

We are IntechOpen, the world's leading publisher of Open Access books Built by scientists, for scientists

6,900

Open access books available

185,000

International authors and editors

200M

Downloads

Our authors are among the

154

Countries delivered to

TOP 1%

most cited scientists

12.2%

Contributors from top 500 universities



WEB OF SCIENCE™

Selection of our books indexed in the Book Citation Index
in Web of Science™ Core Collection (BKCI)

Interested in publishing with us?
Contact book.department@intechopen.com

Numbers displayed above are based on latest data collected.
For more information visit www.intechopen.com



The Multivariated Effect of City Cooperation in Land Use Planning and Decision-Making Processes: A European Analysis

Luís Carlos Loures, Rui Alexandre Castanho,
José Manuel Naranjo Gómez, Ana Vulevic,
José Cabezas and Luis Fernández-Pozo

Additional information is available at the end of the chapter

<http://dx.doi.org/10.5772/intechopen.72191>

Abstract

Spatial and urban planning processes regarding border cooperation have reached unprecedented levels in recent decades, not only due to their potential for territorial integration, i.e., infrastructure construction and planning activities worldwide. Bearing in mind the European project, for a united and strong network of nations, this scenario is more evident in European territories. In this regard, through multivariated analyzes of city cooperation on European border areas, it is possible to identify the factors that influence the territorial success and also a sustainable regional development and even their effects over the urban agglomerations. From the identified factors, the study pointed out one that is common to all cases: connectivity-movement between cities.

Keywords: border territories, cooperation, planning, sustainability, urban planning

1. Introduction

Recent changes in the European landscape introduced by geopolitical, socioeconomic and/or cultural issues have been continuously contributing to strengthen the magnetism of urban areas, increasing their capacity to change land use, thus fostering important transformations not only at the socioeconomic level but also in terms of urban morphology all over Europe [1–7]. Even though sometimes positive, these changes have reinforced the clear tendency of depopulation of rural territories—confirmed on the last decades—consequently increasing the development of progressively larger urban agglomerations [8–10].

Even if these issues are currently seen as part of countries' evolutionary processes, it urges to develop specific strategies that might tackle this scenario, contributing to revert this situation. In this regard, it is crucial to study new ways of cooperation between smaller cities, highlighting the ways in which this type of synergic projects and strategies related to cross-border and city cooperation might revert this process contributing to city sustainability.

Considering the aforementioned opportunity and taking into account that very often the cooperation between cities occur among sovereign nations, such issues gain more emphasis not only because one-third of European population live in border areas [11, 12] but also because this fact takes the discussion to another level, associated with intricate bureaucratic procedures related to the lack of standardization practices and policies between these territories, which generally lead to a reckless attitude by the main actors/decision-makers toward city cooperation and development, facts which have a high influence not only in the development capacity of these regions but also on the overall quality of life of people leaving in these areas [7, 13].

The analysis of city cooperation multivariated effect in land use planning and decision-making processes is, in this respect, seen as a pivotal procedure that, throughout the implementation of specific planning principles and frameworks, might contribute to strengthen the development of these areas, enabling Europe to achieve a more balanced polynucleated territory, less dependent on few large metropolitan areas.

In this regard, in order to identify a set of planning principles and city cooperation frameworks, a group of the best practice case studies will be analyzed, using both Case Study Research (CSR) method [14, 15] and Territorial Impact Assessment (TIA) analysis, in turn identifying the impacts produced by this type of cooperation [16–18] and highlighting how these processes might contribute to reverse the impacts promoted by current mononucleated tendencies.

This study is considered a fundamental basis that will enable the identification of precise factors, which influence spatial planning procedures, leading to the definition of new methods and approaches to one of the main urban problems affecting Europe during the last decades, in line with the scope of the book and considering several relevant issues related to spatial planning, sustainable growth, and urban development approaches.

2. European planning framework: a brief review

The European Union (EU) has no direct mandate and no clear institutional and political framework for spatial planning: according to the principle of “subsidiarity,” territorial planning is a responsibility primarily of the member states. While this is so, it is equally clear that the EU's indirect role in spatial planning is steadily increasing, mainly through sector policies particularly in the areas of regional policy, rural development, environment, and transport. Another way in which the role of the EU is indirectly increasing in spatial planning is the principle of territorial “cohesion” [19].

In this regard, European territorial cooperation is the third objective of the EU Cohesion Policy for 2007–2013, as well as being the new umbrella under the European Spatial Development Perspective (ESDP) of 1999, such as European Spatial Planning Observation Network (ESPON), and European Territorial Cooperation (INTERREG) [20, 21].

In fact, the documents of EU from 1999 regarding spatial policy foster to promote a sustainable urban development. European Territorial Cooperation, and the EU INTERREG Initiative in particular, is one of the five main means of application identified by the European Spatial Development Perspective (ESDP). ESDP is a document approved by the Informal Council of Ministers of Spatial Planning of European Commission in Potsdam in 1999 and forming a policy framework with 60 policy options for all tiers of administration with a planning responsibility.

An entire chapter of the ESDP is in fact devoted to considering the application of its concepts and ideas. The five main means of application comprise (1) application at the European Community level, (2) application via transnational cooperation between member states, (3) application via cross-border and interregional cooperation, (4) application of the ESDP in member states, and (5) application via pan-European and international cooperation. The influence and application of the ESDP clearly have an important transnational learning dimension. As a result, the ESDP remains the most significant policy document guiding the EU's determinations in the territorial development sphere [22].

Even though the document does not have the power of a law, it has indeed been successful in establishing a framework [20]. Once that the strategic aim achieved a balanced and sustainable spatial development strategy. In the late 1990s, the ESDP represented a "new dimension of European policy" since for the first time the EU was starting to pay explicit attention to territorial planning as an instrument to achieve broader social and economic goals [19]. A key objective of the ESDP was to facilitate better coordination of the territorial impacts of European policy: horizontally across different sectors, vertically among different levels of government, and geographically across administrative boundaries [23].

