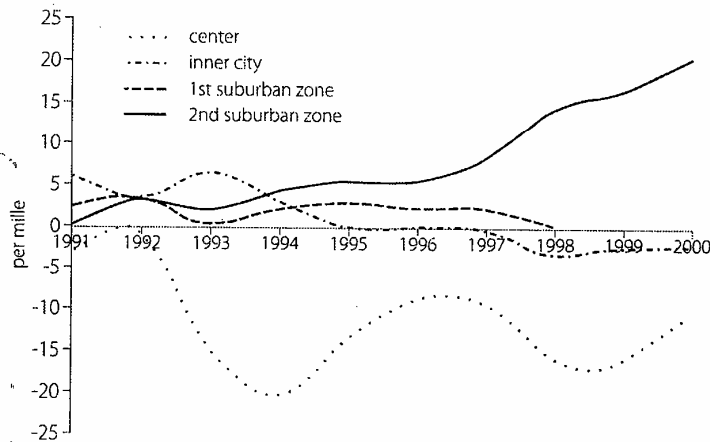


Fig. 8.5 Net migration rates for Prague Metropolitan Area zones in 1991-2000

8.3.2 Non-residential deconcentration

The non-residential deconcentration within Prague and Brno metropolitan areas is a very recent phenomenon; it started in the second half of the 1990s. However, the growth of new economic activities and jobs in suburban locations has been

quite rapid, in particular around Prague. This section provides an account of the economic restructuring in the metropolitan areas of Prague and Brno, and the spatial implications, with the emphasis on the decentralization tendencies.

The economic change through the first two-thirds of the 1990s was directed by government reforms such as privatization and the consequent economic restructuring of the original domestic enterprises. This restructuring has only had indirect effects on spatial reconfiguration through the differences in restructuring in particular areas. New employment growth was concentrated in financial intermediation and other business services (especially in Prague, associated with its role as the command and control centre and gateway to the country), retail (in all larger towns and cities, associated with low levels of retail supply under Communism), and hotels and restaurants (in Prague, associated with the growth of tourism). Most of these jobs were concentrated in the city centres; some new jobs were associated with real-estate development or redevelopment (mainly offices, but also hotels, retail or multipurpose centres) and consequent land use changes affecting central cities (Sýkora, 1998). In this period, there were a few cases of the relocation of production facilities from central parts of cities to the city outskirts (such as the printing house Labe-Vltava-Press from downtown Prague to the suburban borough Uhřetíněves) or outside metropolitan areas (various industrial branches).

The situation changed towards the end of the 1990s with the development of new economic activities located in new suburban locations. This change was largely fuelled by the inflow of foreign direct investments; economic activities in retail, warehousing and distribution, and industries were particularly affected. The late 1990s and early 2000s were characterized by a massive expansion of new retail operations to the Czech Republic. Hypermarkets and do-it-yourself (DIY) stores in big-boxes and later whole retail parks composed of a shopping mall with a variety of entertainment and retail facilities such as DIY and factory outlets rapidly changed the outer areas in the larger Czech cities. These facilities were mostly built on greenfield areas at suburban locations or on the edge of the compact city. There are also, of course, examples of inner city malls, but the majority of new retail emerged in outer city locations. These new facilities offer a relatively large amount of new jobs and have substantially influenced the pattern of commuting for people employed in retail. New warehousing and distribution facilities have been concentrated in industrial and logistic parks developed on greenfield areas, usually outside the city's administrative boundaries.

Industrial employment has suffered a major decline, particularly in the cities. The development of employment in the manufacturing sector was given a new momentum by the inflow of the foreign direct investment attracted by a stabilized domestic economic and political situation, a skilled and cheap labour force, and adequate infrastructure. Many towns and cities affected by the decline in employment set up new industrial zones on greenfield sites located at the edge of existing urban areas, usually in locations with good transport accessibility. Through the newly-established organization CzechInvest, the Czech government attracted foreign direct investments into the country and supported selected local

governments in their preparation of new industrial zones. Consequently, there has been a reindustrialization involving the creation of new manufacturing jobs in the suburban locations of many towns and cities.

