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## **The Spatial Structures of Central and Eastern European cities: more European than Socialist?**

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### Abstract

Central and Eastern European (CEE) cities have been under a command economy for a period varying from 45 to 75 years. During this period, the forces shaping the spatial structure of formerly socialist European cities were very different from the ones transforming their western counterparts. Densities and land allocation between different uses – mainly industrial and residential use – were not reflecting demand from consumers but were mostly based on administrative decisions. However, throughout the socialist period CEE cities have maintained their European cultural identity – defined as a prestigious center and an extensive radio-concentric transit network reinforcing the dominantly monocentric structure.

In all CEE cities, land market forces are now again reshaping cities. Municipalities have often had difficulties in adopting a clear strategy between developing their suburbs to respond to demand for new housing and commercial facilities and maintaining and enhancing their historical city centers. CEE cities should adopt an urban planning strategy that, while dealing resolutely with the liabilities left by the socialist era, reflects their European culture: a strong a prestigious historical center served by transit while allowing large suburbs to develop in a way consistent with the unavoidable increase in motorization.

*Key words: Planning, Europe, Socialism*

### *Summary*

Central and Eastern European (CEE) cities have been under a command economy for a period varying from 45 to 75 years. During this period, the forces shaping the spatial structure of formerly socialist European cities were very different from the ones transforming their western counterparts. The absence of real estate markets had the most pervasive effect on the structure of socialist cities. Densities and land allocation between different uses – mainly industrial and residential use – were not reflecting demand from consumers but were mostly based on administrative decisions aiming at minimizing input rather than maximizing values.

On the other hand, nearly every CEE city is built around a large historical core established many centuries before socialism. The absence of market mechanism during the socialist interval has altered the shape of CEE cities but not to the point where they have durably diverged from the Western European model. CEE cities are, after all, more European than socialist. Nevertheless, socialism has altered their spatial structures and, as a consequence, the strategies required to make CEE cities fully functional and culturally European are different from the strategies currently used in Western European cities.

Based on spatial data collected in a number of CEE and in Western European cities<sup>1</sup>, it is possible to define the spatial characteristics of European cities: a dominantly monocentric structure with a center where exceptionally rich cultural amenities and prestigious retail reinforce its monocentric character. The monocentricity is maintained by the prestigious amenities in spite of many jobs moving to the suburbs. As a corollary to the strongly attractive center, an efficient radial transit network make the center accessible even when many job commuting trips are made by individual cars from suburbs to suburbs.

While CEE cities have maintained their European cultural identity during the socialist period they have suffered from a number of spatial malformations which will be a challenge to correct in the future. These spatial features inherited from socialism are: first, the residential estates of high density panel housing located in the suburbs; second, the abnormally high amount of obsolete industrial land located close to city centers; third, the lack of retail and service space in the city center; fourth, a weak and poorly maintained infrastructure which is inadequate to support the high residential densities found in the center; fifth, property rights problems and fuzzy tenure found mostly in centrally located areas which prevent their timely renovation or recycling; and sixth, an underdeveloped local taxation system which relies on transfer rather than on local resources.

In all CEE cities, land market forces are now again reshaping cities. This is seen in particular in the high rents encountered in centrally located housing, in the low rental values of suburban high density panel housing, and in the expansion of office and retail space in the center at the expense of residential areas. At the same time, the sudden increase in car ownership has created congestion and exacerbated pollution.

The policy and investment response of CEE municipalities to face the liabilities of the past and the new challenge posed by markets has not always been completely coherent and consistent because of lack of a clear model which could deal with the

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<sup>1</sup> The cities in the data base are : Moscow, St Petersburg, Riga, Warsaw, Cracow, Sofia, Prague, Budapest, Ljubljana, Berlin, Paris, London, Barcelona, Marseille and Toulouse.

transition. For instance, the attraction of newly developed shopping center in the suburbs compared to often decrepit retail facilities in the city center tends to decrease the monocentric character of the cities and undermines the viability of the transit network. The lack of investments in central city infrastructure often decreases the potential value of real estate in CBDs. Heavy investments in new ring roads, badly needed because of the increasing rate of motorization, have often starved the central areas from investments in the renovation of cultural infrastructure.

The inability to formulate a clear policy concerning motorization, in particular parking pricing in central areas, further exacerbates congestion in centrally located areas. In addition, the regulatory environment was slow to move away from rigid master plans toward more market friendly rules. At the same time, environmental legislation has not been always effective in protecting exceptional natural assets. It appears that municipalities have often had difficulties in adopting a clear strategy between developing their suburbs to respond to demand for new housing and commercial facilities and maintaining and enhancing their historical city centers.

CEE cities should adopt an urban planning strategy that, while dealing resolutely with the liabilities left by the socialist era, reflects their European culture: a strong a prestigious historical center served by transit while allowing large suburbs to develop in a way consistent with the unavoidable increase in motorization.

#### **1. The impact of socialism on the spatial structures of Central and Eastern European cities**

Central and Eastern European (CEE) cities have been under a command economy for a period varying from 45 to 75 years. During this socialist period, the forces shaping the spatial structure of European cities were very different from the ones transforming their western counterparts under a market economy. The absence of real estate markets had the most pervasive effect on the structure of socialist cities. Densities and land allocation between different uses – mainly industrial and residential use – were not reflecting demand from consumers but were mostly based on administrative decisions aiming at minimizing input rather than maximizing values (Kornai, 1992).

To understand better the impact of a socialist political regime on urban land use, it is necessary to summarize the principles upon which planning and investment decisions are based under a socialist ideology. The most important principle is that land had no monetary value per se (Bertaud and Renaud, 1997). Land was allocated on a “per need” basis. Planning norms would establish the amount of land which was required to build factories as well as apartments. The normative area of land required for each use was established per unit of output and therefore was the same whether the parcel of land was close or far away from the center of cities.

Land, once allocated to an enterprise, could not be sold or leased to a third party. Unused land could only be returned to the state without compensation. This principle had a major impact on industries which were subject to technological change. Under this principle, factories could expand but not relocate, as the cost of relocation would be a net cost which could not be compensated by the sale of land of the initial site. In some cities, in Budapest and St Petersburg, for instance, large industrial areas were created in rings around the historical core. Even when technology and operational concerns prompted managers to move the operations of these factories to more adequate locations, the land

of the original industrial belt was not recycled but remained industrial, albeit with fewer jobs and industrial activities.

Land for services and retail was allocated in the same manner, based on spatial norm per unit of output. However, by contrast with land for industrial use, which was considered the backbone of the economy, land for services was systematically under-allocated. One of the reasons is, of course, that many services do not exist in a socialist economy – for instance, banking, insurance, and real estate brokers, etc. Many services, like health, education, retail and restaurants were provided within the premises of industrial enterprises or government offices and therefore did not require any special land allocation. The systematic under-allocation of land for services gave rise at the time of the transition to an invasion of “shops in a container” often called “kiosks” established on sidewalks and public parks. To palliate the lack of space for newly created retail, many shops established in basements with openings at sidewalks level, as can still be seen in some residential streets of Sofia.