The ESDP was created to achieve three central aims of European policy: socioeconomic cohesion, conservation of natural resources and cultural heritage, and a more balanced competitiveness of the European territory. In order to achieve these goals, the ESDP highlighted three crucial spatial development policy objectives [19–21, 24]:

1. Development of a polycentric and balanced urban system and strengthening of the partnership between urban and rural areas. This implicates overcoming the outdated contrast between city and countryside.
2. Promotion of unified transport and communication concepts, which support the polycentric development of the EU territory and are an important precondition for enabling European cities and regions to pursue their integration into the Economic and Monetary Union. Equivalence of access to infrastructure and knowledge should be realized gradually. Regionally, adapted solutions must be brought into being for this.
3. Development and conservation of natural and cultural heritage through wise management. This contributes both to the preservation and deepening of regional identities and the maintenance of the natural and cultural diversity of the regions and cities of the EU in the age of globalization.

A significant outcome of the ESDP process was the establishment of the European Spatial Planning Observation Network [21]. The mission of ESPON is to support policy development

and build a European scientific community in the field of the European territorial development [19]. The main aim is to increase the general body of knowledge about territorial structures, trends, perspectives, and policy impacts in the enlarging European Union [25].

One of the concrete offspring of the ESDP is the ESPON established in 2001 for providing data and information about spatial trends and developments in the EU. ESPON's aim was to support spatial policy making for all territorial levels [26]. For planners, the value added of ESPON is that it supplies the technical and scientific knowledge needed to help implement the policy options in the ESDP and translates them into appropriate legal and financial instruments [27, 28].

However, the planning and execution of the specific political objectives of the ESDP should take into account the specific economic, social, and environmental situation of each area. These policy objectives for agriculture and rural development, infrastructure, and transport, as well as the environment, in a synthesized way are policy aims and options for ensuring productive and diverse rural areas, policy aims and options for promoting accessibility to transport and sustainable infrastructure, and policy aims and options aimed at preservation and development of the natural heritage [21, 29].

On the other hand, the policy priorities of the ESDP have been addressed by means of cofinancing of spatial planning projects involving partners in different countries through the INTERREG Initiative [19]. In this regard, INTERREG is the EU's primary instrument to support cooperation across national borders, and it is financed by the European Regional Development Fund. INTERREG was launched in 1990 to overcome the disadvantages presented by administrative boundaries of adjacent regions in the emerging common market [30]. INTERREG has included three phases with spatial planning agenda: Phase II (1994–1999), Phase III (2000–2006), and Phase IV (2007–2013). There are three territorial levels: (1) cross-border projects, involving geographically contiguous border regions; (2) transnational initiatives, across large multinational spaces; and (3) interregional initiatives, among noncontiguous regions across the whole territory of the EU.

In the latest phase (2007–2013), INTERREG has been incorporated into the EU's territorial cohesion agenda under the objective of territorial cooperation [19]. This implies cooperation on regional and spatial planning together with other economic growth issues more generally related to regional policy [30]. As for territorial cohesion in 2005, the Commission explained that territorial cohesion becomes a key element of promoting stronger integration of the territory of the Union in all its dimensions, and cohesion policy supports the balanced and sustainable development of the territory of the Union at the level of its macro-regions and reduces any barrier effects through cross-border cooperation (CBC) and the exchange of best practices [31].

The latter objective (strengthening territorial cooperation) is closely tied to the notion of European spatial planning (in INTERREG Phase III). The strong relation between cohesion policy and planning in the EU is reinforced by the work of DG Regio, the Commission Directorate-General for Regional (Cohesion) Policy which has taken the lead, with member states, on European spatial planning initiatives [30].

On the one hand, in European urban areas, the focus is on improving competitiveness through clustering, networking, and achieving more balanced development between the economically

strongest cities and the rest of the urban network. Priorities are promoting entrepreneurship, local employment, and community development and measures to rehabilitate the physical environment, redevelop brownfield sites, and preserve and develop historical and cultural heritage [19, 31].

On the other hand, in European rural areas, the member states should support economic regeneration by ensuring a minimum level of access to “services of general economic interest,” with a view to improving conditions in rural areas and limiting outmigration. Priorities include building connectivity to the main national and European networks; developing an integrated approach to tourism development; investing in development poles in rural areas (e.g., in small- and medium-sized towns); and developing economic clusters based on local assets combined with the use of new information technologies [19, 31].

3. City cooperation (CC) effect in land use planning

City-to-city (C2C) cooperation is not a novel phenomenon, through a scientific study on the matter is quite new. C2C was started, and evolved, in Europe—in wider terms: local governments in developed countries tend to determine the content of it. The first international relations between local governments in Europe were recognized after the Second World War, especially in the 1950s. The Council of European Municipalities and Regions, established in 1951, took a strong position to encourage these international contacts at the local level. The idea was to build a united Europe. Strict regulations were determined for these relations by the Council of European Municipalities and Regions and by the French-oriented *Fédération Mondiale des Villes Jumelées—Cités Unies* [32].

In the Western world of attention for development, cooperation was high in the 1970s, and characteristic of this development was the total absence of formal regulations. Then, a new tendency of international relations of local governments became apparent in the 1980s. In the United Kingdom, the United States, and the Netherlands—among others—local authorities united themselves against the apartheid in South Africa [32, 33].

As for Asia, China has undergone economic and political restructuring in the post-socialist era under the background of globalization. At the same time, its provincial governments have mobilized various forms of booming North-South city-to-city (C2C) cooperation within their respective jurisdictions during the last 10 years [34]. As for cross-border cooperation (CBC), during the recent decades, border areas increased great importance on the international scene concerning their potential and integrative functions such as demonstrated along the unification of Europe [12, 35–37].

The experiences of CBC, assumed not only in Europe but also all over the world, as is the case of several CBC projects between the United States and Mexico, China-India (Asia), Argentina-Chile, or Brazil-Bolivia (South America), among many other examples through the globe [38, 39], fostered the creation of a global network of relationships among people and states, which enabled the achievement of several political, economic, environmental, and sociocultural win-win situations [40, 41]. These networks have been increasingly recognized

by urban planners, landscape architects, and other urban development specialists, as crucial elements which enable the introduction of recent urban development challenges and paradigms [13, 42–47] into future planning activities [10].

