In a globalizing economy territories – most of all large cities and urban regions – find themselves in competition with other cities and regions. Very obviously, cities which are ranked highest are challenged to become a metropolis competing with other metropolises on – at least - the European level. This means, high ranking cities should attract not only general economic functions on the interregional and national level but more specific functions like decision centres of multinational firms, international strategic and controlling institutions (private or public) in the political, economic and cultural sphere (Krätke, 1995). Besides others, specific challenges of governance emerge for strategic efforts on the urban-regional level in order to secure and increase the competitiveness of such territories. From a theoretical point, absolute advantages provided through strategic efforts on the urban-regional level, are predominantly responsible for the strengthening of its competitiveness. (Camagni, 2002; 2008)

Anyhow, in this paper we concentrate on two topics: First, we discuss selected metropolitan functions and relevant impacts on spatial development. Second, we concentrate on specific strategic efforts which aim on the attraction and strengthening of metropolitan functions and competitiveness. Dealing with these topics empirically, we describe the process of metropolisation of Barcelona and Vienna and try to assess relevant strategic efforts in a comparative way.

Keywords: metropolitan functions, competitiveness, strategic efforts, Barcelona, Vienna.
1 Introduction

The process of metropolisation is a specific result of changing conditions for urban development on the global and the European level. At the same time it reflects the competitiveness not only of a city but of an urban agglomeration. Due to this fact specific challenges of governance emerge for strategic efforts on the urban-regional level. (Parkinson, 2003) Facing such challenges in most European metropolises such strategic approaches are established in order to secure and increase the competitiveness of such territories and in order to shape territorial development on the urban-regional level. In this perspective, area based advantages provided through strategic efforts, are primarily discussed for the strengthening of its competitiveness. (Begg, 1999; Camagni, 2002 and 2008)

Facing metropolisation we focus in this paper on two questions: What are metropolitan functions and characteristics of metropolisation?, and What are basic challenges of strategic efforts shaping this process and strengthening its competitiveness in an effective way. Answering the first question we identify most important driving forces and relevant characteristics of the process of metropolisation. Then, we use the concept of territorial capital to discuss metropolitan competitiveness. Dealing the second question we discuss the meaning of strategic efforts and its relevant components enhancing territorial capital. Anyhow, the paper elaborates these considerations on the example of two cities: Barcelona and Vienna. We finally make some conclusions on the meaning of cooperative strategic efforts for the metropolisation process in both cities and on the impact of cooperative initiatives on territorial capital.

2 Metropolisation: driving forces and preconditions

Over the last twenty five years there has been a remarkable shift in the conditions of urban development leading to specific new trends within cities. Due to these trends in the 1990ies urban research was focused for instance on socioeconomic issues like fragmented cities (i.e., Fainstein et al., 1992). However, discussion in urban research and in development planning has been then shifting towards the issues of mono- and polycentric development (Kunzmann, 1996) and, more recently, towards post-modern form of urban development (Friedman, 2002).

In literature these new trends of urban development are discussed under the perspective of urban restructuring. Different dimensions are to distinguish: First, research in this context concentrated for a long time on the identification and assessments of nodes in global networks according to the emergence and meaning of new functions. Empirical research focused on the new definition of
the meaning and role of cities in a global perspective and defined new urban systems and rankings according to their size and their functions in different fields of urban development (Hall, 1984; Sassen, 1991; Keeling, 1995). A second but related topic of research is the discussion of urban restructuring on the urban regional level under the term ‘metropolisation’. Of course, this is done in different perspectives as we show below. Concentrating on this second topic, in this paper we regard the process of metropolisation as a specific form of urban restructuring based on the city’s ability to compete with other cities for metropolitan functions. Therefore, we regard the process of metropolisation not as a distinct spatial form of urban restructuring but as the specific social, economic and spatial outcome which - generally spoken – is depending on specific local factors of influence. However, along with a more comprehensive understanding we assume that metropolitan competitiveness is very much linked to its territorial capital. This territorial capital consists of different endowment related factors and potentials but also of specific forms of cooperative efforts with strategic planning character which –in combination - provide competitive advantages for the realization of metropolitan functions (Camagni, 2009; Giffinger, 2008). In this perspective, metropolisation we therefore regard as the outcome of mobilized territorial capital.

However, in next chapter we focus on some specific aspects of metropolisation. Primarily we concentrate on some important driving forces of this process – in particular in front of European experiences. This means that this term will be discussed shortly putting our attention on arguments enforcing this process of metropolisation. Then, very briefly metropolitan characteristics and relevant functions are identified having an impact on metropolitan development of such cities. Finally, chapter 2.2 deals with the understanding of territorial capital and discusses briefly the importance of metropolitan governance in form of strategic efforts for metropolitan development.