Retail has been the major force behind non-residential deconcentration. New suburban retail developments have emerged around virtually all the cities and towns with a population over 50,000 (Smolová & Szczyrba, 2000). There are several edge-of-city and suburban locations with new retail and wholesale facilities in Prague and its hinterland (see Figure 8.6). Some of these areas also accommodate warehousing. The most important shopping areas are at Zličín (west), Černý Most (north-east), Průhonice/Čestlice (south-east), Letňany (north), and Štěrboholy (east) (Pommois, 2004). All of them contain a shopping mall, at least one hypermarket, a DIY (do-it-yourself) or furniture stores and other facilities. These areas can be divided into two types according to their location: Zličín, Černý Most, Letňany, and Štěrboholy are located just at the edge of a compact built-up area adjacent to the inner city and the suburban zone. This type certainly contributes to the spatial deconcentration of retail within the city. However, it is questionable whether this type of location forms part of the suburbanization process. The location of these consumption places within the metropolitan area can be seen as the result of a long-term strategic vision that placed them between the large pool of an inner-city population with huge consumption power and the new suburban residential areas with growth potential and a smaller number of people, but with high incomes. Two of these new shopping areas, Zličín and Černý Most, are located on the last stops of the underground: they are well served by the inner city public transportation. The other two, Letňany and Štěrboholy, are currently served by buses while the new underground line towards Letňany is under construction. These access factors contribute to their perception as edge-of-city rather than suburban places.

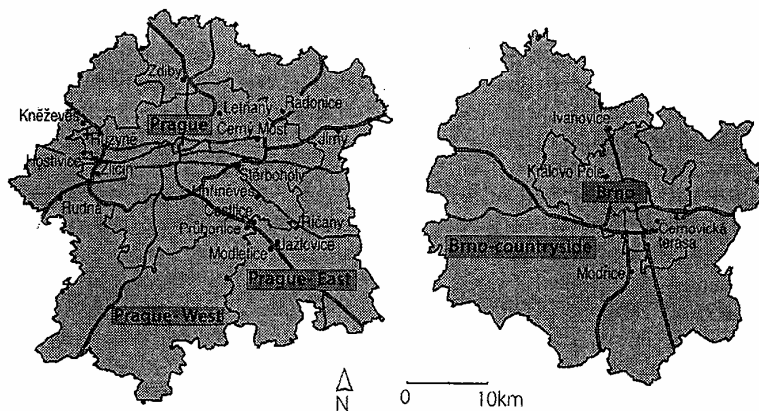


Fig. 8.6 Locations of places mentioned in the text

Průhonice/Čestlice zone exemplifies another type of location (Photos 8.1 and 8.2). This zone emerged out of Prague on the territory of two adjacent municipalities located on both sides of the major D1 highway that connects Prague with Brno. The zone is at some distance from the edge of the compact city. There is a hypermarket with a small mall, an independent shopping mall, a cash-and-carry hypermarket, a DIY store, a furniture store, and other specialized shopping facilities ranging from electronics to sports equipment, clothing to luxury lights. There are also some factory outlets and wholesale facilities. Furthermore, the territory next to the retail section accommodates a large segment of warehousing. Currently, an aqua-park is under construction, adding a leisure and entertainment element. This whole area is situated at the beginning of a major ribbon development along the national highway D1 linking Prague with Brno. The ribbon contains some other shops (from footwear and china to gardening tools) and includes some large industrial/logistic zones on the next highway exit at Říčany.

This huge concentration is a prime example of non-residential suburban development and metropolitan deconcentration. In the section devoted to employment deconcentration, we draw on the case of Průhonice/Čestlice and Říčany as examples of changes in employment in the period 1991–2001. Beside these major retail locations, there are many independent stores, usually DIY, cash&carry, and hypermarkets in big-boxes located in the outer areas of inner city or just at its edge, usually in places with good accessibility by private car.

Brno saw the opening of the first Czech hypermarket in 1996 (Globus). It is located in Ivanovice, at the northern edge of the city, just outside the compact city. The hypermarket is now accompanied by a DIY store. Since that time, a new and now dominant retail zone has been developed in the southern part of the city, next to the junction of two major highways. This retail zone contains shopping malls, hypermarkets, DIY and furniture stores, and other facilities (Muliček 2002; Strategie pro Brno 2003; Photo 8.3). The huge concentration in one spot is the result of the market competition and location strategies of competing firms bringing together an agglomeration of economic activities and at the same time increasing the distance between services and customers. Some argue that these firms produce the advantage of bigger choice in one place. This concentration was strongly influenced by specific local factors, namely the highway junction and the availability of large plots of land.