As for spatial planning system, an ensemble of territorial governance arrangements that seek to shape patterns of spatial development in particular places is considered [48, 49]. In this regard, the set of systems and policies of the planning of the EU expanded planning system increasing criteria such as the extent of the planning system, the extension, and the type of planning at the national and regional level [31, 50, 51]. Also, it has redefined the role of the public and the private, maturity and integrity of the system and the distance between the intended objectives and the results actually obtained [52]. And, it divides traditional planning mainly into four types, including regional economic planning, urban planning, comprehensive planning, and land use planning [49].

In fact, the efficacy of the CBC at different scales of cooperation in planning the land use has been under discussion, through the review of CBC's initiatives in developing countries [10, 53]. On a governmental scale normally stands as the promise of the project from the management and land use, in several cases, it contributes to overshadow the limitations of land use. For example, the extraction of natural resources and the massive agricultural exploitation. Secondly, at the regional level, the design and implementation of the CBC have overlooked often asymmetries of power within a community. This effect has been gone unnoticed at the individual level. Thus, there has been unequal access to the design, decision-making, and the intended results. It also highlights at the community, local, and national bargaining power that has taken the elites, because this has been instrumental in shaping the governance of the CBC and even in the promotion of the CBC by external agents. In fact, the adaptation of the CBC to new scenarios depends largely on the process of empowerment of the community and the construction of optimal networks with external agents [53]. In this way, as will be achieved through CBC, cross-border regions can reach (1) comparative advantages and (2) economies of scale.

4. The impact of city cooperation in decision-making processes

Planning potentially influences and connects a wide range of issues, behind which are most diverse and conflicting interest [49]. The traditional special planning focuses on the position, intensity, form, quantity, and coordination of the development of the land in different spaces. However, the issues and challenges faced by the local areas need to be addressed by a process of socio-spatial integration through which occurs a vision, coherent actions, and means of implementation for shaping and structuring making it a place and what this place might be in the future position [54, 55]. In this sense, cooperation between cross-border cities is directed to the solution of problems arising from the dysfunctions caused by the existence of the border [56].

As for sovereign and cooperation problems, nation-states are under pressure to find innovative ways to redefine their relationships with space. The traditional understanding of the state, as the ultimate repository of sovereignty over a bounded portion of the Earth's surface

and the society that inhabits it, is at odds with the current world of cross-border flows of capital, goods, people, and ideas [57]. At the same time, there is a reterritorialization of economic and political activity that transcends the spatial framework of the nation-state [58].

Border, cross-border regions, and CBC studies address state territorial restructuring at the subnational level. They have primarily examined the reterritorialization of state power and institutions across borders, documenting the emergence of cross-border governance networks and power relations [57, 59–65]. In this regard, CBC should be placed in the context of the emergence of multilevel and participative governance, which requires an active involvement on behalf of, on the one hand, different tiers of government (from the EU institutions to local governments) and, on the other, civil society and private actors working alongside public authorities [66]. The diversity of arrangements existing in the field of CBC includes the fact that Euroregions may be established according to either private or public law [67]. The geopolitics of Euroregions suggest that cross-border reterritorialization across the latest EU borders is driven by a scalar conflict of territorial logics [57]. The border-induced territorial logic of the nation-state conflicts with the border-bridging territorial logic of CBC [68].

In political and institutional terms, the emergence of CBC and the setting-up of cross-border frameworks such as Euroregion and European Grouping of Territorial Cooperation (EGTC) can be seen as an expression of broader developments in the field of European governance, including the subsidiarity principle and its adaptation to a borderless Europe, the increasing centrality of regions as spaces combining a political, economic, social, and cultural dimension [69].

A “territoire de projet” amounts to a bottom-up process, which in turn can contribute to moving from a vertical, interlocked approach to regional development and multilevel governance to the one characterized by shared responsibilities and by horizontal, interdependent relationships among different regions and tiers of government [70]. Besides, the added value of EGTCs lies in their ability to fulfill cross-border tasks by common decisions on the regional/local level and to reinforce the ability of local and regional authorities to contribute to bottom-up regional development [71]. But public authorities on the regional/local level need an EGTC; otherwise, a bottom-up approach in territorial cooperation is very difficult [66]. Also, in comparative terms, the adoption of the EGTC Regulation also serves to highlight the relevant role played by CBC within the European integration process, since the sovereignty of the state ends at its borders, but the differences and problems of these borders continue to exist and require sustainable solutions [66]. Against this background, they cannot allow their borderland to follow special rules without compromising the theoretical model of the territorial container that the nation-state follows [72]. Euroregions for their part need exemptions from national regulation in order to be able to function meaningfully across state borders [57]. Indeed, the degree of cross-border integration can be a result of political will and the benefit perceived by the communities involved in the collaboration, but it can also be interpreted as resulting from the prevailing tension between the aim to supersede traditional borders and the ongoing weight of national traditions and structures [66].

In this regard, research has gained additional momentum considering current developments, such as the recent situation in Crimea (Ukraine) with Russia, the Greek-German frictions, the rise of terrorism in European continent (leading to an increasingly fractious debate about free

movement in Europe as well as the resurgence of nationalist and extremist sentiments among European citizens), the economic fallouts in Europe, or even the recent Brexit scenario [3, 7, 73–75]. Due to the fact, other factors to ensure the sustainability of experiences include political will, i.e., political commitment and transparency, and the integration of a “cross-border awareness” or “cross-border culture” in the standard design and management of policies and legislation, i.e., common objectives and Master’s Plans [10, 66].

5. City cooperation in Europe: assessing the past, envisioning the future

In the inception of the twenty-first century, especially in a European and Western context, it is almost given that borders are just lines drawn on a map. For this, the establishment of the European Union has contributed as a catalyst [76], almost vanishing borders and promoting CBC and city border cooperation, i.e., as is the case of the establishment of the Euro-cities. Still, as abovementioned, the recent developments going on European territory are threatening such relationships among European nations and even with other continents, leading to the necessity to rethink some of the EU policies.

In this regard, four European CBC case studies (**Figure 1**) focused from different aspects and perspectives will be exposed, analyzed, and assessed, enabling a multivariate effect analysis of city cooperation in land use planning and decision-making processes. Thus, the case studies need to meet the following criteria:

- Cities must present a historic of city cooperation.
- Countries should present CBC projects toward the integration of environmental, sociocultural, and economic development goals.
- The distance between cities should be no longer than 100 km.



