

1 Territorial development and border cities. A theoretical debate

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Abstract:

In the European Union, around 30% of the population live in border regions (border NUTE 3), covering approximately 40% of the territory. These regions have, for the most part, lower territorial development levels than non-border regions. The exceptions are commonly the border cities which serve as anchors of development for the entire border region, making their analysis especially important for better understanding the territorial development challenges, as well as the territorial capital and trends of border regions. In this context, this chapter presents a theoretical framework of the territorial development process while linking it to the potential contribution of border cities to the territorial development of border regions. The chapter concludes with the analysis of the territorial development trends of the main EU border cities during the last decade (2005-2015), largely based on statistical elements and available literature. Based on the European case, 65 border twin cities were identified and analysed. These are, with few exceptions, small and medium-sized cities, located in lagging regions. However, they hold the key to increase the territorial development potential of EU border regions, since they concentrate the human and socioeconomic capital of these regions.

Keywords: Border Cities, Territorial Development, Eurocities, Border Regions, Cross-Border Cooperation.

1.1. Introduction

According to dominant theories, cities need to be adequately involved in the conception and implementation of development policies with a multi-level governance approach. Moreover, these development policies need to be better adapted not only to the urban realities where they will be implemented, but also to the surrounding hinterland (EC, 2014). Being crucial drivers of territorial development, mainly due to their functional specialisation and their position in the knowledge economy, cities are significant nodes for regional competitiveness and cohesion, at all territorial

levels (ESPON, 2006). Then again, in cross-border regions, which are commonly characterized by lagging territorial development and demographic trends, border cities, which are mostly small and medium-sized, can play a vital role in their territorial development process, as development anchors, as providers of services of general interest and quality of life, and also by serving as crucial nodes for cross-border urban networks (EC, 2016).

The key socioeconomic, environmental, planning and governance opportunities and challenges facing border cities, in a contrasting ‘globalisation’ vs ‘rising nationalisms’ era, is particularly challenging, as the 2020 covidfencing process has shown (Medeiros et al., 2020). More importantly, however, in our view, is the role of border cities to support cross-border cooperation processes in a sustainable way, as a means to achieving territorial integration processes and knowledge flows across cross-border regions (Cappelli & Montobbio, 2016). In a similar manner, border cities have a crucial role in materialising the political, institutional, socioeconomic and sociocultural added-value, often associated with the implementation of cross-border cooperation processes (AEBR, 2008). In the end, it is expected that all sorts of persisting border barriers (Medeiros, 2011, 2018a) will be systematically mitigated in order to increase business across borders, resulting in positive territorial development processes to cross-border regions. For this, border cities should also engage in cross-border planning processes (Braunerhielm et al., 2019), and in favouring integrated sustainable urban development policies (ESPON, 2014; Medeiros & van der Zwet, 2020a, 2020b).

In this context, this chapter addresses the importance of border cities for the territorial development of cross-border regions. It starts by providing a concise theoretical overview of the territorial development concept by identifying its main analytic dimensions, pillars and scales. The next section identifies the main roles of border cities in promoting territorial development processes in border areas. Largely based on the European example, in which the authors have been working for the past three decades, the analysis is mostly based on desk research (literature review), complemented with quantitative data for the selected number of border twin cities. From a methodological standpoint, this chapter proposes a novel typology to identify different types of border twin cities, applied to 65 cases in Europe. The analysis ends by shedding light on the territorial development trends of EU border cities in the past decade (2005-2015), largely based on data (demography, territorial articulation, environmental sustainability, social inclusion, and institutional building) collected at the EU Nomenclature of Territorial Units for Statistics (NUTS) 3 level.

1.2. Territorial development: the concept, dimensions and components

Commonly associated with positive progress, advancement, and social betterment, no matter how it is measured, development ends up being geographically uneven. Conceptually speaking, the popular understanding of development implies improvement in society's economic, social, or environmental conditions (Greiner, 2014). Also noteworthy is the dominant academic and policy focus on economic development, which entails the growth of per capita income and the consequent reduction of poverty (Warf & Stutz, 2012). Also referring to "processes of change involving the nature and composition of the economy of a particular region as well as to increases in the overall prosperity of a region" economic development implies: (i) changes in the structure of the region's economy; (ii) changes in forms of economic organization within the region; and (iii) changes in the availability and use of technology within the region (Knox & Marston, 2016: 286).

Notoriously hard to define, development can be viewed as both a material process and a political or ideological project (Daniels, 2016). Much contemporary research on the concept of development also reveals how it has been highly contested through time, and how its meaning varies from place to place. Impelled by increasing social inequality and environmental concerns, economic development has gradually incorporated an interplay with these analytic dimensions, as previously seen. Rather remarkably, the notion of development has also broadened over the years to incorporate aspects related to political freedoms (Potter et al., 2008).