2.1 Driving forces of metropolisation in a competitive situation

For European cities two forms of driving forces are regarded to have importance for an increasing competitive situation: In recent decades the globalization of economic activities has increased on the basis of improved conditions for communication and production, and altered the relations of production, distribution and consumption regardless of national boundaries (Thornley, A. 2000). At the same time, globalization effects on city development because the allocation of investments respective of economic activities is done according to comparative advantages between cities. Besides, the fall of the Iron Curtain and the process of integration changed the conditions for urban development – especially for cities in Central Europe. New opportunities and perspectives for
economic activities arose during the integration process, providing new market potentials and new patterns of mobility of labour forces and capital. But at the same time the pressure of competition has increased because such cities lost their centrality and their primate function in the former urban hierarchy at the national level. Based on these two trends the European urban system experiences strong changes under two aspects. First, not every city is able to participate on these processes in a positive way which is predominantly characterized through the economic restructuring and the increase of knowledge intensive economic activities whereas manufacturing and other work intensive activities disappear. In this perspective, some cities loose, others are winners in economic terms (Krätke, 2008). Second, in particular capital cities experience the changing conditions through the increasing competition regarding specific functions in the economic, cultural and political sphere. Due to this changed situation such functions are realized in few and most attractive cities only. Accordingly, metropolisation is driven through the allocation of such high ranked and specialized functions.

Concluding, this attraction of metropolitan functions is regarded as the outcome of this competitive situation between cities in the European or global urban system. What we may understand by the process of metropolisation can be described in different ways:

- the result of a mutual process of spatial concentration of (new) economic functions and population having an effect on its growth and spatial extension through immigration; (Friedman, 1986 and 2002; Geyer, 2002)
- the meaning as a node of global networks of material and immaterial flows exercising command and control functions with excellent connectivity between each other (Keeling, 1995)
- economic restructuring towards knowledge intensive economic activities in specialized branches of production or service (Krätke, 2007)
- Spatially differentiated allocation of specialised functions as driving forces of a polycentric economic and demographic development within the agglomeration (Krätke, 1995; Kunzmann, 1996)

2.2 Territorial capital as a precondition for metropolisation

Because of these significant trends the competitiveness of a city is the more relevant the more it is challenged to become a metropolis competing for highest ranked functions with other metropolises on the European and global level. Thus, what do we understand by competitiveness for a metropolis? Basically, there was a shift in academic discussion towards a more comprehensive understanding. Parkinson (2003) identified the innovation in
firms and organizations, the skilled workforce, the internal and external connectivity, the economic diversity and the strategic decision-making as critical preconditions for urban competitiveness in an additive way. Recently, the concept of ‘territorial capital’ which was originally described by OECD (2001), takes up this discussion on competitiveness in an increasingly comprehensive perspective. Its basic endowment and functional related elements are natural features, material and immaterial cultural, technical and social heritage; fixed assets as infrastructures and endowment related qualities of distinct places. Its basic relational elements are ‘untraded’ interdependencies (like customs, informal rules, understanding) or specific environments (institutions, rules and practices, common strategies and policies) (Storper, 1997). In a more taxonomic perspective, Camagni (2008, p. 123) identifies two dimensions along which all potential sources of territorial capital could be described: these are materiality and rivalry. Through the combination of these two dimensions he classifies 9 different components which describe the character of these components defining and enhancing territorial capital. He argues that components which are characterized through endowment related elements (independent of degree of rivalry) provide exclusively ‘hard’ and tangible goods. At the same time he emphasizes that it is relational capital and in particular cooperative initiatives which are the most relevant components providing intangible goods which can be regarded as intangible assets based on cognitive, social, cultural and institutional capital (Healey, 1997). Thus, territorial capital is assumed to depend on the qualities of places characterized through its tangible and intangible assets which are resulting from the provision of endowment related functional elements and of cooperative initiatives and relational capital. These assets are providing respective relative and absolute comparative advantages (Camagni, 2009). This means that territorial capital is in particular enhanced through any form of cooperative initiatives and relational capital which enforce the linkage of cities or specific groups of actors (public, private), or the provision of clusters that are located in places where people can acquire and share tacit knowledge about how things work. Therefore, the approach emphasizes cooperative initiatives between different actors resp. fields of urban development in the sphere of business as well of politics. The functional approach is widely enriched through the focus on actors’ relationships, their perception of reality, their identification with the territory and their capacity to react creatively to common challenges of metropolitan development.
3 Characteristics of metropolitan development: the examples of Barcelona and Vienna

Specific attention is now given to Barcelona and Vienna, two typical ‘compact’ European cities, but very different in their historical, geographical and economic conditions. Due to these differences we expect that the spatial process of metropolisation is likely to be different. For our empirical analysis, we subsequently deal with metropolisation in a combined structural and functional perspective and neglect the network perspective. Thus, we regard the outcome of metropolisation as follows:

- as the allocation of knowledge intensive economic activities within the industrial and the service sector.
- as the allocation of important functions like decision centres of multinational firms, international strategic and controlling institutions (private or public) or international institutions in the political, economic and cultural sphere.
- as a process of spatial extension with the allocation of metropolitan functions somewhere in the urban region creating new sub-centres and polycentric development, probably reaching far beyond city borders.