While until recently most retail turnover was concentrated in city centres and inner-city shopping areas, a large proportion of shopping is now moving to the suburban zone. In Prague, the first suburban shopping zone opened in the mid-1990s; since 1997, the growth of suburban retail parks and zones has been rapid, with several main concentrations developed outside the compact-city area. Similarly, there has been a massive explosion of suburban retail in Brno, with one large shopping area south of the city. This development has caused a radical transformation in the spatial pattern of shopping and travel. In Prague, half the retail turnover was concentrated in the city centre in 1989. In 1998, the hypermarket was the first shopping place for 4 percent of Czechs; two years later, in 2000, the hypermarket



Photo 8.1 Průhonice/Čestlice business zone

Source: Geodis Brno, 2002

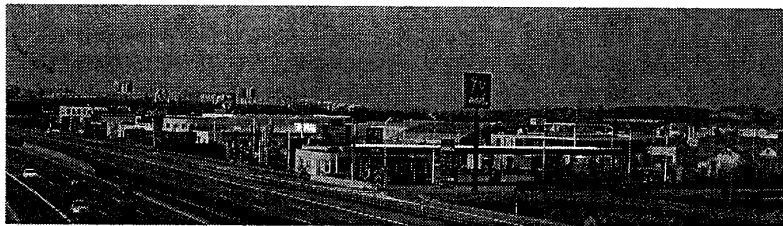


Photo 8.2 Průhonice/Čestlice business zone on D1 Highway approaching Prague from south-east

Author: Jana Temelová, 2004

was the first shopping place for 20 percent of Czechs and 25 percent of Prague inhabitants. Most new retail space in shopping malls, hypermarkets, and big box do-it-yourself stores are located in out-of-city areas and the urban population travel to them for shopping and entertainment by private car.

Warehousing and distribution is another vital component of the recent suburban development, especially in the Prague metropolitan area. Prague is well situated in the middle of the Bohemian basin: that is, it is a place from which the rest of the western part of country can be served. Prague and its vicinity is also an

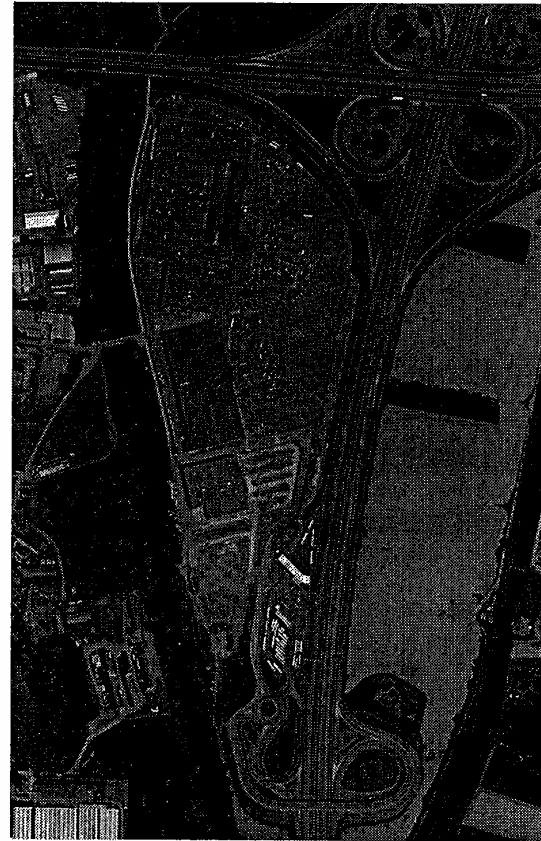


Photo 8.3 Olympia Shopping Park, Brno

Source: Geodis Brno, 2002

area of major junctions, with motorways going in all directions. At the same time, Prague and the Central Bohemian region are huge markets with many consumers with above-average consumption power. Last but not least, the proximity of the headquarters of major international as well as many domestic firms and government offices contribute to the attractiveness of this location.

In and around Prague, the major logistic parks are located on major highways, the outer city-ring-road, and in the vicinity of the international airport Ruzyně. All the new major areas are in the 2nd suburban zone or even beyond it, outside Prague's administrative boundary.



Photo 8.4 Warehousing area around D1 Exit Říčany/Jesenice

Source: Geodis Brno, 2002

Two major logistic parks have been developed to the east and west of the city. First, along the major country highway D1 connecting Prague with Brno, there is an extensive ribbon development starting with a retail outlet near Průhonice and continuing with warehousing and distribution facilities organized in parks or even as independent buildings. Beside the Průhonice/Čestlice zone (discussed in the retail section), there are three major clusters of warehousing and distribution around the exit to Říčany and Jesenice (Jazlovce Industrial Zone, Říčany Logistic Park and Modletice cluster, Photo 8.4). There are further warehousing and distribution facilities on the following exits.