Figure 1. Selected case studies. (A) Vienna-Bratislava-Brno-Győr, (B) Copenhagen-Malmö, (C) Oradea-Debrecen, and (D) Ruse-Giurgiu.

5.1. Case study analysis

5.1.1. Vienna-Bratislava-Brno-Győr: the labor force as a catalyst “4” city cooperation

The institutional relations between the cities of Bratislava, Vienna, Brno, and Győr are driven, mainly, by the desire to promote economic development. With the end of the transitional period—limiting the right of Slovak workers to enter the labor market in the European Union in 2011—the cooperation levels between the cities have considerably increased. Nowadays, the leading entity, regarding CBC, is the Centrope Strategy 2013—which includes territories of Hungary, the Czech Republic, Austria, and Slovakia. In this regard, one of the main goals of such strategy is to foster a coordinated approach toward a sustainable regional planning to improve connectivity and the movement between cities, in this large region, regarding accessibility and transportation infrastructure and services [77]. All the regions present great results; however, it should be highlighted that the city of Bratislava once is perhaps one of the best examples of urban growth in the globalization *Era* [1, 7]. These great results may be explained mainly by its privileged geographical situation, at the heart of a rapid European development, presenting interesting future indicators for their citizens, along with new opportunities and horizons perfectly possible to reach.

Identified critical factors: common objectives and Master’s Plans, connectivity-movement between cities, and stronger economy.

5.1.2. Copenhagen-Malmö: a strong cooperation through a bridge below Öresund

The cooperation around the Øresund Strait mainly focuses on cross-border economic development based on knowledge and innovation—several clusters in life sciences and clean technologies. Projects as the Øresund Bridge, the train or the freeway, are just some example that have enabled an increase on accessibility standards and improving border functional integration among regions, which have led to the development and construction of new urban districts, i.e., Ørestad, in Copenhagen, and Hyllie, in Malmö, through this transboundary linkage. Being peripheral cities normally seen as a handicap, however, in this case, it has turned into an advantage thanks to the great relationships among these territories and the commitment demonstrated by the main actors of the common regional planning processes and the decision-makers.

Identified critical factors: common objectives and Master’s Plans, connectivity-movement between cities, and stronger economy.

5.1.3. Oradea-Debrecen: CrossTrans toward the EU standards

If the cooperation between these two cities is still young and also poorly developed, the possibilities for growth through new cooperations and synergies are considerably high, once these two cities perform one of the major urban agglomerations of the region—leading to a significant amount of human resources. By the other hand, the existence of a Hungarian minority in the Romanian side contributes to a stronger regional cohesion. Still, both cities are inserted in the Euroregion Hajdu-Bihar Bihor, where one of the pre-established goals of the Euroregion

is fostering a better integration of the projects carried out by the public regarding: health, culture, education, and economic development. The distance between these two cities, about 65–70 km, should also be taken into account. So, their territorial success depends on well-developed connectivity between cities; so, the *CrossTrans* project, as well as the establishment of other infrastructures, has been critical to achieving the so desired success. Besides, it also should be considered that the region is not Schengen Area, or a member of the common currency (Euro), leading to more handicaps for the territories. Nevertheless, and against all the low odds, the region through CBC strategies shows significant positive performances which conduct an approach to European standards.

Identified critical factors: access to European funds, connectivity-movement between cities, and increasing life's standards.

5.1.4. Ruse-Giurgiu: the importance of being inserted in a Euroregion

The cities of Ruse and Giurgiu constitute the largest border urban agglomeration between Bulgaria and Romania, separated by the Danube River, which is in itself a reason for cooperation since a long time, i.e., common urban planning due to extreme flood phenomena. Along with the previously identified reason for cooperating, also exists the need for the rehabilitation of accessibility infrastructures promoting a transboundary integration avoiding infrastructural duplication in CBC [7]. Also, in this case, the area is inserted within a Euroregion—*Danubius Euroregion*. Thus, it is possible to verify, once more, the importance of being inserted in a Euroregion, mainly, for cities and regions that denote an estrangement from the European standards—which, unfortunately in many cases, is more evident. So, their integration in larger common regional development programs, i.e., the Euroregions, conducts that the performances presented by these “Euroregionalized regions” start to reverse the estrangement tendency and consequently a closeness to the EU standards.

Identified critical factors: access to European funds and connectivity-movement between cities.

5.2. Outcomes

In this regard, general settings including statistical data for the population of the cities and the corresponding region or influenced area (**Table 1**), as well as data for the distance-time between the cities of these border areas (**Table 2**), were analyzed. Through that analysis, it is possible to understand their spatial configuration, i.e., different spatial configurations and different urban patterns and dynamics, concurring with previous researches and studies as the one conducted by ESPON regarding Urban Functions [78], among many other studies and works developed in the same context.

Also, an indicator which allows that to analyze the economic dynamics of the territories, i.e., GDP per capita in terms of purchasing power parity, is presented in **Table 3**, covering both sides of the border. Analyzing **Table 3**, it is possible to understand the socioeconomic dynamics of the urban areas under study, i.e., GDP per capita for each case study region for the 3 years 2000, 2006, and 2011, where in all cases, the GDP per capita has increased in absolute terms but with very different rates. For an easy reading, in the last column, the information is synthesized using signs which allow seeing whether GDP has increased at rates, which are:

Case study	Country	Area (km ²)	Spatial structure	Population
Vienna-Bratislava-Brno-Györ (Centroe region)	AT SK CZ HU	48,200	Cross-border polycentric metropolitan region	6,500,000
Copenhagen-Malmö	DK SE	21,800	Cross-border polycentric metropolitan region	3,800,000
Oradea-Debrecen	RO HU	13,600	Cross-border polycentric metropolitan region	1,134,255
Ruse-Giurgiu	BG RO	195	Cross-border agglomeration	204,297

AT, Austria; SK, Slovakia; CZ, Czech Republic; HU, Hungary; DK, Denmark; SE, Sweden; RO, Romania; and BG, Bulgaria.

Table 1. General settings and spatial structure (source: [77, 79]).