3.1 Barcelona

The Metropolitan Area and Region are already defined for a long time, maybe not in the administrative form it has nowadays, but the importance of the surrounding municipalities was always a fact. Nowadays the BMR (Barcelona Metropolitan Region) is formed by 164 municipalities and 3,236 sq km. According to 2001 Census BRM has 4,539,749 inhabitants and 1,903,291 job places (CPSV, 2001).

In the nineteenth century, textile companies were established in Barcelona and in adjacent cities such as Sabadell, Terrassa and Mataró. Barcelona also organized two universal expositions in 1888 and 1929. These events drove the expansion of the city and attracted population. Immigrants came to work in the construction sector and were later on absorbed by the industries of the area.

The social instability of the 1930s in Spain, with a clear social polarization and strong forces against modernization, resulted in the Spanish Civil War. The economic policy of the time followed the model of autarky. It relied on direct state intervention in economic affairs and economic self-limiting trade with the rest of the world, what impacted directly in the economy of Barcelona and region, stopping the growth and making a lot of unemployed.

The failure of the autarkic model led to a radical change in economic policy. In 1957 a Stabilization Plan (Plan de Estabilización) was implemented, whose
social impact was the migration of some two million Spanish in a few years. The economy was opened to the outside world, the currency was devalued and foreign investment was facilitated. Between 1961 and 1973, the favorable situation in the world led to rapidly growing industry and services in Spain and foreign investment attracted by low labor costs. That result was the biggest boom from urban and population growths, and a massive migration to Barcelona; it triggered an exodus from rural to industrial areas, which consequence was a big housing deficit. The housing deficit was reduced to house-building campaigns, especially encouraged for massive private constructions by entrepreneurs close to the Franco’s regime. Most of this construction occurred in the outskirts of big cities, but without prior planning, that eventually resulted in overcrowded bedroom-cities, often with many shortcomings of community services, i.e. the beginning of urban sprawl in the metropolitan region of Barcelona.

After Franco’s death, Spain started a process towards democracy. In 1977 a new democratic constitution was approved, and in 1979 the Regional Government of Catalonia (the Generalitat de Catalunya) returned from exile and was legalized. During its consolidation in the beginning of the 1980s, the new democratic institutions had to face an economic recession, a consequence of the oil crisis and the old industrial model. The territorial model of the regional administration reinforced and diversified internal movements: new cities and towns well connected with the city through railways and roads grew in population, attracting higher income classes. The Barcelona Area has suffered with special intensity the effects of the crisis due to industrial specialization (Trullén, 1989). 1986 was a key date for Barcelona for two different reasons. Firstly, Spain became a member of the European Community. Secondly, and decisive for the city’s development, the Olympic committee chose Barcelona as the organizer of the 1992 Olympic Games. The nomination gave the city a strategic objective that would regard urban renewal as a priority, the Barcelona’s Model. The main idea was "urban citizenship", improving regional infrastructures and internationalizing the city.

In the last decade the employment growth at the BMR and was accompanied by a tertiarization process. Alongside, there is a process of spatial redistribution of metropolitan employment. Social Security Employment data illustrates that in 1991 manufacture accounted by 36% of metropolitan employment, and in 2001 that sector only represented 26%. In ten years 10 percent of the employment has been transferred from manufacture towards services. In 2001 services accounted by 66% of metropolitan employment. In the last 20 years Barcelona municipality (52% of BMR’s employment in 1981) has lost 10.27 points on the concentration of metropolitan employment (Marmolejo, 2007).
During the 1980s and 1990s public investment in R+D grew. That growth stagnated in the mid-nineties. Regarding the economic dimension, in the early 1990s the BMR suffered a new economic recession that affected the traditionally strong industrial sectors (textile and automobile industries) of the region. As a consequence the economy of the city became more and more service-oriented. Therefore intraregional mobility increased, and became the main characteristic of the territorial model. Barcelona lost population in favour of the region, but the number of people who worked in Barcelona as commuters from the region increased.

The BMR is one of the main industrial regions of Spain (Oliver, 2006), although there has been a recent economic transformation to a service-oriented economy. In fact, the region still has a strong industrial profile, with a multi-centric organization of its industrial activity. The economic basis of this multi-centric shape is a much-diversified economy, where traditionally the small and medium cities played a significant role through industrial specialization. The so-called polycentric-networked city model (Trullén, 2003) is distinctive of Barcelona and is considered a determinant factor for the success of the city in terms of industrial development.

The polycentric function of the BMR was reinforced by the policies of the Autonomous Government of Catalonia of the Housing Department during the last 5 years, in which it has developed policies of decentralization of the location of the housings. The specializing poles, does not come as a question imposed from the administration, but it is the result of the overlapping of the local know-how with the new population cores.