Land allocated to housing was also following a uniform norm, whatever the location of the site. However, in time, the normative area allocated to housing changed with the technology used for construction. Prefabricated panel systems, which became universally used for housing all over CEE countries from the 60s onward, permitted to build higher blocks of apartments, decreasing the normative land requirements. The density of large apartment projects was not linked, therefore, to their location within the city, or to perceived demand or the price of land, but to the technology used at the time of construction (Buckley & Mini, 2000). Because the evolution of panel technology allowed building higher and higher structures over time, the most recent housing projects had usually the highest density.

Panel prefabrication projects required large sites to accommodate an on site prefab factory and large moving cranes. Large vacant sites required by the prefab process were found only in distant suburbs. As a consequence, the most recently built projects in the most distant sites would end up with the highest density. The increase of housing density with distance from the center is observed more dramatically in the cities of the former Soviet Union (Bertaud and Renaud, 1997). It is important to note that the increase in density with distance from center was not a deliberate spatial policy but a side effect of the administrative land allocation system.

In some CEE countries, enclaves of private housing were tolerated, as were the case in Poland and Hungary (Buckley & Tsenkova, 2001). Private housing, however, was severely controlled: it had to be owner occupied, for one family only and the unit's floor space could not be above 120 m<sup>2</sup>. In this manner even privately owned housing would follow a set of spatial norms independent from its location in the city. The areas and locations where private housing was allowed to survive were not the object of a conscious planning decision but a historical accident where old system of tenure was kept on what was considered residual land.

It should be noted that the use of normative land use standards independent of locational demand for housing was not a practice unique to socialist economies. Many market economy cities of western Europe – France, Belgium, Holland, for instance – used prefabricated system based on government established norms to build subsidized housing for low income households in distant suburbs. The densities, site design and location of these housing projects were not very different from their socialist counterparts

in Central and Eastern Europe. Indeed, many of these projects constituted a socialist enclave in an otherwise capitalist economy. The only difference is that these types of high density residential projects were not built anymore after the mid 60s and they usually represented only a fraction of the new housing stock built each year.

To summarize, we would expect that CEE cities would retain from their socialist past a number of spatial malformations which will be a challenge to correct in the future. These spatial features inherited from socialism are: first, the residential estates of high density panel housing located in the suburbs; second, the abnormally high amount of obsolete industrial land located close to city centers; third, the lack of retail and service space in the city center; fourth, a weak and poorly maintained infrastructure which is inadequate to support the high residential densities found in the center; fifth, property rights problems and fuzzy tenure found mostly in centrally located areas which prevent their timely renovation or recycling; and sixth, an underdeveloped local taxation system which relies on transfer rather than on local resources.

## **2. The spatial characteristics of European cities**

Every CEE city is built around a large historical core established many centuries before socialism<sup>2</sup>. The spatial structure of CEE cities is therefore the result of the superimposition of a socialist city structure on the historical market economy city. To what extent one structure dominates the other will depend on the history of individual cities. (see Bertaud 2002 (a), 2000 (a) &(b), 1999 (a) & (b))

It is impossible to understand the structure of CEE cities, which are always a hybrid between market and socialist economy structures, without defining the major spatial characteristics of European cities.

All major European cities are ancient cities whose core and main radial streets date from the middle ages or even from the Roman period. A large number of high grade amenities such as museums, concert hall, religious and civil monuments have accumulated through centuries in the historical core. Around these historical community buildings have grown over the years the most prestigious department stores, specialized shops, café and restaurants. The mixed land use common in most of Europe has allowed modern office buildings to develop either within historical shells – as in Paris – or in juxtaposed modern buildings – as in London. The center of European cities constitutes a center of attraction much more important than a traditional CBD in other continents. The prestige associated with the proximity to the amenities found in the city center increases the value of commercial as well as residential floor space. The strong attraction of European city centers for rich households is well explained and documented by Brueckner *et al* (1999).

The network of public transit is organized along a radial network of roads which further reinforce the role of the city center. The radial system of transport inherited from the pre-automobile age continue to predominates, in spite of the circular roads which have been developed during the second half of the twentieth century.

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<sup>2</sup> Warsaw, in our sample was entirely destroyed during the second world war. However, during reconstruction, Polish planners were careful to try to reproduce as much as possible the type of housing and density of the old pre-war Warsaw. The old city was rebuilt “à l’identique”. Our sample lack new cities of Russia which were built a novo, like for instance Novo-Sibirsk or Magnetogorsk.

### 3. Comparative spatial analysis of CEE cities

The superimposition of the socialist spatial development pattern over a market economy core is immediately visible when making a spatial analysis of CEE cities. We will compare the spatial structure of ten CEE cities, Moscow, St Petersburg, Riga, Warsaw, Cracow, Sofia, Prague, Budapest, Ljubljana, and Berlin, with five counterparts in Western Europe: Paris, London, Barcelona, Marseille and Toulouse. We will use four spatial indicators: average density, density profile, land price profile, and % of industrial land.