- Still below the average increase for European regions in NUTS 3 (-), which was 5500 €.
- Between 5000 € and 10,000 € above the EU average growth (+).
- Very above (++), over 10,000 € elation to the population.

It is a well-documented fact that labor market can play a critical role through the impact on cross-border integration [81]; so, throughout **Table 4**, it is possible to analyze the differences in unemployment levels and where cross-border cooperation can potentially allow a higher fluidity of the labor market for the benefit of both sides of urban regions [80, 81].

Table 5 shows the identified factors for territorial success on the case studies.

Case study	Country	Between main cities	Travel time (min)		
			By public transport	By car	By bus
Vienna-Bratislava-Brno-Györ (Centroe region)	AT	Vienna-Bratislava	83	54	/
	SK	Vienna-Györ	116	81	
		Vienna-Brno	137	103	
	CZ	Bratislava-Györ	91	55	
		Bratislava-Brno	87	78	
	HU	Brno-Györ	248	122	
Copenhagen-Malmö	DK SE	Copenhagen-Malmö	34	48	/
Oradea-Debrecen	RO HU	Oradea-Debrecen	54	69	/
Ruse-Giurgiu	BG RO	Ruse-Giurgiu	/	15	15

AT, Austria; SK, Slovakia; CZ, Czech Republic; HU, Hungary; DK, Denmark; SE, Sweden; RO, Romania; and BG, Bulgaria.

Table 2. Connectivity and accessibility-movement between cities (source: [80]).

Case study	Country	GDP per capita			Evolution (2000/2011)
		2000	2006	2013	
Vienna-Bratislava-Brno-Győr	AT	30,263	34,547	36,562	+
	SK	12,400	17,200	19,000	+
	CZ	12,803	16,139	18,652	+
	HU	15,652	26,855	34,357	++
Copenhagen-Malmö	DK	22,100	25,700	27,100	—
	SE	29,161	33,419	36,667	+
Oradea-Debrecen	RO	7600	10,900	12,500	—
	HU	4700	9300	10,100	—
Ruse-Giurgiu	BG	4700	7100	8700	—
	RO	2700	4800	9000	+

Notes: (–) means that the evolution of the GDP per capita is below 5.500 € (EU NUTS 3 average growth) between 2000 and 2011; (+) means that the evolution of the GDP per capita is between 5.500 and 10.000 € between 2000 and 2011; (++) means that the evolution of the GDP per capita is higher than 10.000 € between 2000 and 2011; The threshold values have been calculated based on the average and standard deviation in all the NUTS 3 regions in the EU. AT, Austria; SK, Slovakia; CZ, Czech Republic; HU, Hungary; DK, Denmark; SE, Sweden; RO, Romania; and BG, Bulgaria.

Table 3. GDP per capita dynamics (source: [77, 79]).

Case study	Country	NUTS2*	Active population 2006/2013 (%)	Unemployment rate (%)			Employment 2006/2013 (%)
				2006	2013	Difference (%)	
Vienna-Bratislava-Brno-Győr		Burgenland	3.5	5	4.7	–1	4.7
	AT	Niederösterreich	6.2	4	5.6	0.5	5.6
	SK	Wien	7.4	8.8	7.8	–0.4	7.8
	CZ	Jihovýchod	3.7	7.1	4.1	–0.3	4.1
	HU	Nyugat-Dunántúl	–0.7	5.7	–2.7	2.1	–2.7
		Bratislavský kraj	0.3	4.6	–1.7	1.8	–1.7
Copenhagen-Malmö	DK	Sydsverige	9	8.2	6.8	1.7	6.8
	SE	Hovedstaden	8.8	5	3.8	2.4	3.8
		Sjælland	–2	4	–5.6	2.8	–5.6
Oradea-Debrecen	RO	Észak-Alföld	5.7	11	1.7	3.4	1.7
	HU	Nord-Vest	0.6	5.9	2.7	–1.8	2.7
Ruse-Giurgiu	BG	Severen Tsentralen	–9.1	13.5	–11.1	1.8	–11.1
	RO	Sud-Muntenia	–8.8	9.4	–9	0.5	–9

AT, Austria; SK, Slovakia; CZ, Czech Republic; HU, Hungary; DK, Denmark; SE, Sweden; RO, Romania; and BG, Bulgaria.*Totally or partly incorporated in cross-border urban areas.

Table 4. Labor market dynamics (2006/2013) (source: [77, 79]).

Identified factors	Case studies			
	Vienna-Bratislava-Brno-Győr	Copenhagen-Malmö	Oradea-Debrecen	Ruse-Giurgiu
Access to European funds			x	x
Common objectives and Master's Plans	x	x		
Connectivity-Movement between cities	x	x	x	x
Increasing life's standards			x	
Stronger economy	x	x		

Table 5. Identified factors.

6. Discussion and conclusions

The performed multivariated analysis of the case studies enabled us to identify critical factors for territorial success through CBC projects. Nevertheless, similar studies have already been developed, i.e., [7, 10, 32, 66], among many others, however, not through a multivariated analysis focusing on the addressed case studies. Thus, the present study allowed to define specific factors for these cases as well as to establish a correlation with land use, urban planning, city cooperation, and CBC.

So, from an individualized perspective, two rhythms of development and consequently two groups of factors and objectives can be defined; in order words, through the analysis of the case studies, it is verified that the cases located in Central and North Europe, Bratislava-Vienna-Brno-Győr, and Copenhagen-Malmö, have similar objectives, i.e., common objectives, Master's plans, and stronger economy, while in the cases of Eastern Europe, Oradea-Debrecen, and Ruse-Giurgiu, the factors and objectives are access to the EU funds and increase in life's standards, demonstrating significant disparities in the development levels within the European continent. However, one of the identified factors is common to all case studies: connectivity-movement between cities, showing unequivocally its relevance to achieve territorial success as well as the so desired sustainable development. In this regard, to achieve a sustainable, well-developed and abiding CBC project, all the critical factors, even the ones that have been assigned only for some of the cases, should be considered and not be underestimated [6]; such statement is valid not only for the planners but mainly for the decision-makers.