Regarding connectivity Barcelona shows the following characteristics:

- The Port of Barcelona is an important port of the Mediterranean Sea. The growth in Port business in recent years has been very significant, in 2006 an increase of container traffic by 12%, was recorded higher than the rest of the ports in Spain and also in other major ports in Europe. The Port is currently implementing the largest process of expansion in its history, also the railway and road infrastructures of access, but one of the biggest problems of the port is the small capacity to grow, because of its localization.

- The Barcelona Airport, the key link in tourism, logistics and business, is southwest of the city, just 7 km from downtown, 3 km from the port and close to Zona Franca, the largest industrial area (Area Activities Logistics Park and Logistics). Since the organization of the Olympic Games, the airport has increased dramatically, from 10 million users in 1992 to over 30 million in 2006, being the first airport average annual growth in Europe and was in the eighth place in the ranking of European airports, according to data Officers of the Airports Council International. The
airport is currently in a large process of modernization and expansion of its facilities.

- **Motorways** - The BMR is well connected to interregional highway network. Barcelona by its privilege localization always has been important as a city that makes the union of the Iberian Peninsula with the rest of Europe via France.
- **Railways** – Barcelona has practically a municipal subway network, and short distance trains are passing for transformations with the intention to be more efficiency. Nowadays the implementation of the High Speed Train – AVE, came to insert Barcelona in union with the rest of Europe.

## 3.2 Vienna

After 1945 in post-war Europe the conditions of urban development of Vienna altered several times because of the Cold War establishing a massive political and economic segmentation, after 1989 because of the fall of the Iron Curtain providing first a gateway function and, then, after 2004 because of the integration process a central position in Central Europe.

Until 1990 Vienna as Austria’s capital – with an area of 415 km² – had a total population of less than 1.5 million. Since the fall of the Iron Curtain it increased again. Facing the geopolitical conditions the economic development of Vienna changed over time (Giffinger et al., 2005): in the 1970s an ongoing process of restructuring took place; in the 1980s the secondary sector lost approximately 23% of its workplaces, the tertiary sector gained 20%. The de-industrialization process was nearly compensated by the service sector. Until 2001 the share of employed people in the tertiary sector increased up to 81%, being mainly driven by information technologies and production services. However, the development of employment is sluggish but Vienna had a moderate unemployment-rate until the economic crises which affects labour market since November 2008. Today, Vienna’s key economic sectors include electrical engineering, food, transport, consumer electronics and metal-processing. More recently, the city has become a centre for 'new urban technologies', concentrating on ecological research and innovation through research and development.

Economic restructuring implied an ongoing out-migration of space-intensive enterprises (manufacturing, metal industries, etc.). These firms relocate in the city’s periphery or the neighboring municipalities of Lower Austria (own federal state). But high-tech industrial sub-sectors and different branches of private or public services (health services, creative industries) tend to stay in the city. Thus, demographic and economic development is reaching far beyond the city borders of Vienna having a differentiated functional impact on spatial development in neighboring municipalities.
Despite this spatial development there is no definition of a metropolitan area for the case of Vienna. A first approximation is the definition of the LUZ (large urban area) by the Urban Audit, which defines the metropolitan area as the functional urban zone centred around the core city. (table 1) As this is a rather restrictive spatial delimitation of the metropolitan area, we will define the metropolitan area of Vienna on the base of three NUTS-3 regions: one is corresponding to the city itself and the others define the surrounding region. According to this definition development is characterized as follows:

- The metropolitan region is rather large with about 2,278 millions of inhabitants. However, the majority lives in the core city. This metropolitan region is the most important economic center within Austria with about 1,065 millions of employees.

- The metropolitan region is dominated through a very large center with about 821,000 employees. Schwechat – ranked on second place – has about 21,000 employees and there are only two further cities with about 11,000 employees. Thus, the metropolitan region of Vienna shows a clear monocentric structure. Outside of Vienna, most important employment centers are located in the south and west of Vienna.

- Relative to all economic activities with 5.3% of all employees the knowledge intensive manufacturing activities are not as important as the knowledge intensive service activities with about 36.6% of all employees. Again, Vienna demonstrates its absolute importance in knowledge intensive economic activities against other cities and municipalities: it has 35 times more employees in knowledge intensive manufacturing branches than the second largest city (Berndorf); it has 70 times more employees in the knowledge intensive service branches than the second largest city (Baden).

- However, there is a clear difference in the spatial organization of knowledge intensive economic activities: from a structural point of view Vienna does not show dominant knowledge intensive activities in the manufacturing branches. They are mostly dominant in some distance to Vienna in all directions but not in the Western part of the metropolitan region. At the same time Vienna shows a light dominance in the knowledge intensive activities in the service branches; clear dominance in these activities show some municipalities in the metropolitan region.