#### Indicator 1: Average density

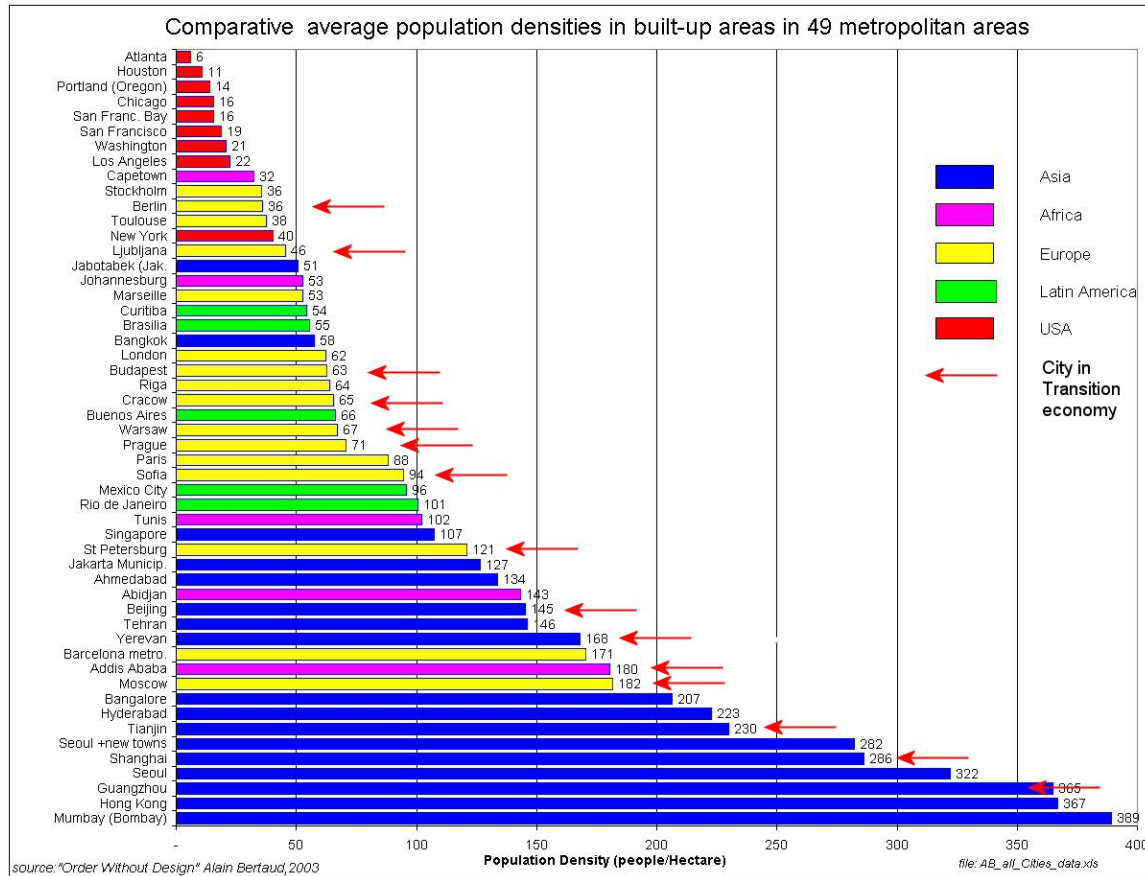


Figure 1: Average population density in the built-up area of 49 cities

Average densities would be expected to be higher in former socialist cities because of the way land had been allocated during the socialist period, in particular because of the ideologically motivated dominance of apartments over individual housing. On the other hand, the over-allocation of land to industries should tend to lower densities. In fact, when compared to other cities' densities, the density of CEE cities does not show any differences with the density of their market counterparts. As seen on Figure 1, average densities varies greatly – of several order of magnitudes – between cities in various part of the world. The variations, however, seems to be due to cultural factors inherent to each continents, as shown on the graph of Figure 1. Former socialist cities in Europe have the same range of average densities – between 35 and 100 people per

hectare – as their European market economy counterparts. Moscow and St Petersburg are European outliers with much higher densities, but Barcelona's density is similar to Moscow's. It is remarkable that the density of Chinese cities is very similar to their South Korean and Indian counterparts. When it comes to average density – i. e. consumption of land per person – regional location is more important than ideology. In CEE cities, being European is a more important predictor of densities than being formerly socialist.

### Indicator 2: Density profile

Many of the peculiarities of the socialist land allocation system described above should be identifiable on the density profile of cities. Figure 2 shows the density profile of some CEE and western European cities. On Figure 2, the distance from the city center in kilometer is represented horizontally; the built-up density within each ring at 1 kilometer interval is represented vertically. To facilitate comparisons between cities, both horizontal scale and vertical scales are equal on all graphs and varies respectively from 0 to 30 km and from 0 to 300 people per hectare.

On the graph of Figure 2 cities are divided into 3 categories: first, CEE cities that have been under 40 years of socialist rule, second, cities under 75 years of socialist rules and third, cities of Western Europe with an uninterrupted tradition under a market economy. We can see that with the exception of Budapest, CEE cities under the first category show a density profile which is negatively sloped but convex, with notable disturbance in the profile, cities in the second category tend to have a positively sloped profile, while market cities in the third category exhibit the negatively sloped concave exponential profile in conformity with the literature on density gradient in monocentric cities in market economies (Alonso 1964, Muth 1985, Mills 1970).

The comparison of density profiles shown on Figure 2 confirms the hypothesis made above: CEE cities have a hybrid spatial structure reflecting the time they spent under different economic systems. The city development pattern under capitalism tends to shape densities along a negatively sloped exponential curve (example Paris), while socialism tend to shape densities along a positively sloped curve (example: Moscow). The longer the time spent under socialism the more positively sloped is the curve. Most CEE cities, with the exception of Moscow, have a high density in the city center, the resilient imprint of their capitalist past.

The density profile of Budapest is more puzzling but is not inconsistent with the hypothesis of two superimposed spatial structures. The profile starts with a high density in the center of 280 people per hectare (similar to Paris') then drops suddenly to around 60 at a distance of 4 km and stay about flat at this level on a distance of 4 kilometers. The high density of the center is the imprint of its historical capitalist core, while the sudden drop in density is due to a wide industrial belt similar to the one found in St Petersburg and Moscow. In the other CEE cities the industrial areas are more spread along radial axis and tend to decrease densities more evenly (for instance in Warsaw, Sofia and Riga).