The historical and social evolution that European territories have felt through time should also be focused; along with the land use, changes as well as territorial landscapes, urban and rural, are the outcome of policies and administrative actions leading to strengthen urban agglomerations giving them the consistency that they present as a result of the application of regional strategies, i.e., the plurality of Europe [41]. In fact, the reality of the twenty-first century is increasingly the change tendency in the urban landscapes of these "new times," i.e., technological, and socioeconomically, where city cooperation is not an exception.

In fact, throughout history, territories have always sought an approach to the more developed/avant-garde nations of their time. Nowadays, and based on the results of the present

study, economies and countries of Central and Northern Europe, along with the United States, continue to be references to good practice, formatting the urban agglomerations and their landscapes in the demand for such standards.

Acknowledgements

The authors would like to acknowledge the financial support given by the Junta de Extremadura/FEDER for the support to the research Group ARAM - Environmental Resources Analysis Research Group (GR15149).

Author details

Luís Carlos Loures^{1*}, Rui Alexandre Castanho^{2,5}, José Manuel Naranjo Gómez³, Ana Vulevic⁴, José Cabezas² and Luis Fernández-Pozo²

*Address all correspondence to: lcloures@gmail.com

1 Polytechnic Institute of Portalegre, Portugal and Research Centre for Spatial and Organizational Dynamics (CIEO), University of Algarve, Portugal

2 Environmental Resources Analysis Research Group (ARAM), University of Extremadura, Badajoz, Spain

3 Polytechnic School, University of Extremadura, Caceres, Spain

4 Department of Architecture and Urban Planning, Institute of Transportation – CIP, Belgrade, Serbia

5 Department of Landscape, Environment and Planning; School of Science and Technology, University of Évora, Portugal

References

- [1] Špírková D, Ivanička K. Dynamics of Bratislava urban and housing development. In: Panagopoulos T, editor. *New Models for Innovative Management and Urban Dynamics*. Faro: University of Algarve; 2009. pp. 37-53
- [2] Martins S. *Labirintos Mundiais: As Revoluções Pós-Modernas e os Caminhos da Incerteza Global*. Lisbon, Portugal: Sílabo; 2015. 248 p
- [3] Holmes DR. Fascism 2. *Anthropology Today*. 2016;**32**(2):1-3. DOI: 10.1111/1467-8322.12235
- [4] Scott JW. Rebordering Central Europe: Observations on cohesion and cross-border cooperation. In: Scott JW, editor. *Cross-Border Review Yearbook 2016 European Crisis and*

- its Consequences for Borders and Cooperation. Budapest: Central European Service for Cross-border Initiatives (CESCI), European Institute of Cross-Border Studies; 2016. pp. 9-29
- [5] Castanho R. Sustainable Urban Planning in Transboundary Areas—Analysis of Critical Factors for Territorial Success. [PhD Thesis]. Badajoz, Spain: University of Extremadura; 2017
- [6] Castanho R, Cabezas J, Loures L, Fernández-Pozo L, Nunes J, Gama J. Processes to achieve territorial cohesion and sustainable development. Proceedings of the International Congress on Interdisciplinarity in Social and Human Sciences. Faro-Algarve, Portugal; 2017
- [7] Castanho R, Loures L, Cabezas J, Fernández-Pozo L. Cross-border cooperation (CBC) in southern Europe—An Iberian case study. The Eurocity Elvas-Badajoz Sustainability. 2017;**9**(3):360. DOI: 10.3390/su9030360
- [8] McCann E, Ward K. Policy assemblages, mobilities and mutations: Toward a multi-disciplinary conversation. Political Studies Review. 2012;**10**(3):325-332. DOI: 10.1111/j.1478-9302.2012.00276.x
- [9] Batista T, Caballero C, Ceballos F, Carriço C, Mateus J, Lopes H, et al. IDE-OTALEX C. The first crossborder SDI between Portugal and Spain: Background and development. Journal of Earth Science and Engineering. 2013;**3**(6):393. DOI: 10.1553/giscience2013s6
- [10] Castanho R, Loures L, Fernández J, Pozo L. Identifying critical factors for success in cross border cooperation (CBC) development projects. Habitat International. 2016; (in press). DOI: 10.1016/j.habitatint.2016.10.004
- [11] Smallbone D, Welter F. Cross-border entrepreneurship. Entrepreneurship & Regional Development. 2012;**24**(3-4):95-104. DOI: 10.1080/08985626.2012.670907
- [12] Martín G. Border Space as a Vehicle for Territorial Cooperation in the New Programming Period 2014-2020. Badajoz, Spain: OTALEX-C. Dirección General de Transportes, Ordenación del Territorio e Urbanismo. Consejería de Fomento, Vivienda, Ordenación del Territorio y Turismo. Junta de Extremadura; 2013
- [13] Loures L, Panagopoulos T, Burley JB. Assessing user preferences on post-industrial redevelopment. Environment and Planning B: Planning and Design. 2016;**43**(5):871-892. DOI: 10.1177/0265813515599981
- [14] Yin RK. Case Study Research: Design and Methods. London: Sage Publications; 1994
- [15] Levy JS. Case studies: Types, designs, and logics of inference. Conflict Management and Peace Science. 2008;**25**(1):1-18. DOI: 10.1080/07388940701860318
- [16] Medeiros E. Efeito barreira e cooperação transfronteiriça na Raia Ibérica. Guarda/Lisboa: Centro de Estudos Ibéricos/Áncora Editora; 2011
- [17] Medeiros E. Assessing territorial impacts of the EU cohesion policy: The Portuguese case. European Planning Studies. 2013;**22**(9):1960-1988. DOI: 10.1080/09654313.2013.813910