Second, there is a large warehousing and distribution park containing several premises in Rudná, west of Prague on the D5 highway to Pilsen and Bavaria (Photo 8.5). There are also some single buildings at the junction of the D5 highway and the outer city-ring-road (on both sides of the Prague administrative boundary). The large retail concentration at Zličín at the edge of Prague is also on this highway. Northpoint Distribution Park is currently under development on D8 highway to Dresden in Germany near Zdíby at the northern part of Prague Metropolitan Area. There are some smaller new warehousing and distribution locations. Tulip Park, near Hostivice in Prague-West, is capitalizing on the proximity of the outer city-ring-road; the park is located between the international airport Ruzyně and the D5 highway to Germany. Airport Logistic Park, as the name suggests, is located next to the airport, on the territory of Kněžves municipality just outside the city's administrative boundary on the R7 highway heading north-west of Prague. Two other warehousing locations are situated on the highway to the north-east (R10 to



Photo 8.5 Rudná warehousing and distribution park on the D5 highway

Source: Geodis Brno, 2002

Mladá Bosleslav and Liberec) at Radonice and east (D11 to Hradec Králové and Pardubice) at Jirny. In Brno, there is a new warehousing and distribution area: Central Trade Park Brno, located in Modřice, south of the centre and close to the area of large retail concentration.

Both Prague and Brno have industrial zones located in their outskirts. These areas are now undergoing a transformation, influenced by the general economic restructuring. The transformation often includes the takeover by new firms of existing building and their reconstruction and extension. In addition, new premises are built on empty lots within these industrial zones or in adjacent areas. An example of a newly-built industrial property is the Labe-Vltava Press printing house in Uhřetěves, which now accommodates economic activities formerly located on Venceslas Square in the centre of Prague. This printing house is an example of relocation and the direct deconcentration of economic function from the city centre to the inner suburban zone. Another example is the relocation of the former ČKD (now Siemens) factory from the inner city area Smíchov to the edge-of-city location at Zličín, next to the retail area described above. The situation in Brno is quite different, with the establishment of new zones for production activities. The first, Czech Technology Park, is located in the northern part of the inner city (Královo Pole), next to the campus of Brno Technical University. The Park contains both

office and production facilities. The Technology Park is an example of spatial deconcentration within the city's compact built-up area and does not contribute to suburbanization. An example of suburban non-residential deconcentration is the Brno Industrial Zone Černovická terasa, established by the city government with central government support on a greenfield site in the south-east of the city, within the inner suburban zone. This new production/industrial site together with the distribution/warehousing Central Trade Park Brno Modřice and a huge concentration of retail outlets has created a new large non-residential suburban belt along the south-eastern edge of Brno.

The industrial zones are the major difference between Prague and other cities and towns in the Czech Republic. Although Prague accommodates the command and control function (offices), the major distribution hub (logistic, distribution and warehousing), and a huge regional market (retail), new industry tends to develop elsewhere. This concentrates around other towns, where government authorities have prepared service plots in industrial zones and attracted foreign investors through cheap land and labour. Brno cannot aspire to become another command and control centre. It does, however, have the ambition to attract routine manufacturing and high-value-added production and services to the Czech Technology Park. The park has not generated many new jobs, however, as it is focused on high-value-added and capital-intensive rather than labour-intensive production. The city of Brno has therefore also developed a new suburban greenfield industrial zone to attract manufacturing production and provide employment opportunities for people with traditional industrial skills.

8.3.3 Employment deconcentration

In this section, we document the changes in the distribution of jobs between the core city and the remaining suburban parts of the metropolitan areas, referring in particular to the economic sectors according to the NACE classification. There are two sources of information about employment and the spatial distribution of jobs: the population censuses; and the registers of the numbers of employees. We have drawn on the Censuses of 1991 and 2001 and from the registry of employees available from the annual reports of the Czech Statistical Office. Unfortunately, the registry only covers about two thirds of the jobs in the country and the criteria for the inclusion of employees changed several times during the 1990s. The Census data, the alternative source, has available the number of economically active people living in a particular geographic area and the number of people commuting out of and into the area according to NACE sectors.