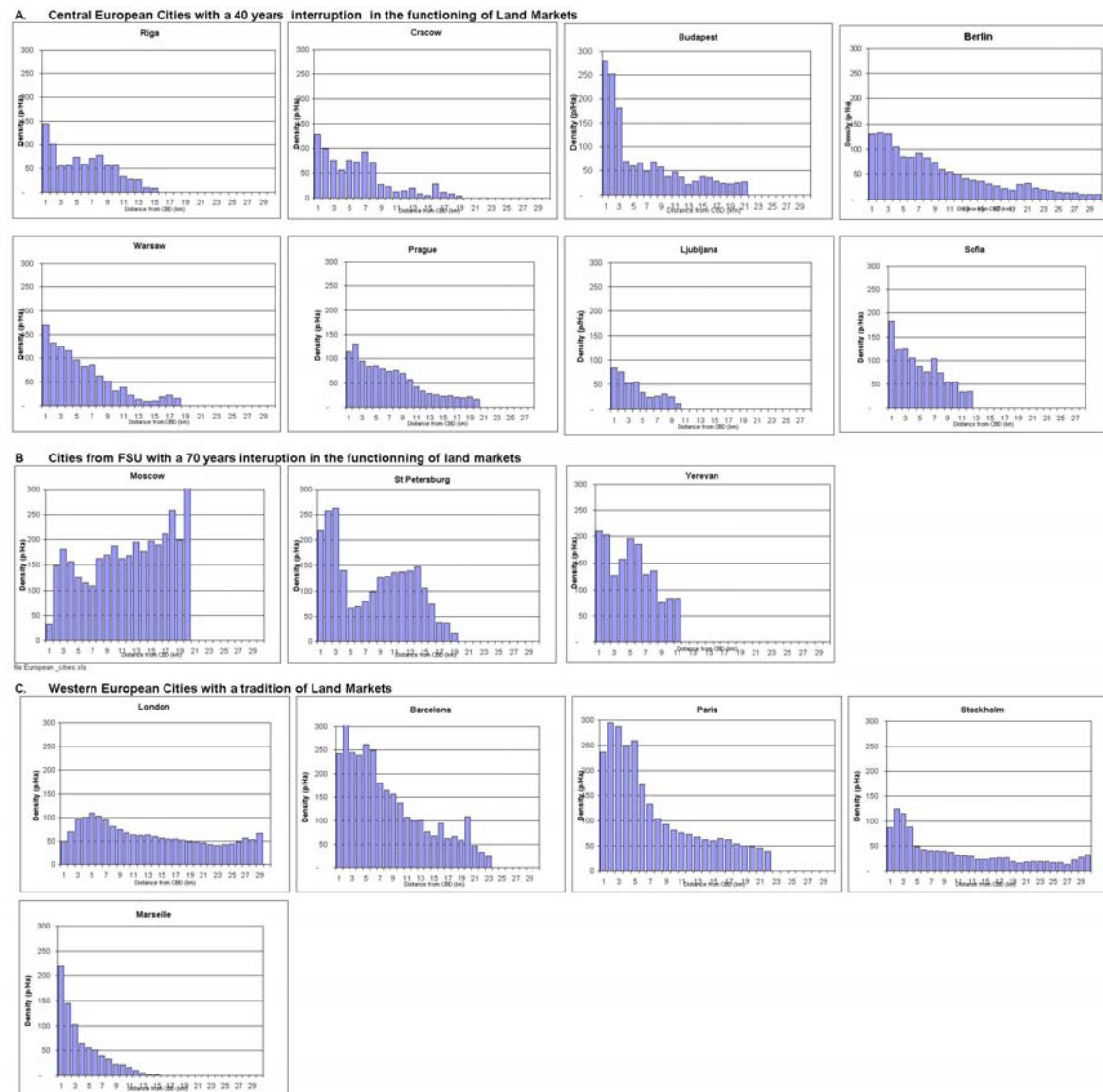


Figure 2: Comparative density profile between CEE cities and Western European cities

The density profile at time can be misleading in accounting for change in densities with distance from the center. In a socialist economy, within a given radius, a large proportion of the built-up area might be occupied by industries or low density private housing, while the majority of the population lives in very high density settlements. The average density at this distance might be rather low, in spite of the majority of the population living in very high density residential projects. The graph of Figure 3 shows that in Budapest, more people live in high density neighborhoods (higher than 200 people per hectare) between km 8 and 9 than between km 3 and 5. The large numbers of peoples living in low density neighborhoods close to the center are either living close to or within industrial areas or in private housing with a controlled low density. While the density profile is a useful tool for describing market economy cities, it is not always adequate to describe socialist type of land use which is far less homogenous.



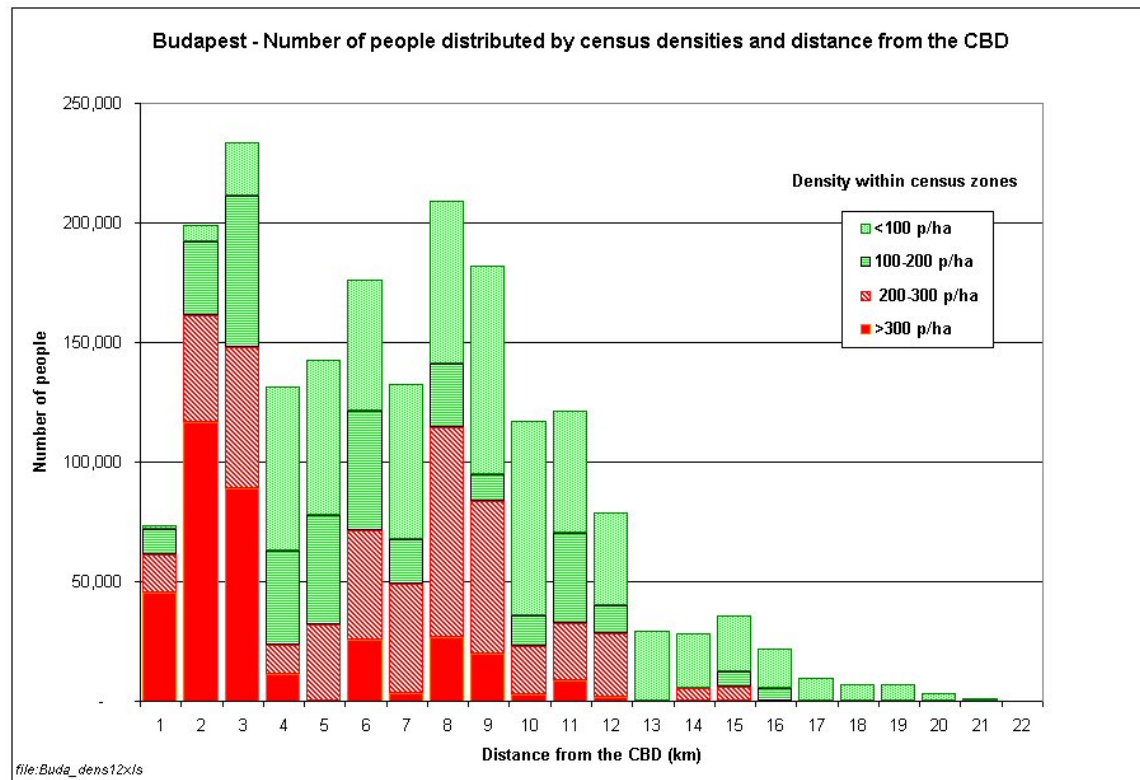


Figure 3: Budapest: Distribution of people by distance from the center and densities

### Indicator 3: Land price profile

The monocentric city model of Alonso (1964), Muth (1985) and Mills (1970), implies that there is a close correlation between density and land prices. This is usually confirmed by empirical evidence in most market cities – even in cities which are not dominantly monocentric. For instance, in Paris, the income and density profiles follow the predictable negatively sloped exponential curve (Figure 4 a) and both curves follow closely each other inflections. The very steep decrease in price and density at a distance of about 4 km from the center is typical of European cities. It suggests that the high quality amenities and to a lesser extent the jobs offered in the center of the city are highly valued by households.

Under a socialist economy there is no land price profile, as land is distributed administratively. However, as soon as a market economy started to function in CEE cities, land bids aligned themselves along an exponential negatively sloped curve (Brzeski & Dale Johnson 2001) – as predicted by the monocentric model – while the density profile kept the shape it had acquired during the socialist period. There is therefore a discrepancy between prices and density in all CEE cities as can be seen on Figure 4 b, c, and d for Warsaw, Cracow and Riga. For instance at km 5 in both Riga and Cracow, land prices drop sharply while density increases.