Regarding accessibility Vienna shows the following characteristics:

- It has the biggest inland container port in Europe. It has always been a hub for trade between eastern and western Europe. This container port will increase constantly depending on the economic integration process in Central European countries and the ongoing improvement of the river’s navigability from Vienna in direction to the Black Sea.
- Vienna International Airport increased as a hub for East European and Mid East connections over the last years counting in 2008 about 19.7 million passengers. Dependent on the depth and length of economic crises the number of passengers will probably grow to about 26 million passengers in 2016. In addition a new terminal is under construction and a third runway is planned. The airport is not within the city area but the city is one of the shareholders.

- Vienna has become an important node in the network of motorways in Central Europe. Since a long period of time motorways connect Vienna with regions in Italy and in Bavaria. Since the nineties of the last century there are new motorways towards Budapest, to Sopron and Balaton lake as well to as newest connection to Bratislava. However, the motorway towards Brno and Prague, Czech Republic, is still not finished.

- Vienna is even an important node in the network of railways, traditionally connecting neighboring regions and countries. However, improvement of the accessibility towards Budapest and Bratislava lasted very long and is still under construction. In particular, the old two existing terminal stations as dead-end-stations which had been connected poorly will be replaced through a new central station.

### 3.3 Metropolisation compared: economic restructuring and spatial form

Due to this differentiated situations the cities of Barcelona and Vienna show following characteristics in spatial organization as well as in demographic and economic terms:

#### Table 1: Demographic characteristics

<table>
<thead>
<tr>
<th></th>
<th>Vienna</th>
<th>LUZ Vienna</th>
<th>Barcelona</th>
<th>LUZ Barcelona</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resident population 2001 in mill.</td>
<td>1.550</td>
<td>2.127</td>
<td>1.504</td>
<td>4.364</td>
</tr>
<tr>
<td>Resident population 2004 in mill.</td>
<td>1.599</td>
<td>2.180</td>
<td>1.579</td>
<td>4.234</td>
</tr>
<tr>
<td>Resident population 2007 in mill.</td>
<td>1.664</td>
<td>2.278</td>
<td>1.595</td>
<td>4.648</td>
</tr>
</tbody>
</table>

* Urbain Audit, EUROSTAT, INDESCAT

Both core cities have approx. the same size. In Vienna resident population increased by about 114,000 persons between 2001 and 2007; in Barcelona the number of residents increased 91,000 persons in the same period; The population scenarios indicate for Vienna a clear growth to about 2 million residents until 2020 (City of Vienna, 2005). In Barcelona core city the scenarios indicate that resident population will decrease by about 19,000 until 2015, but in the metropolitan area population is going to increase more than 500,000 persons.
Table 2: Economic development

<table>
<thead>
<tr>
<th>Indicator name</th>
<th>Vienna</th>
<th>Barcelona</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employment rate</td>
<td>67,91</td>
<td>64,53</td>
</tr>
<tr>
<td>Unemployment rate</td>
<td>10,7</td>
<td>10,85</td>
</tr>
<tr>
<td>Annual average change in employment over 5 years</td>
<td>0,63</td>
<td>1,16</td>
</tr>
<tr>
<td>GDP per head in PPS</td>
<td>34956,72</td>
<td>32486,34</td>
</tr>
</tbody>
</table>

* Urban Audit data for 2001

Employment and unemployment is increasing in both cities. In 2001, Vienna presents approx. 3% more of employers than Barcelona; the unemployment rate shows no difference. In the case of Barcelona is important to say that the centre continues expanding in terms of employment; nevertheless its growth rate is small in relation to average metropolitan growth rate. Annual average change in employment in Barcelona is almost the double compared to Vienna. This significant difference is a consequence of the strong process of economic restructuring. Finally, in 2001 Vienna's economy provides a relative high level of economic wealth in terms of the GDP (= gross domestic product in relation to local prices) per head. It is about 2,500 Euros per head higher than in Barcelona. Regarding spatial organization of knowledge intensive activities the following differences are obvious:

- Knowledge intensive manufacturing activities play an important role in both metropolitan areas due to its history. However, they are more important in Barcelona on the metropolitan level: there are clear development poles resp. axis in the northeast and south and southwest of the core city.

- Knowledge intensive service activities again play an important role in both case metropolitan areas: again spatial patterns tend to be similar but there is a clear dominance of these service activities in the core city Barcelona whereas the patterns are not so clear in the case of the Vienna metropolitan region.

Regarding economic restructuring, Krätke et al. (2007, p. 47) analyzed the development of knowledge intensive economic activities and the respective profile of Barcelona and Vienna in a comparative way relative to other European metropolitan cities: In comparison to other cities in the European urban system Barcelona is characterized through well established centers of knowledge intensive manufacturing and service activities which already existed in 1997, whereas Vienna is characterized through well established centers of knowledge intensive service activities only. At the same time both cities show a similar path of development: between 1997 and 2005 in both cities the knowledge intensive activities in manufacturing and service sector are growing in combination.
Finally, specific metropolitan functions are allocated in different ways: In both cities, the decline of manufacturing activities – even knowledge intensive activities – is concentrated in the core cities. But it does not necessarily mean that all manufacturing functions will be lost: Barcelona with its tradition in manufacturing in general shows this very clear and underpins the assumption of a specific path dependency. In contrary, Vienna lost manufacturing and it is not a city of manufacturing; even its region – with the exception of few and mostly small cities - can not really establish knowledge intensive manufacturing activities. Thus, it is characterized through its focus on service activities and in particular of knowledge intensive service activities.