- [18] Medeiros E. Territorial impact assessment and cross-border cooperation. *Regional Studies, Regional Science*. 2015;**2**(1):97-115. DOI: 10.1080/21681376.2014.999108
- [19] Rabé P, Toto R, Dhima S. Analyzing the Likely Impact of European Union Policies on Territorial Planning in Albania. Rotterdam, Netherlands: Netherlands government (MATRA); 2013
- [20] Faludi A. European Territorial Cooperation and Learning. *disP: The Planning Review*. 2008;**44**(172):3-10. DOI: 10.1080/02513625.2008.10556998
- [21] Gualini E. Political economy of scale in European spatial policy. In: *Rethinking European Spatial Policy as a Hologram: Actions, Institutions, Discourses*. London, United Kingdom: Routledge; 2017
- [22] Stead D, Waterhout B. Learning from the application of the ESPD: Influences on European Territorial Governance. *disP: The Planning Review*. 2008;**44**(172):21-34. DOI: 10.1080/02513625.2008.10557000
- [23] Faludi A. The application of the European spatial development perspective: Introduction to the special issue. *Town Planning Review*. 2003;**74**(1):1-9. DOI: 10.3828/tpr.74.1.1
- [24] Commission of the European Communities. *European Spatial Development Perspective: Towards Balanced and Sustainable Development of the Territory of the European Union*. Luxemburg: Office for Official Publications of the European Communities; 1999
- [25] ESPON. Study on Urban Functions, No. 1.4.3. Luxembourg: The ESPON Monitoring Committee; 2007
- [26] Vogelij J. Does ESPON support planning practice? *Planning Theory & Practice*. 2014;**15**(1):139-143. DOI: 10.1080/14649357.2013.873232
- [27] Ravesteijn N, Evers DVH, Middleton D. *Unseen Europe: A Survey of EU Politics and its Impact on Spatial Development in the Netherlands*. Rotterdam, Netherlands: NAI Publishers; 2004
- [28] Knieling J, Othengrafen F. Planning culture—A concept to explain the evolution of planning policies and processes in Europe? *European Planning Studies*. 2015;**23**(11):2133-2147. DOI: 10.1080/09654313.2015.1018404
- [29] Vulevic A. Accessibility concepts and indicators in transportation strategic planning issues: Theoretical framework and literature review. *Logistics & Sustainable Transport*. 2016;**7**(1):58-67. DOI: 10.1515/jlst-2016-0006
- [30] Dühr S, Stead D, Zonneveld W. The Europeanization of spatial planning through territorial cooperation. *Planning, Practice & Research*. 2007;**22**(3):291-307. DOI: 10.1080/02697450701688245
- [31] Commission of the European Communities. *Cohesion Policy in Support of Growth and Jobs: Community Strategic Guidelines, 2007-2013*. Luxemburg: Office for Official Publications of the European Communities; 2005
- [32] Buis H. The role of local government associations in increasing the effectiveness of city-to-city cooperation. *Habitat International*. 2009;**33**(2):190-194. DOI: 10.1016/j.habitatint.2008.10.017

- [33] Musch A, van der Valk C, Sizoo A, Tajbakhsh K. City Diplomacy. Hague, Netherlands: VNG International; 2008
- [34] Xian S, Chan RCK, Qi Z. Booming provincial-led North–South City-to-city cooperation in China: A case study of Suzhou-Suqian Industrial Park of Jiangsu Province. *Cities*. 2015;**46**(Supplement C):44-54. DOI: 10.1016/j.cities.2015.04.006
- [35] Fadigas L. Urbanismo e natureza: os desa os. Lisbon, Portugal: Edições Sílabo; 2010
- [36] Dominguez Castro L, Varela AE. Building Europolis on the basis of local “informal” cooperation in European cross-border spaces: The case of RIET. *Geopolítica(s) Journal*. 2015;**6**:225-246
- [37] Trillo Santamaria J, González R, Paül V. Border-crossing cities: A critical analysis on the Eurocidade Chaves-Verin project. *Journal of Geography*. 2015;**54**:160-185
- [38] Heredia C, Lawson C. Managing the United States–Mexico border: Cooperative solutions to common challenges. In: Report of the Binational Task Force on the United States–Mexico Border. Washington DC., USA: Pacific Council for International Policy (PCIP) and the Mexican Council on Foreign Relations (COMEXI); 2012
- [39] Lee S, Na S. E-waste recycling systems and sound circulative economies in East Asia: A comparative analysis of systems in Japan, South Korea, China and Taiwan. *Sustainability*. 2010;**2**(6):1632-1644. DOI: 10.3390/su2061632
- [40] Bacova A, Puskar B, Vrablova E. New Housing Models—Case Studies. Albena, Bulgaria: SGEM; 2015. DOI: 10.5593/ sgem2015/b62/s27.066. Pub. SGEM. Albena, Bulgaria
- [41] Fadigas L. Urbanismo e território: as políticas públicas. Lisbon, Portugal: Edições Sílabo; 2015
- [42] Slotterback CS, Runck B, Pitt DG, Kne L, Jordan NR, Mulla DJ, et al. Collaborative Geodesign to advance multifunctional landscapes. *Landscape and Urban Planning*. 2016; **156**:71-80. DOI: 10.1016/j.landurbplan.2016.05.011
- [43] Follmann A. Urban mega-projects for a ‘world-class’ riverfront—the interplay of informality, flexibility and exceptionality along the Yamuna in Delhi, India. *Habitat International*. 2015;**45**:213-222. DOI: 10.1016/j.habitatint.2014.02.007
- [44] Joseph M, Wang F, Wang L. GIS-based assessment of urban environmental quality in port-au-prince, Haiti. *Habitat International*. 2014;**41**:33-40. DOI: 10.1016/j.habitatint.2013.06.009
- [45] Yu L. Low carbon eco-city: New approach for Chinese urbanisation. *Habitat International*. 2014;**44**(Supplement C):102-110. DOI: 10.1016/j.habitatint.2014.05.004
- [46] Norman B. Principles for an intergovernmental agreement for coastal planning and climate change in Australia. *Habitat International*. 2009;**33**(3):293-299. DOI: 10.1016/j.habitatint.2008.10.002
- [47] Saavedra C, Budd WW. Climate change and environmental planning: Working to build community resilience and adaptive capacity in Washington State, USA. *Habitat International*. 2009;**33**(3):246-252. DOI: 10.1016/j.habitatint.2008.10.004