In practical term, does it matter? The discrepancy between price and density shows a contradiction between the supply of existing housing and the demand from households. On the ground this contradiction manifests itself by market rents which are

often lower than maintenance cost, but more generally by capitalized market rents which are much lower than land price plus construction replacement costs. The low market value of a large part of the housing stock in CEE cities is not due to a temporary demand slump but to a permanent spatial defect reflecting inefficient land allocation at the time of socialism. This raises important policy implications which will be discussed below.

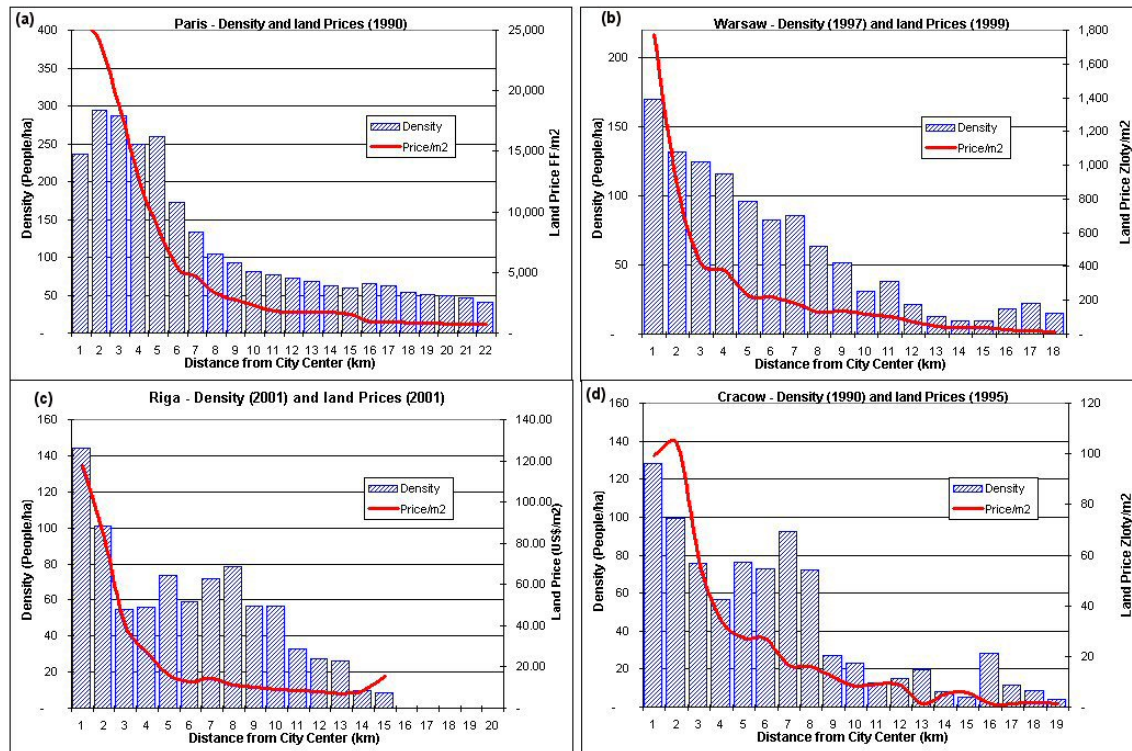


Figure 4: Land price and density profile in CEE cities and in a market economy

#### Indicator 4: Proportion of industrial land over built-up area

In market economy cities, industrial land built during the industrial revolution and during the first part of the twentieth century has been progressively reconverted to other uses. This systematic and progressive reversion was not due to deliberate urban planning decisions but rather to market forces. Industrial use is land intensive and therefore increases the need of capital where land is expensive. In addition, the communication technology which allows having production, design and management in different locations further encourage the land intensive production function to move to distant suburbs where land is cheaper while maintaining the design and management functions in the CBD.

In CEE cities, these market forces were obviously not at work. The value of real estate did not appear as assets in the industrial enterprises accounts. In addition, the socialist ideology gave a special prestige to manufacturing, as can be seen on propaganda poster including iconic smokestacks.