Regarding spatial patterns of metropolisation Vienna and Barcelona show clear differences: In the metropolitan area of Vienna dominates still a monocentric development – with some exceptions. There is small scaled and emerging polycentric development within the core city based on the allocation of some decision centers of multinational firms (i.e., Siemens in the North, Wienerberger in the South) as well as some knowledge intensive service centers in the region (i.e., Tulln, Wr, Neustadt, Gugging). All important hubs (railway, harbor) are within the city’s territory, only the airport is outside in Schwechat. In opposite, spatial patterns of development in the metropolitan area of Barcelona show a clear polycentric pattern which reaches far beyond city borders. This polycentric structure is a consequence of the presence of multiple development nodes on the territory since the 1900, with a high diversification and specialization of the surrounding municipalities. These municipalities are attractive for high tech industry for three reasons: firstly they have industrial land and premises available, secondly they are located near metropolitan subcentres and thirdly they are well connected to interregional highway network.

4 Strategic efforts as specific form of territorial governance

As shown above, the territorial capital concept in particular emphasizes that the quality of social, cultural or policy-related strategic (inter-) actions may become the most decisive elements of competitiveness shaping the process of metropolisation. Based on this line of argumentation, one of the crucial challenges is to build effective forms of coordination, cooperation and communication between governmental and non-governmental actors and institutions but also between different actors and institutions responsible for various sectoral policies. To meet these challenges, it is necessary to realize strategic efforts, which enforce cross sectoral and cross border initiatives and networks.

Due to the argumentation of Camagni (2009, p.123 ff) competitiveness will primarily be dependent on strategic efforts in form of cooperation networks and
relational capital. Cooperation networks he assumes to be important for the definition of strategic alliances in knowledge intensive economic activities and regarding the governance on land and cultural resources. Relational capital he supposes to be important in form of cooperative capability and collective action of different types of actors (public, semi-public, private) as well as in form of collective competencies which are the base for area bounded innovative milieus. Regarding the situation of Barcelona and Vienna we will now focus on such cooperative initiatives and relational capital which aim at the mobilisation of territorial capital and – in particular – which have an intangible character providing predominantly absolute advantages. Therefore, empirical research will focus on the questions (1) which strategic efforts are really based on a cooperative approach overcoming cross sectional or cross border barriers in a metropolitan context? (2) Do relevant potential actors have sufficient cooperative capability?, and (3) Do they have collective competencies?

4.1 Barcelona

The Barcelona strategy is characterized for a long tradition of collaboration between different public bodies to arrange coordinated projects and a successful implementation of urban strategy. The history of strategic planning in Barcelona can be divided in two parts of regional scope. The first part was focused in the City of Barcelona, and the second in the Metropolitan Area.

In 1986 Barcelona obtained the chance to organize the 1992 Olympic Games. The main actions for these condition were: project of new public space; immediate action that give response to the reality of neighborhoods; reconstruction of the existing city instead of the expansion; compacity and urban
continuity instead of the sprawl; These interventions were based on the efficiency of the project on the lack of definition of the plan, improving regional infrastructures and internationalizing the city. This model was exported to the other cities around the world. This stereotype is a consequence of Barcelona has been copying Amsterdam during the last 25 years in the planning and in the management.

Regarding the potential actors in Barcelona, they are present in the transformation of the city since 1988, when the Strategic Metropolitan Plan of Barcelona (PEMB), was created by the Barcelona Town Council. It is an association of the 36 municipalities that make up the Metropolitan Area of Barcelona (MAB - total surface area of 628 km2 and a population of 3.150.380 million.). The PEMB also includes a diversity of the institutions and administrations, the Autonomous Regional Government of Catalonia, the Barcelona Provincial Council; the Chamber of Commerce, Foment del Treball (employment promotion agency), the University of Barcelona, the Fira de Barcelona (fairgrounds), the Port and the Airport; as well as other regional institutions, including the Mancomunitat de Municipis (the association of municipalities of the Metropolitan Area of Barcelona) and the governing bodies of metropolitan transport and environment (the EMT and the EMMA, respectively).

The PEMB was created to identify and promote support strategies for the economic and social development of the MAB. As a result, the association's main tasks involve analyzing and identifying potential in traditional and emerging activities, and anticipating problems and providing their solutions ahead of time. It implies to all the social sectors by means of a methodology of work in which the consensus, the shared leadership and the cooperation of the implied agents (stakeholders) has to allow to design the strategies that they have to lead to the best possible future for the metropolitan area of Barcelona.