- [48] Nadin V, Stead D. European Spatial Planning Systems, Social Models and Learning. *disP: The Planning Review*. 2008;**44**(172):35-47. DOI: 10.1080/02513625.2008.10557001
- [49] Zhou X, Lu X, Lian H, Chen Y, Wu Y. Construction of a Spatial Planning system at city-level: Case study of “integration of multi-planning” in Yulin City, China. *Habitat International*. 2017;**65**(Supplement C):32-48. DOI: 10.1016/j.habitatint.2017.04.015
- [50] Commission of the European Communities. The European Compendium of Spatial Planning Systems and Policies. Luxembourg: Office for Official Publications of the European Communities; 1997
- [51] Williams M, Williams R. European Union Spatial Policy and Planning. Thousand Oaks, CA, USA: Sage; 1996
- [52] Munteanu M, Servillo L. Romanian spatial planning system: Post-communist dynamics of change and Europeanization processes. *European Planning Studies*. 2014;**22**(11):2248-2267. DOI: 10.1080/09654313.2013.830696
- [53] Calfucura E. Governance, Land and Distribution: A Discussion on the Political Economy of Community-Based Conservation. *Ecological Economics*. 2018;**145**:18-26. DOI: 10.1016/j.ecolecon.2017.05.012
- [54] Albrechts L. Strategic (spatial) planning reexamined. *Environment and Planning B: Planning and Design*. 2004;**31**(5):743-758. DOI: 10.1068/b3065
- [55] Albrechts L. Shifts in strategic spatial planning? Some evidence from Europe and Australia. *Environment and Planning A*. 2006;**38**(6):1149-1170. DOI: 10.1068/a37304
- [56] González XO, Guimerà AD, Perkmann M. Las regiones transfronterizas: balance de la regionalización de la cooperación transfronteriza en Europa (1958-2007). *Documents d'anàlisi Geogràfica*. 2010;**56**(1):21-40
- [57] Popescu G. The conflicting logics of cross-border reterritorialization: Geopolitics of Euroregions in Eastern Europe. *Political Geography*. 2008;**27**(4):418-438. DOI: 10.1016/j.polgeo.2008.03.002
- [58] Sassen S. *Territory, Authority, Rights: From Medieval to Global Assemblages*. New Jersey, USA: Princeton University Press; 2008. DOI: 10.1515/9781400828593.473
- [59] Anderson J, O'Dowd L, Wilson TM. *New Borders for a Changing Europe: Cross-Border Cooperation and Governance*. London, United Kingdom: Psychology Press; 2003. DOI: 10.4324/9780203508435
- [60] Hooper B, Kramsch O. *Cross-Border Governance in the European Union*. London, United Kingdom: Routledge; 2004. DOI: 10.4324/9780203563380
- [61] Paasi A, Newman D. *Boundaries, Territory and Postmodernity*. Abingdon: Taylor and Francis; 1999. 206 pp
- [62] O'Dowd L. The changing significance of European borders. *Regional & Federal Studies*. 2002;**12**(4):13-36. DOI: 10.1080/714004774

- [63] Perkmann M. Euroregions: Institutional entrepreneurship in the European Union. In: *Globalization, Regionalization and Cross-border Regions*. Springer; 2002. pp. 103-124. DOI: 10.1057/9780230596092_5
- [64] Scott JW. European and North American contexts for cross-border regionalism. *Regional Studies*. 1999;**33**(7):605-617. DOI: 10.1080/00343409950078657
- [65] Sparke M. Between post-colonialism and cross-border regionalism. *Space and Polity*. 2002;**6**(2):203-213. DOI: 10.1080/1356257022000003635
- [66] Baltà PJ. *Cross-Border Cooperation and Cultural Communities in Europe*. Brussels, Belgium: Centre Maurits Coppieters; 2015. DOI: 10.3726/978-3-0352-6452-4/13
- [67] Commission of the European Communities. *Practical Guide to Cross-border Cooperation*. Brussels, Belgium: EU; 2000
- [68] Browning CS. The internal/external security paradox and the reconstruction of boundaries in the Baltic: The case of Kaliningrad. *Alternatives*. 2003;**28**(5):545-581. DOI: 10.1177/030437540302800502
- [69] Föhl PS. Regionale Kooperationen im Kulturbereich. Begri e und Systematisierungen. In: Föhl PS, Neisener I, editors. *Regionale Kooperationen im Kulturbereich Theo-retische Grundlagen und Praxisbeispiele* Bielefeld. Wetzlar, Germany: Majuskel Medienproduktion GmbH; 2009. pp. 15-46. DOI: 10.14361/97838394 10509-001
- [70] Perrin T. *Culture et eurorégions: enjeux institutionnels de l'action culturelle eurorégionale*. Grenoble: École Doctorale Sciences de l'Homme, du Politique et du Territoire; 2010
- [71] Gabbe J. General Secretary. Association of the European Border Regions (AEBR), Gronau, Germany; 2010. p. 17
- [72] Taylor PJ. The state as container: Territoriality in the modern world-system. *Progress in Human Geography*. 1994;**18**(2):151-162. DOI: 10.1177/030913259401800202
- [73] Perrin AJ. Political microcultures: Linking civic life and democratic discourse. *Social Forces*. 2005;**84**(2):1049-1082. DOI: 10.1353/sof.2006.0028
- [74] Kornyeveva L, Boehnke K. The role of self-acceptance in authoritarian personality formation: Reintroducing a psychodynamic perspective into authoritarianism research. *Psychoanalytic Psychology*. 2013;**30**(2):232. DOI: 10.1037/a0029879
- [75] Dale G. *Karl Polanyi: A Life on the Left*. New York, USA: Columbia University Press; 2016. DOI: 10.7312/dale17608
- [76] Treaty on European Union. Maastricht Treaty. Luxembourg: Publications of the European Communities; 1992
- [77] LISER. *Opportunities of Cross-Border Cooperation between Small and Medium Cities in Europe*. Luxembourg: Institute of Socio-Economic Research; 2015
- [78] ESPON. *Scenarios on the Territorial Future of Europe*. ESPON Coordination Unit: Luxembourg; 2007

- [79] Eurostat. Eurostat – Statistics Explained. Luxembourg: European Commission; 2015
- [80] ESPON. Cross-Border Polycentric Metropolitan Regions. Targeted Analysis. Luxembourg: The ESPON Monitoring Committee; 2013
- [81] Decoville A, Durand F, Feltgen V. Opportunities of cross-border cooperation between small and medium cities in Europe. In: Report Written in the Frame of the Spatial Development Observatory. Luxembourg: On Behalf of the Department of Spatial Planning and Development, Ministry of Sustainable Development and Infrastructure; 2015. pp. 1-55