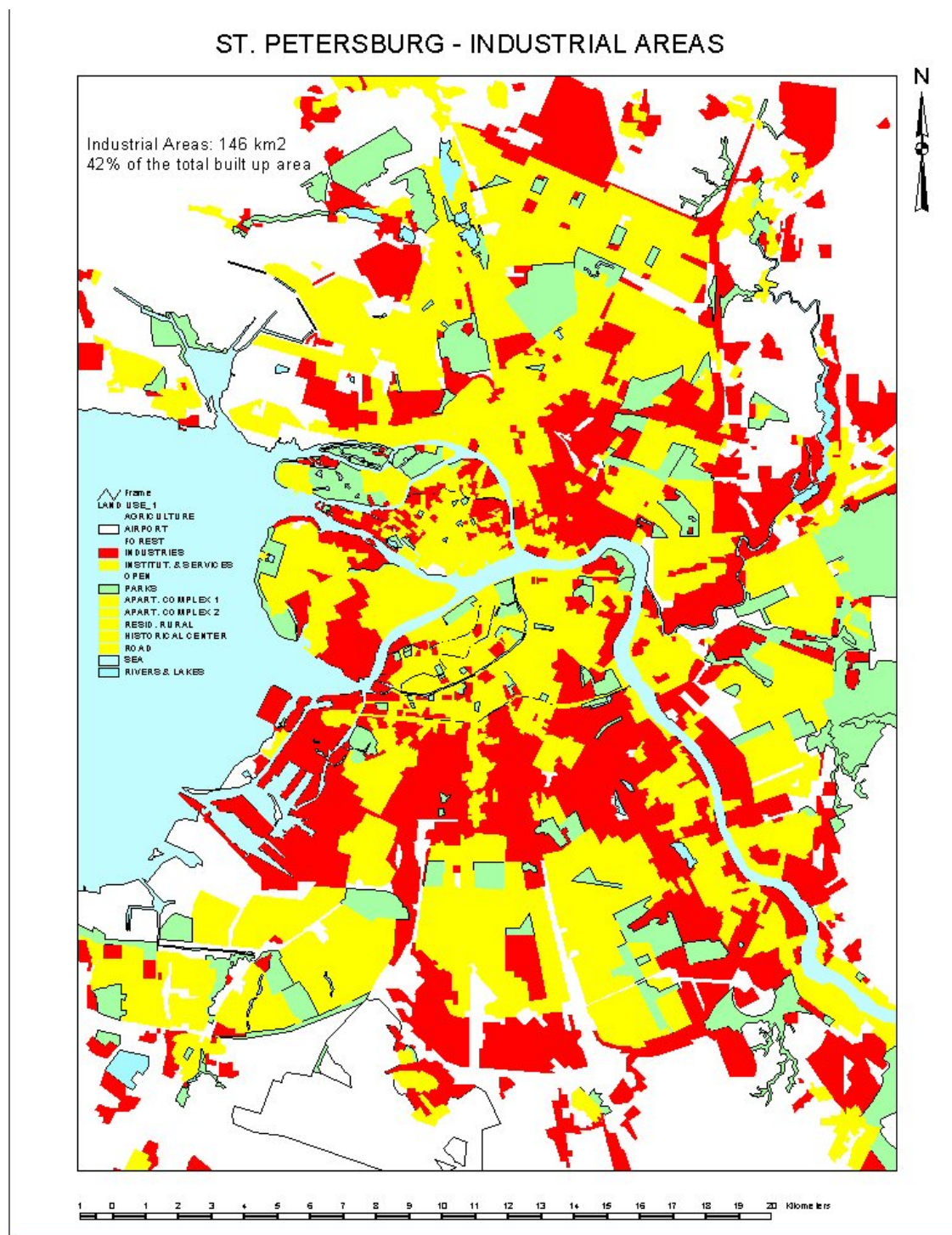


Figure 5: St Petersburg. Map of industrial areas

The land use map of St Petersburg illustrates the way industrial land hinder urban growth (figure 5). The areas shown in red on the map of Figure 5 are industrial; the areas



shown in yellow represent the rest of the built-up area. In St Petersburg, there is very little employment left in industrial areas; many areas are in fact warehouses.

One area of more than 40 hectares, in the first industrial belt directly to the South of the historical city is used to store coal in bulk. This area is next to 2 subway stations, within a few minutes from Nevsky Prospekt. If the cost of capital represented by the market value of the land occupied by the coal depot was included in the price of coal distributed in St Petersburg, it would certainly represent a sizable amount and would provide a strong incentive for its relocation. This suggests that the privatization of state owned enterprises should improve land use efficiency more effectively than drawing new “improved” land use plans.

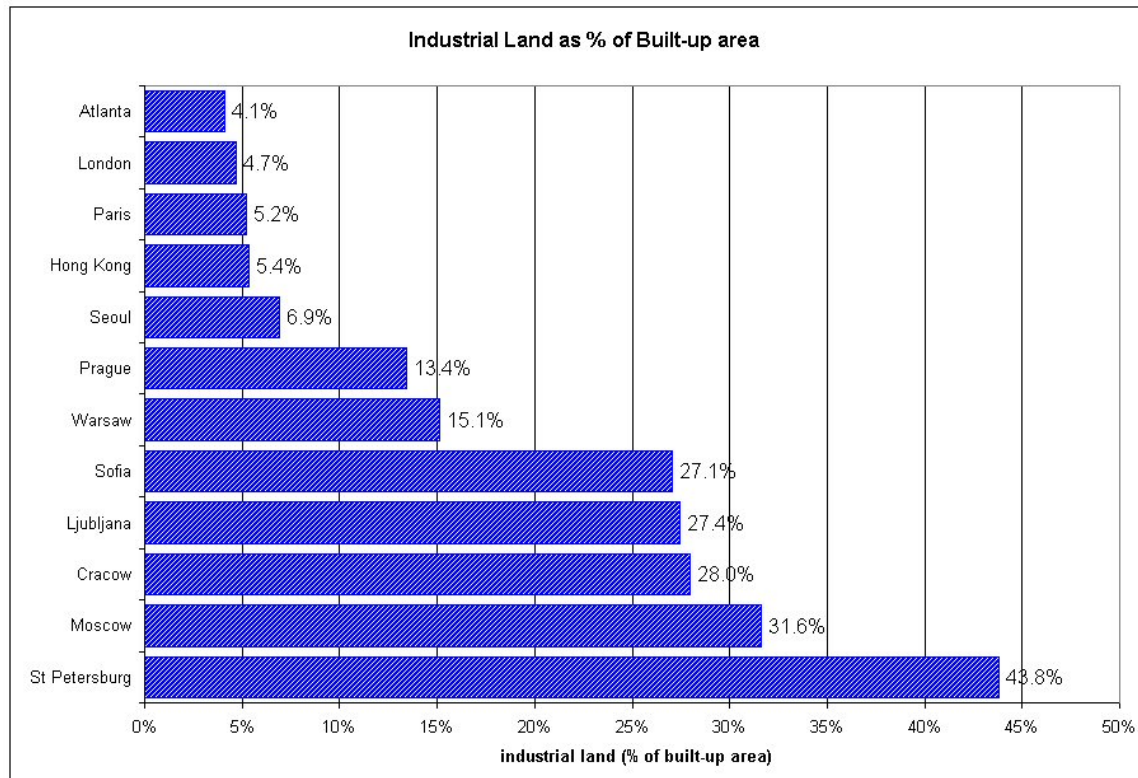


Figure 6: Percentage of industrial areas in various cities

The large amount of industrial areas as a percentage of the total built-up area is a typical feature of CEE cities. In most market economy cities, the industrial areas represent from about 4 to 10 % of the total built-up area. The graph of Figure 6 shows the variations in industrial area percentage overbuilt-up areas in CEE cities and in other cities in the world. Even cities like Seoul and Hong Kong which had still a strong manufacturing base 30 years ago, managed to reduce the proportion of industrial land below 10% because of land market pressure. The large areas of underused industrial land in CEE cities constitute a major challenge to their modernization. In the absence of land industrial land conversion, new developments have to leap frog derelict industrial waste land, increasing the cost of transport and of infrastructure development.

#### **4. The development of urban strategies specific for CEE cities**

The policy and investment responses of CEE municipalities to face the liabilities left by their socialist past and the new challenges posed by markets have not always been completely coherent and consistent because of lack of a clear model which could deal with the transition. At the same time the declared development objectives of the municipalities are remarkably consistent between CEE cities and other European cities. These objectives include usually the following<sup>3</sup>:

1. reinforcing and preserving the historical character of the urban center by maintaining a high level of economic activity and a mixed land use;
2. maintaining a high proportion of trips by transit and discouraging the use of private cars in the center city;
3. preserving the quality of the urban environment – in particular historical and cultural monuments – and preventing the deterioration of the natural environment in the periphery of cities;
4. maintaining a high level of employment – in particular in the city center – by making cities attractive to business investments;
5. keeping housing prices as low as possible by insuring a steady supply of new housing for all income groups;

These objectives are common to CEE and most Western European cities. However, the policy and strategy to implement these objectives are different in CEE cities because of the spatial land use constraints described above. Each of these five objectives requires a strategy specific to CEE cities as described below:

##### *a) Reinforcing economic and cultural activities in city centers*

A greater freedom in land transactions and in land use changes is required to reinforce economic activities in the center of CEE cities. A large part of the land or at least the floor space in the center city of CEE cities is misallocated. A greater flexibility should be allowed to progressively allow land use changes which reflect demand for new business, retail and commerce like restaurants and cafés.