The main objectives of the Strategic Metropolitan Plan are to improve productivity throughout innovation and knowledge, as well improve social cohesion. Culture plays a key role in the later aspect and the environmental dimension is also taken into account. This multidimensional approach allows for a long-term strategic vision of the territorial development in many different aspects, such as transport facilities, infrastructures, culture and education.

Metropolitan projects at BRM can be classified in 3 categories: urban renewal projects; new centrality projects; high speed infrastructures. One of the most relevant strategic elements of the renew process in the core city is the creation of the 22@ district, establishing conditions of knowledge and creative industries. In reference with new centralities: the strategy on innovation and creativity is the improvement of the knowledge base through the generation of knowledge, for example the Prat’s Directional Centre and Cerdanyola’s Directional Centre
10 km of the city and in the region, companies like HP, the twin SONY production or the SEAT automotive plant. The high speed infrastructure is the implementation of the AVE well connected with the port and airport. In 2004 the Forum de les Cultures based on the same ideas of Barcelona’s model, sought to solve the demands that were priorities for the city, but it has been a project that has not been able to clearly respond to the demands of the city, it was not more the same conjuncture as it was when the model was created. Nowadays, the new objectives are focused on city’s competitiveness on the global spot (Capel, 2005), but currently we have to take in consideration the pressure of the private actors, that spoil the initial model of development. There is not a superior entity to manage and to coordinate urban decisions in regional level. Metropolitan Regional planning in Catalonia has never come into reality (Marmolejo, 2007). The move from city to region implies the need to design and establish administrative arrangements at the metropolitan level as a basic prerequisite for improving the management of strategic projects, with these intention is in process a Metropolitan Regional Plan to give an answer for these news challenges in the territory.

4.2 Vienna

During the last decades planning approaches aiming at the design and governance of metropolitan development issues changed massively. The most traditional one is the City Development Concept („Stadtentwicklungsplan“) elaborated every 10 years; the last one was issued in 2005. (City of Vienna, 2005). This planning instrument is defining a spatial model of urban development in a more or less traditional approach. The last version of 2005 already includes a regional perspective on most important poles and aches of development. Thus, there was already the concept of polycentric metropolitan development in mind, but by definition this instrument concerns only to the urban area of the core city and not to the area of the metropolitan region. The Strategic Plan („Strategieplan“) which was elaborated first in 2000 and then modified in 2004 takes a clear metropolitan perspective. Whereas the strategic efforts in the first Strategic Plan concentrated explicitly on social, economic and environmental development, the second version is clearly oriented towards challenges of sustainability, gender mainstreaming, positioning and allocation of high ranked knowledge intensive economic activities and specific metropolitan functions. Strategic objectives are defined and corresponding strategic projects are elaborated in a participative and cooperative way. Strategic efforts contain a broad range of fields of positioning including economic issues, innovation, culture, education, leisure, urban renewal, environmental and living
quality. Not at least, there are discussed strategic efforts regarding the metropolisations of Vienna and its positioning as a region in Europe. Explicitly, it is emphasized the cross border situation with Bratislava and the strategic efforts in form of CENTROPE. The initiative CENTROPE aims exclusively at the implementation of a Central European Region as a pole of growth and innovation. In 2003 a comprehensive initiative was launched in form of the INTERREG III A / PHARE project CENTROPE. This cooperative approach was based on the idea that “…….all efforts should be taken to create a prospering high quality European Region, where the available competences in economics, society and politics as well as the diversity of languages and culture are turned to a good account and help to support a dynamic development.” (Giffinger, et al., 2005: 103). Based on this initiative, recently the area of CENTROPE includes territories of Slovakia, Czech Republik, Hungary and Austria with 8 partner regions and 9 partner cities. Very obvious, one of the dominant objectives is the positioning of Vienna as a metropolitan centre within this polycentric region. The largest cities and densest places are Vienna, Bratislava and Trnava (in Slovakia), Brno (in Bohemia), Sopron and Győr (in Hungary). Due to the complex geo-institutional conditions the initiative was started step by step and was based on a cooperative approach which is supported through political commitments and agreements up from 2003.

Of course, other initiatives were established: since 2006 the Urban - Suburban-Management („SUM: Stadt-Umland- Management“) acts as a promotor for regional coordination, mediation and information exchange. Two other planning initiatives are dealing with the urban-regional development of Vienna: the Planning Association East („PGO: Planungsgemeinschaft Ost“) which is defined as a Contracted Association of the provinces Vienna, Lower Austria and Burgenland aiming at the coordination of spatial planning activities on the municipal and federal level; and the Transport Union Eastern Region („VOR: Verkehrsverbund Ostregion“) which coordinates the Public Transport Systems in the Vienna Region since 1984. However, none of these initiatives defines specific objectives or projects aiming at the metropolisation process explicitly.