The number of jobs in the whole country declined between 1991 and 2001 by 10.8 percent. There are only two geographic areas where the number of jobs increased: Prague metropolitan area and the Mladá Boleslav district (the location of the Volkswagen-Škoda car-production plant). Between 1991 and 2001, the share of the total number of jobs in the country increased by 15 percent in Prague MA and 4 percent in Brno MA (Table 8.3). These figures clearly

Table 8.3 Number of jobs in the metropolitan areas and their share of total jobs in the Czech Republic

	1991 No of jobs	2001 No of jobs	1991 Share on CR	2001 Share on CR	2001/1991 Change in the share
Prague city	723349	734724	13.61%	15.50%	113.91%
2nd suburban zone	62842	73875	1.18%	1.56%	131.83%
PMA	786191	808599	14.79%	17.06%	115.34%
Brno city	245755	228494	4.62%	4.82%	104.27%
2nd suburban zone	57265	52687	1.08%	1.11%	103.18%
BMA	303020	281181	5.70%	5.93%	104.06%

show a major difference in the dynamics of the two metropolitan economies. The growth rate in the Prague hinterland was 32 percent compared with 14 percent in the city itself. These figures include the suburban growth within the city's administrative boundary. The contrast between the jobs growth in the compact city and the suburban zone would therefore be much sharper. In Brno MA, the city's share of the country's total pool of jobs increased slightly faster than did the hinterland's share. Economic deconcentration in Brno MA is not very pronounced; furthermore, most of it is realized inside the city's administrative boundary.

What is the spatial distribution of jobs within the Prague and Brno Metropolitan Areas and how did it change between 1991 and 2001? Prague city has the dominant position in its metropolitan area accounting for over 90 percent of all jobs (Table 8.4). In 2001, 14 percent of all metropolitan jobs were in the city centre, 70 percent in the inner city, 7 percent in suburban areas within the city limits and 9 percent in the suburbs outside the city. Similarly in the Brno area, the city is dominant, accounting for 81 percent of metropolitan jobs. However, the Brno proportion is slowly changing. Between 1991 and 2001, the hinterland of Prague increased its share of jobs in the whole MA by 14 percent, while the city's share declined slightly (Table 8.5).

Which economic sectors contributed most to the differential growth in the cities and their suburban hinterland? In Prague, compared with the city, growth in the suburban zone has been remarkable in (F) construction, (G) wholesale and retail and (I) transport, storage, and communications. The growth in Brno was mostly in (F) construction, while the increase in (G) wholesale and retail was also high in the city. Transport, storage and communications (I) did not increase significantly. These data, however, do not take into account the growth in suburban areas inside the city's administrative boundary. If this growth was included, the difference would be more pronounced.

The economic deconcentration is spatially very selective. It is bringing about rapid and enormous changes in particular locations and zones, while other parts

Table 8.4 Share of the total number of jobs in metropolitan areas according to zone and economic branch (NACE)

NACE sectors	All sectors	A+B	C-E	F	G	I	M+N	H+J+K+L+O
1991								
Prague city	91.94%	1.48%	18.66%	11.01%	12.96%	8.10%	15.27%	24.46%
2nd suburban zone	8.06%	1.47%	2.57%	0.55%	0.77%	0.35%	0.81%	1.55%
Total PMA	100.00%	2.95%	21.23%	11.57%	13.72%	8.45%	16.08%	26.00%
2001								
Prague city	90.83%	0.46%	11.15%	8.39%	11.34%	8.77%	10.38%	40.34%
2nd suburban zone	9.17%	0.33%	2.33%	0.94%	1.47%	0.67%	0.69%	2.74%
Total PMA	100.00%	0.79%	13.48%	9.33%	12.81%	9.44%	11.07%	43.08%
1991								
Brno city	81.14%	1.87%	27.59%	9.69%	7.41%	5.89%	13.39%	15.30%
2nd suburban zone	18.86%	3.42%	8.06%	1.04%	1.50%	0.86%	1.84%	2.15%
Total BMA	100.00%	5.29%	35.65%	10.73%	8.90%	6.75%	15.23%	17.45%
2001								
Brno city	81.23%	0.77%	16.68%	9.33%	10.08%	5.99%	12.23%	26.14%
2nd suburban zone	18.77%	1.28%	6.85%	2.11%	2.14%	1.07%	1.89%	3.43%
Total BMA	100.00%	2.05%	23.54%	11.44%	12.23%	7.06%	14.12%	29.57%