Planners in CEE, while recognizing the need for change, tend to “design change” rather than let market forces shape the new land use. For instance, the new master plan of St Petersburg in 1998 had already selected specific sites where respectively 2 stars, 3 stars and 4 stars hotels should be located. It is of course much better to let hotel operators propose how many and which types of hotel should be built on which sites. The city may then raise objections because of obvious externalities, or may negotiate an impact fee to compensate for additional off site infrastructure modification which may be required. Micromanagement of land use is never successful as urban planners do not have enough information about the demand for and the operational viability of hotels, barbershops or any other business activity.

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<sup>3</sup> Individual municipal objectives for the cities of Cracow, Budapest, Warsaw, Riga and Prague are described more in detail in Bertaud 1999 (a) and (b), 2000 (a) and (b), 2002 and in Bertaud and Malpezzi 2003.

Many well meaning regulations prevent land use conversions in down town areas. For instance in many centers in CEE cities, conversion of residential floor space into office space or even retail space is strictly controlled or even forbidden. The main objective of these regulations is to prevent a decrease in the housing stock. Restricting land use conversion in downtown area is however an ill conceived policy, as it contributes to lower the attraction of the center and push modern commercial development in the suburbs, often in peripheral municipalities where regulations are more flexible. As most apartments in CEE cities have been privatized, the sale price of apartments purchased by office developers is likely to be reinvested in newer more modern apartments in the same city, therefore unlikely to result in a net loss in the total number of apartments.

In addition to restrictive regulations, land use conversion might be hindered by fuzzy property titles. Uncertainty over property rights affect most particularly the older parts of towns where overlapping titles and restitutions problems have not yet been solved. Because it affects mostly the center city, the problem of tenure uncertainty contributes to weaken the center's economic activities and by default push toward the suburbs activities which should have located in the center if clear titles had been available.

The need to maintain the historical character of city centers is often invoked to justify freezing land use in its past socialist state. This is a self destructive policy, as historical buildings are expensive to maintain and only high rents and high property taxes produced by prestigious economic activities can pay for the continuous maintenance of historical buildings.

The maintenance of a strong center requires the municipal government to make sizable investments in maintaining and renovating cultural centers and even, in the European tradition, in subsidizing the operation of concert hall, operas and theaters. The western European tradition of mixing cultural monuments with commercial ones<sup>4</sup> should be extended to CEE cities. Mixed land use should contribute to generate the taxes which allow subsidizing cultural activities. The mix of culture and commerce reinforce each other. However, for this mix to happen land transactions should be facilitated and regulations should allow land use changes.

*b) Maintaining a high proportion of transit trips*

Most European cities are dominantly monocentric, have a prestigious center with a high level of amenities (Brueckner et al, 1999) and have relatively high population densities around the city center. This creates very favorable conditions for operating an efficient transit network which is convenient for the consumer and viable for the operator. However, a reversal of these conditions – loss of economic activities in the center, deterioration of amenities and lowering of population densities, will contribute to a decrease in the number of trips by transit. The municipal objective of maintaining a high proportion of transit trips is therefore dependent on land use policy at least as much as it is dependent on the efficient operation of the transit network itself.

The ability to maintain a high proportion of transit trips depends therefore on the conditions described in the preceding section on the quality of the city center. Land use

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<sup>4</sup> See for instance the recent underground shopping gallery directly connected to the lobby of the Louvre Museum in Paris.

regulations allowing land use change, a great flexibility in land use mix, and buoyant land transactions contribute in large part in reinforcing the use of transit. Deterioration of transit operations and of the economic viability of the city center decrease transit trips and increase the use of private cars. The policy toward the use of private cars, in particular road pricing and parking pricing are key element of a spatial policy.

The high population density of the center of European cities, ranging from 100 to 300 people per hectare is possible only with an efficient transit system serving the high density central area. Western European cities have had to deal with the competition between car and transit for the last 75 years. The recent pricing of car access to the city center imposed in London shows that the debate about car vs. transit is still not over.

In CEE cities the increase in car ownership and car usage as a mean of commuting has been recent and brutal. Unfortunately, the policy regulating car access in the center city has not been always consistent with the municipal objectives described above. Municipalities of CEE cities, confronting a flood of newly acquired cars, have a tendency to either force through regulations the buildings of new off street parking, or even worse, subsidize the creation of municipal parking and underprice on-street parking. Municipalities parking strategy should be consistent with their overall objectives. The maintenance of a dense dynamic center – characteristic of European city centers – is incompatible with subsidizing car access to the center. Land in the center of European cities is far too valuable to be used for free or subsidized parking. The price of land and its corresponding market rent should establish parking rates and, as a consequence, the number of cars that have access to the city center. Right of ways of downtown streets should be entirely used for either pedestrian or car traffic, but free of parked cars. Private developers should be free to build off-street car garages, provided the capital and operation is free of subsidies.

*c) Preserving the quality of the environment*

To preserve the quality of the environment a different urban strategy should be developed for each of the following sub-topics: the urban environment, historical buildings and the “natural” environment outside the built-up area.

The first step in preserving the urban environment in CEE cities is to decrease air pollution. The relocation of obsolete industries and the maintenance of an efficient transit system – both topics discussed in previous sections – are the most efficient strategies to deal with this problem. The quality of the urban environment will be significantly improved by establishing a balance between transit and car access in the downtown area, while preserving or creating large pedestrian areas.

Historical buildings or entire historical neighborhoods should be protected by specific regulations. However, it does not mean that historical buildings should be gutted of their market value. The use of the floor space within historical buildings which are not already occupied by traditional activities, such as municipal facilities or churches, for instance, should be dictated by market forces, under the constraint of building regulations which aim at preserving their appearance and their historical characters. CEE cities often contain boarded-up historical building that the municipality is trying to preserve while enforcing land use regulations which prevent any viable use for them.

Pressure on the natural environment in the outskirt of cities is best alleviated by allowing land recycling and market driven densities in the areas already built. In many

CEE cities, the regulatory and tenure constraints encountered in the center are putting an enormous pressure on the city outskirts, or even in some cases, as in Budapest and Cracow, for instance, across municipal boundaries.

The natural environment in the outskirt of cities is best preserved by first delineating clearly the most valuable or environmentally fragile areas, then letting development occur rather freely in the areas outside these zones. Because people in CEE cities have suffered in the past from high administrative densities imposed on the suburbs, there is a reverse tendency now to over-regulate densities but on the low side. Regulations which systematically decrease densities below market demand result in expanding the city further and creating even more pressure on the natural environment. The low density imposed in areas adjacent to an electric tramway in the new zoning of Cracow illustrates this point (Bertaud 1997).

*d) Maintaining or promoting high employment*

Governments in CEE cities are concerned by the high unemployment rate created by the closing of state owned enterprises. While municipalities are working to attract large foreign investments – say, a Volkswagen factory or a Coca-Cola bottling plant – they often ignore the land needs of small local businesses. In reality, most new jobs are created by small enterprises in the service and retail sector. These sectors have been grossly undeveloped under the past command economy. One of the major hurdles faced by newly created small enterprises in CEE cities is to find a place to operate their business.