4.3 Strategic efforts compared and conclusions

Resuming these strategic efforts regarding question (1) – which strategic efforts are based on a cooperative approach - we can conclude:
• In Barcelona strategic efforts are based on an existent and acknowledged metropolitan area. The Metropolitan Strategic Plan is the principal tool for
the changes occurring in the territory. However, there is no Metropolitan Regional Plan that manages the strategic projects, this document is being redacted. Besides, Barcelona tries to position as the capital of the Mediterranean Arc, based on an initiative aiming at the strengthening of the competitiveness of South Europe

- In Vienna, the Strategic Plan and the CENTROPE-initiative are based on a cooperative understanding providing the positioning of Vienna as a metropolis. The objectives and the character of cooperative efforts differ across the mentioned approaches: the Strategy Plan 2004 was primarily realized and conceptualized in order to foster cooperative strategic efforts of different sections within the magistrate/administration of the City of Vienna but no other actors from the administrative system from Lower Austria or federal ministries had been included. Anyhow, strategic efforts defined in the Strategic Plan 2004 try to strengthen the metropolisation process aiming at knowledge intensive economic activities but also on the improvement of infrastructure systems.

- The CENTROPE initiative is clearly the most important one regarding the process of metropolisation aiming at the strengthening of the metropolitan functions and the restructuring of the economic sector in favour of knowledge intensive economic activities. Due to the extension of and the regional differences within CENTROPE, these objectives and strategic efforts do not have the same meaning and importance for all participating actors. Very obvious, small municipalities and peripheral regions have other than challenges of metropolisation to meet.

Regarding question (2) - Do relevant potential actors have sufficient cooperative capability? – We can conclude:

In Barcelona, the capability of cooperation between actors (public and private) is already a fact (see 4.2) in strategic efforts for the metropolitan area. In January of 2009 the Consorcio del Area Metropolitana de Barcelona (Consortium of Barcelona’s Metropolitan Area) was created with 36 municipalities. This is the first step for metropolitan governance that was created with the intention to revitalize the old Coorporación Metropolitana (1976-1986). Its principal objectives are to reorganize the metropolitan territory (planning, mobility and promote economic improvements of the metropolitan area).

The City of Vienna with its corresponding administrative units has by far the largest capability to initiate and to realize cooperative strategic efforts. The Strategic Plan 2004 was explicitly initiated for the strengthening of the city’s capability to act on a strategic level with other partners – primarily within city administration as well as with further private or semi-public partners, but not
with public actors from province administration of Lower Austria or with other larger cities. Exception is the network participation in EUROCITIES. In addition, Vienna’s representatives on the political level and its actors from strategic sections are the driving forces within the CENTROPE-initiative. Correspondingly, they are the strongest actor within this region and very often dominate discussion on objectives and visions. Although there is the intention to create cooperative structures, the initiative was always dominated by Austrian and Viennese perspectives. Initial conditions of public promotion on the base of an INTEREG/PHARE-project already had been unequal. Fortunately, this inequality in promotion changed now and next years will show whether Vienna keeps the dominant partner because of the nature of the cross-border conditions and its recent institutional setting (Giffinger et al., 2008)

Question (3) - do the partners of strategic efforts have collective competencies? - is not easy to answer. Facing the experiences in Vienna and Barcelona, this ability of having collective competencies is influenced through the degree of regional identity and on mutual trust on which cooperative efforts are based. Correspondingly we can state that in Barcelona exists a long and positive tradition of a metropolitan discussion and planning in Barcelona and Catalonia. Obviously, there are common goals and competences of cooperation which will result in new and more institutionalized strategic efforts in form of a new Metropolitan Plan, recognizing an unique territory, offsetting the current weakness. For the case of Vienna, we have to state that the political and institutional constraints between Vienna and Lower Austria resp. between Austrian and neighbouring partners are strong. Strong political fragmentation and the evolvement of different planning cultures enforced differences in regional identity and new positive experiences in cooperation are hard to gain because of asymmetric approaches since 2003. At a first glance, this means that cooperative efforts in the metropolitan situation of Vienna are likely to be more insecure than in Barcelona; the risk of defecting behaviour is likely to increase with unequal conditions and the dominance of distinct partners.

To conclude, in both cities the need for cooperative efforts is obvious in order to meet its challenges resulting from the process of metropolisation. In comparison Barcelona shows a clearer polycentric development than Vienna. At the same time Barcelona has a longer tradition of cooperative strategic efforts based on a more or less common history and a clear definition of the metropolitan region. However, in Vienna such strategic efforts become increasingly important but there is still missing a clear definition/understanding of a metropolitan
development. Very obvious, different strategic efforts are related to different areas and regions – a smaller and more homogenous region than CENTROPE seems to be a necessary precondition. Besides all, metropolisation demands for strategic efforts which should be based on network approaches like the South Europe initiative with Barcelona as an important node in this region. Again, strategic efforts in Vienna are characterized through its relative strong spatial concern in CENTROPE but do not aim on network efforts with other metropolises in Central Europe.

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