Note: A+B – agriculture, forestry, fishing; C-E – total industry; F – construction; G – wholesale and retail; H – hotels and restaurants; I – transport, storage and communications; J – financial intermediation; K – real estate; renting and business activities; L – public administration and defence; M – education; N – health and social work; O – other communal, social and personal services.

of suburban areas are untouched. The aggregated data for the whole districts do not allow us to see this spatial variation. Furthermore, the most radical impact of employment decentralization concerns suburban municipalities, where new development takes place. We have selected three municipalities beyond the southeast edge of Prague's administrative boundary to illustrate the local impacts of employment deconcentration. There has been a remarkable growth in the number of jobs in all three municipalities (Table 8.6). However, their different situation is revealed in the variety of local outcomes of non-residential suburbanization.

Čestlice and Průhonice are neighbouring municipalities. Since 1997, a new commercial zone has been built on their territory. While, in 1991, Čestlice was an agricultural village from which most economically active people had to commute, Průhonice was a thriving suburb oriented to weekend recreation and tourism and with more jobs on offer than the number of economically active residents. By 2001, the situation had already become dramatically different, especially in Čestlice, with nearly four times as many jobs as there were economically active residents; 61 percent of the jobs were in wholesale and retail. The new retail and warehousing

Table 8.5 Change in the share on the total number of jobs in metropolitan areas

	All sectors	A+B	C-E	F	G	I	M+N	H+J+K+L+O
2001/1991								
Prague city	98.80%	30.74%	59.77%	76.15%	87.55%	108.30%	67.99%	164.95%
2nd suburban zone	113.69%	22.73%	90.49%	169.88%	191.90%	189.58%	85.64%	177.31%
Total PMA	100.00%	26.75%	63.49%	80.63%	93.37%	111.68%	68.88%	165.68%
2001/1991								
Brno city	100.12%	41.28%	60.47%	96.28%	136.14%	101.65%	91.34%	170.89%
2nd suburban zone	99.50%	37.32%	85.01%	202.40%	143.23%	125.24%	102.66%	159.57%
Total BMA	100.00%	38.72%	66.02%	106.57%	137.33%	104.65%	92.71%	169.50%

Table 8.6 Change in employment of selected municipalities 1991–2001

Municipality	Population	Economically active (Ea)	Employed (Emp)	Emp/Ea
1991				
Čestlice	405	226	62	0.274
Průhonice	1589	914	958	1.048
Říčany	10650	4259	3698	0.868
2001				
Čestlice	405	241	934	3.876
Průhonice	1948	1089	2197	2.017
Říčany	10876	5838	6301	1.079

zone also contributed markedly to the change in the structure of employment in Průhonice increasing the share of jobs in retail and wholesale from 8 percent to 33 percent. There was also growth in manufacturing jobs in Čestlice and transport and communication in Průhonice. The place became a strong suburban commuting target from Prague and the surrounding suburban municipalities for work in retail and warehousing facilities. Říčany is a small suburban town that has been losing its role of local centre since the 1960s. It lies in the shadow of Prague, to which many people used to commute. However, with the transition to a market economy, this town started to benefit from the vicinity of Prague and the processes of deconcentration. On municipal territory, but outside the town itself, however, two logistic and warehousing parks were established, thereby adding further to the employment.

Since most jobs are located in central cities, there is a high level of centrality in both Prague and Brno Metropolitan Areas. This centrality has recently been challenged by newly-established jobs in the newly-constructed suburban retail, warehousing, and industrial zones. The new suburban employment is clustered in just a few areas, challenging the former dominant concentration in the central city. A polynuclear pattern with strong dominance by the city centres is emerging in metropolitan areas. In most instances, the new areas are at the edge of the existing compact city, maintaining the continuity in urban expansion into the hinterland. However, there are also leapfrogging areas offering new jobs. The former compact city, with a continuous built-up area, is being transformed into a less continuous pattern with spatial fragmentation in the outer parts. It is possible that, in a few decades, the new suburban nuclei of economic activity will develop into large centres of employment (edge cities). In the long term the location of such new areas is strategic, since they are often placed between the existing city's huge population pool (labour supply, consumption power) and the expanding population in the new suburban areas. The spatial pattern of the metropolitan area could become polynuclear, with the strength of urban and suburban centres more evenly matched. The central city and the edge cities will, however, differ importantly in the composition of jobs, with specialized advanced services offering well-paid occupations in the centre and less-well-paid jobs in basic consumer and producer services (and industries) in the new suburban centres. Bearing in mind the residential pattern and the socio-spatial structure, a spatial mismatch between jobs and residences can be seen to emerge.