Land is a major input in creating employment in urban areas. Because of the under-allocation of land during the socialist time, much of the land and floor space required for creating new jobs are currently under a different use, either industrial or residential, or even agricultural or government use. The creation of new jobs depends therefore upon the timely conversion of existing obsolete land use and floor space into a new use for which there is demand. Unfortunately, the new zoning laws which have replaced the old master plans of the command economy are often either preventing land use conversion or imposing such high transactions costs that land becomes unaffordable to new businesses.

Planners have converted the old master plans into “structural development plans” which usually include a new zoning plan, very similar in purpose to the zoning plans found in Western market economy cities. However, in doing so they have often perpetuated the old land use inherited from the command economy. For some reasons, the notion of “non conforming zoning”<sup>5</sup>, indispensable in the practice of zoning law in market economies, is often absent from the zoning legislation of CEE cities. For instance the zoning plan of Prague, as established in 1998, contains 68 zoning categories representing the current land use. Any entrepreneur desiring to start a new business is unlikely to find a ready seller within the precise zoning category corresponding to his/her

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<sup>5</sup> “Non conforming zoning” refers to areas which are currently under different use than the one allowed by the zoning plan. The zoning regulations does not requires the owners to demolish and change their current use, but only that when the existing building is demolished the new one rebuilt in its stead conforms to the zoning provisions. A building may therefore stay in non conforming state for decades if no economic forces are there to change the use.



new business in a compatible location. The entrepreneur will have therefore to ask for a rezoning, which will be lengthy and costly, if at all possible.

Designing regulations which are consistent with markets is relatively easy in market economies, because zoning changes are usually preceded by public hearings where suppliers and consumers have a chance to express a well informed opinion. It is more difficult in former socialist economies because, first, existing land use does not provide much indication of what the market “wants”, second, public participation in local government issues is still embryonic, and third, interest groups are much less organized and informed about technical issues such as zoning. In CEE cities the best approach to regulations could be the one used in Warsaw (see Bertaud 2000). In Warsaw zoning areas are divided into 3 broad categories, market driven areas covering about 48% of the municipal area, segregated areas for noxious uses (14%) containing heavy industries and utilities, and protected areas (37%) including historical areas, university areas, and green areas to be protected. Within these categories are of course subcategories adapted to more specific uses. The market driven area category is the most original feature of Warsaw proposed zoning. In this zoning category, regulations allow almost any mix of non-noxious use and establish a limit on density far above the current density, providing developers with an incentive to redevelop existing structures in a more intensive way wherever there is demand for it. At the same time, the historical monuments and the natural features, such as the bluff dominating the Vistula River, are fully protected. Prague zoning, by contrast, with its more than 68 zoning categories reflecting existing land use, does not provide much incentive for developers and requires continuous zoning amendments which might be difficult to monitor.

*e) Keeping housing prices as low as possible*

Most CEE cities face falling populations over the next decades. In spite of the falling population there is still pressure on housing because household size is also falling, and many apartments in downtown areas have been transformed into offices or even torn down (as in Warsaw) to make room for office and commercial space. As incomes increase we can predict that the desire to consume more floor space per person will also fuel demand for more housing. Many small apartments (outside panel housing) are being consolidated into larger ones, thus diminishing the number of units. We have therefore a paradox of a concurrent falling population and a housing shortage.

This housing shortage in some CEE cities has resulted in a sharp increase in housing price, especially for new modern and better standard constructions. Understandably enough, municipal authorities are concerned with rising housing prices. Municipalities should resist the temptation to try to control prices or worse to establish rent control. The best approach is, first, to facilitate land conversion from industrial or agricultural use to residential use; second, to allow the densities suggested by the market. Too often, because of popular rejection of large panel housing estates, regulators have a tendency to zone most new residential areas for low density individual housing with rather large minimum plot size. In most areas, regulators should allow developers to fix density according to demand, even if this requires a negotiation on impact fees to reinforce the available infrastructure. Urban planners should be reminded that higher

residential density – when demand driven – reduce the foot print of the city and therefore reduce transport time and pollution due to transport. Higher residential densities, when there is a demand for them, are therefore environment friendly.

The problem of the rehabilitation or progressive elimination of “panel” housing pose a particular difficult problem. In many socialist cities, though most spectacularly in Moscow, a great deal of past investment has been in housing that is worth very little, not only because of poor design and maintenance, but because of location. In many CEE cities market rents in “panel housing” is below maintenance cost. “Panel housing” apartment units are trading much below replacement costs.

This creates a real conundrum for city managers. On the one hand, investing large sums of money to upgrade this existing stock would be risky, at best, given their location. On the other hand, at least in some cities these units are such a large proportion of the stock that it will take some years for markets to build sufficient replacement stock to house the population. The best policy is probably to undertake some “minimum” maintenance, while accelerating the development of real estate markets that can fill the gap. This would include, but not be limited to, regulatory and planning environments conducive to market-driven infill as well as some greenfield development.

## **5. Conclusions**

In spite of the remnants of socialist land use, CEE cities have remained European because of their underlying spatial structure and the priority objectives expressed in their development plans. However, to maintain their European character, the land use patterns left over from socialist times have to be corrected. Improving the functioning of markets by allowing more transactions and reducing regulatory barriers and transactions cost is the best way to deal with the spatial problems left from the socialist period.

The reinforcement of the city center, in terms of amenities and job concentration is an important objective which has many benefits: first, maintaining the dominantly monocentric character of the city increases the viability of the transit system and therefore reduces pollution; second, maintaining high densities in the center decreases the pressure on the natural environment at the city fringe; and third, a prestigious center maintains the cultural identity of the city.

The removal of the large industrial areas located next to the historical centers is probably one of the highest priorities to maintain the European character of CEE cities. This removal is not always easy as the soil of these industrial areas is often polluted and requires to be treated before being allocated to another use. In addition, municipalities have to invest a large amount of resources to create new streets and new infrastructure compatible with residential or business use.

Municipalities in CEE cities are confronted with 2 apparently contradictory tasks: letting the market take the lead in allocating land and floor space between different uses in the city center, while taking investment initiatives in planning and building infrastructure to redevelop obsolete industrial areas. Private developers in CEE cities have neither the experience nor the access to sufficient financial resources to take over the redevelopment of such large areas.

In the absence of strong municipal initiatives to reinforce the cultural and business character of the center city and to invest in the redevelopment of industrial

areas, the structure of CEE cities might be irreversibly damaged. The increase in motorization combined with the difficulty of real estate transactions in the city center will artificially stimulate the growth of business and residential development in the suburbs, progressively marginalizing the historical city center. If this scenario was to be realized, CEE cities would progressively lose their European character, in spite of the stated objectives of their development plans.

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