Indeed, the broader concept of territorial development, which dominates this chapter, not only encompasses all these economic, social, environmental, governance and planning analytic dimensions, but also covers all territorial scales of analysis. Likewise, the territorial development process is distinctive in terms of economic growth processes, since it not only addresses the need to create wealth, but also pro-active requirements to retain and distribute this wealth across territories (Figure 1.1). A similar, yet debatable, perspective (Medeiros, 2018b) is advanced by Sachs (2015: 11) when discussing the concept of sustainable development as: "a way to understand the world as a complex interaction of economic, social, environmental, and political systems". This holistic vision for global development is also retained in the United Nations (UN) Sustainable Development Goals (SDGs) expressed in their 2030 Agenda for Sustainable Development (UN, 2016) (Table 1.1).

As can be seen, the UN SDGs provide a holistic conceptual impetus for global development with a special attention to social and environment aspects of development. Conversely, mainstream literature on regional development still holds a marked economic lens (see OECD 2012, 2018). This can be testified by the insistence in using the term 'economic growth' instead of 'economic development'. For instance, a quite recent work on local economic development by Beer and Clower (2020: 4) concludes that "growth is achieved through positive interactions between factors such as infrastructure provision, educational attainments, innovation and the promotion of an entrepreneurial

culture. Critically, such synergies are best planned for at the local, city or community scale”. Then again, and on a positive note, these authors convincingly present a comprehensive interconnection and interdependency between economic development and spatial planning processes (Medeiros, 2020b).

Insert here Figure 1.1. The territorial development concept. Source: based on Medeiros (2019b).

Table 1.1 Relation between the UN SDSs and the territorial development dimensions

Territorial development dimensions	UN SDG
Economic competitiveness	Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation Goal 12. Ensure sustainable consumption and production patterns
Social cohesion	Goal 1. End poverty in all its forms everywhere Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture Goal 3. Ensure healthy lives and promote well-being for all at all ages Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all Goal 5. Achieve gender equality and empower all women and girls
Environmental sustainability	Goal 6. Ensure availability and sustainable management of water and sanitation for all Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all Goal 13. Take urgent action to combat climate change and its impacts Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
Territorial governance	Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels Goal 17. Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development
Spatial planning	Goal 10. Reduce inequality within and among countries

	Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable
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Source: Authors' compilation based on UN (2016)

The work of the UN on promoting sustainable development as a key policy goal of our age is entrenched in a dominant trend in development thinking 'sold' by development agencies. In the current predominant liberal capitalist (Thomas, 2000) and nationalist/populist (Gonzalez-Vicente & Carroll 2017) context, this development message is particularly challenging. On the other hand, an increasing recognition of the relevance of place-based (Barca, 2009) and multi-level territorial governance (Faludi, 2012) approaches to promoting territorial development, in particular by European Union (EU) policies, echoes a positive imprint on potential effective implementation of territorial development policies. Crucially, as Beer and Clower (2020: 9) assert, "success in local or regional economic development is achieved by addressing local needs and opportunities. Successful city or community economic development is unlikely to emerge by following strategies prominent in the popular or industry press, but poorly matched to local conditions".

As regards border cities they are, for the most part, located in lagging regions (border areas) from a territorial development prism (EC, 2017; Medeiros, 2018c). As such, they are faced with noticeable challenges to compete in a national and global economy, when compared with leading regions (Table 1.2). However, they can be crucial development pillars for surrounding lagging regions as they have, in many instances, the potential to attract productive, knowledge/creative, human, social-institutional, cultural, and infrastructural capital, as bases of regional competitive advantage (Beer & Clower, 2020).

Table 1.2. Determinants of growth in leading and lagging regions and their relation to territorial development dimensions.

Growth factors in leading regions	Impediments to growth in lagging regions
ec - Innovation - including entrepreneurship	ec - Innovation - including entrepreneurship
ec - Business environment	ec - Business environment
Ec - Foreign direct investment	so - Human capital
so - Human capital	tg - Policies
es - Presence of natural assets	tg - Institutions - including leadership
tg - Policies	sp - Connectivity of infrastructure
tg - Institutions - including leadership	sp - Geography
sp - Connectivity of infrastructure	sp - Demographic factors
sp - Geography	sp - Density and cohesion, i.e. fragmentation

Note: ec - economic competitiveness; so - social inclusion; es – environmental sustainability; tg - territorial governance; sp - spatial planning. Source: Authors based on Beer and Clower (2020: 39).