8.4 Conclusions and discussion

Suburbanization has only developed in Czech metropolitan areas as an important process of metropolitan change since the second half of the 1990s. The suburbanization of non-residential functions, particularly of retail and warehousing, has been more dynamic and influential than residential deconcentration. This situation is quite specific to a post-communist city, which in this respect differs from the common sequence familiar in North America and Western Europe.

The residential suburbanization has not been fostered by a large migration of population to metropolitan areas and a fast expansion of homes to the hinterland of the cities. The overall population stagnated and the deconcentration happened mainly through the spatial redistribution of the population within metropolitan areas. While the central and inner cities declined, there was a population increase in the suburban areas. In 2001, 22 percent of the population in Prague MA and 33 percent of the population in Brno MA lived in a suburban zone. However, most of these people were not typical suburban residents and the settlements are not the products of recent suburbanization. The dense settlement network around cities has its roots in the middle ages. Most suburban inhabitants still belong to a rural population. The original employment in agriculture has diminished over the past five decades and

people have become dependent on industrial and service jobs in cities. The social status of this population is below average in the context of metropolitan areas. The true new middle-class suburbanites only settled these areas in the 1920 and 1930s and then again in the last few years. The overall presence of this middle-class is, therefore, not very strong. However, some municipalities have been significantly affected by suburbanization, where new residents already account for a substantial part of the population and in some cases even the majority.

Employment deconcentration is a completely new and very recent phenomenon. There has been a rapid growth of new economic activities and jobs in suburban locations, in particular around Prague and to a lesser extent also around Brno. Employment in the core cities of Prague and Brno metropolitan areas is shrinking, while it is expanding in suburban areas. This general employment deconcentration is also important in terms of its structural shift in employment composition. In particular, the growth in the suburbs is in the retail, wholesale, and storage sectors, while the decline in the cities is the result of deindustrialization. The spatial deconcentration of employment has not concerned advanced services or office jobs.

The extent, form, and functional composition of suburbanization in Prague and Brno differ. The metropolitan area of the capital city of Prague is the wealthiest region in post-communist Europe and residential suburbanization is driven mainly by the prosperity of its population. Commercial suburbanization has developed in retail and distribution, serving booming local markets and located in the very centre of the country. Residential suburbanization around Brno is less marked. The major difference from Prague is the development of new industrial zones and individual production plants in the Brno suburban areas. While Prague is the country's major command and control centre, Brno's economic development depends strongly on reindustrialization. In both cases, a majority of commercial facilities has been developed through the inflow of direct foreign investments; the development has been realized on out-of-town greenfields. However, the distinctive character of these two metropolitan economies has strongly affected the outcomes of suburbanization.

Suburbanization has made a major impact on the quality of life in metropolitan areas. The compact character of former socialist cities is being changed through rapid commercial and residential suburbanization taking the form of unregulated sprawl. Non-contiguous, leap-frog suburban sprawl has more negative economic, social, and environmental consequences than more concentrated forms of suburbanization. The societal costs of sprawl are well-known from North America and Western Europe; now sustainable metropolitan development in the Czech Republic is threatened. This threat concerns not only residential estates, but also new commercial facilities. For instance, the suburbanization of retail facilities has completely reshaped the pattern of travel for shopping. At present, suburban hypermarkets and shopping malls cater for a large share of shopping. Many of these locations are not served by capacity public transportation and people travel to them from the inner city by car. Another major impact of suburbanization is in the spatial mismatch in the distribution of jobs in metropolitan areas. Suburban

employment is in retail, warehousing, and distribution, with low-paid jobs taken by people from the inner city and the surrounding region. In contrast, the suburban areas are now becoming the homes of prosperous people who commute to their office jobs in central and inner cities. There is, therefore, a spatial mismatch developing between the location of jobs and residences, contributing to an increase in travel in metropolitan areas, with consequent effects on the quality of life and the environment. The outcomes of rapidly-developing suburbanization in terms of spatial distribution of people and their activities in metropolitan areas form conditions that will influence the life of society for several generations. Patterns of urbanization in metropolitan areas will therefore become important targets of urban and metropolitan planning and policies that intend to keep a more compact urban form.

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