1.3. The main role(s) of border cities in promoting territorial development of border areas

A border city is, in simple terms, a city located in a border area or border region. This viewpoint, however, leaves ample scope for disputing the correct identification of border cities, since the delimitation of border and/or cross-border areas is subject to an interplay of a multitude of factors (Medeiros, 2019c). Borders areas commonly exhibit low levels of urbanization (Sohn & Lara-Valencia, 2013). Even so, due to their relatively vast geographical areas (in the EU alone internal border areas - borders NUTS 3 - cover around 40% of the territory and account for 30% of the population – 150 million people - EC, 2017). Albeit having several meanings, the notion of the more specific border twin cities refers to “a pair of border cities adjacent to each other across a national border” (Kaisto, 2017). For example, the rarer binational city belongs to two national states (Sohn & Lara-Valencia, 2013).

For Buursink (2001) a border city is more or less dependent on the border for its very existence, since its development process was forged by the presence of a cross-border point, and/or a settlement on the other side of the boundary. According to him, border cities located in the immediate proximity of borders can be considered duplicated cities or partitioned cities. As expected, the constant change of the delimitation of European national boundaries, for example, limits the application of this criteria (Eskelinen & Kotilainen, 2005). There are, however, several cases of border cities created from scratch, either to act as border defensive strongholds, or as a result of economic or administrative considerations (Sohn & Lara-Valencia, 2013).

Several border cities lie at the fringes of the state and stand at the frontiers of globalisation (Shirk, 2014). In certain cases, border cities appropriate spaces of foreign policy (Gasparini, 2014). This is being materialised in Europe via the EU cross-border cooperation programmes (Guillermo-Ramirez, 2018; Medeiros 2018d). Moreover, at the institutional level, border cities have contributed to mitigate border barriers as they are the headquarters of entities which have established a myriad of cross-border networks and entities (Lange & Pires, 2018). These include European Grouping of Territorial Cooperation (EGTCs) (Evrard & Engl, 2018) and Euroregions (Medeiros, 2011). Likewise, other forms of cross-border urban cooperation such as Eurodistricts, Eurometropolis and Eurocities have begun to take shape in Europe since the 1990s, driven by a need to mitigate several barriers (legal-administrative, accessibility, socioeconomic, etc.) caused by the proximity of the borderline (Lange & Pires, 2018). Conversely, similar initiatives in North America have mostly been driven by market forces (Brunet-Jailly, 2004; Sohn & Lara-Valencia, 2013).

Across Europe, the adoption of border Eurocities (Jurado-Almonte et al., 2020), twin cities (Brakman, 2016) and binational cities (Ganster & Collins, 2017), can be viewed as an institutional tool to use the presence of the border as a resource (Sohn, 2014a). This cross-border

institutionalisation process is forged via cooperative agreements and memorandums of understanding thus implying that adequate resources are devoted to cross-border twinning activities. Curiously, in a North America context, “as of 2013, there were more than 200 bilateral treaties and agreements in force between the United States and Mexico” (Ganster & Collins, 2017: 499).

In certain instances, a border city is a vast metropolis. Sometimes even the national capital. This is the case for Vienna (Austria), which is not only located relatively close to the national borderline, but also to another European capital (Bratislava - Slovakia). This has led to the creation of the Twin City Vienna-Bratislava, with the goal to “develop a functionally coherent transnational region based on specific advantages of the respective capital cities or other medium-sized cities” (Giffinger & Hamedinger, 2013: 213). This is just an example of cross-border intra-metropolitan spatial integration, entailing new opportunities to reinforce the transfrontier metropolises’ positions at the heart of global economic networks (Sohn, 2014b). However, legal-administrative barriers posed by differences in national systems tend to blur a full spatial integration process between both sides of the border (Decoville et al., 2013). In this regard, Sohn (2010) proposes three distinct models of cross-border metropolitan integration: (i) integration by specialization: cross-border commuting takes place primarily from the periphery towards the metropolitan centre, but not fully; (ii) integration by polarisation: cross-border flows primarily converge on the dominant urban centre; and (iii) integration by osmosis: cross-border flows are bi-directional. At an ultimate stage, this cross-border integration process contributes to cross-border regionalisation (Sergunin & Joenniemi, 2017).

There is some recognition that border twin cities have been contributing to various forms of institutionalisation - via the promotion of legal instruments and access to financial instruments (Sohn, 2014b) - and spatial integration (Sergunin & Joenniemi, 2017). An interesting manifestation from these types of cities is the policy branding of places: “as pairings declare they are playing a role of integration laboratories, they reveal this claim in the towns’ naming, promotional slogans and visual marketing symbols” (Jańczak, 2018: 408). However, in our view, the ultimate cross-border urban integration process is established via the implementation of cross-border planning processes (see Chapter 3) (Braunerhielm et al., 2019; Durand & Decoville, 2018; Medeiros, 2014). In the case of the U.S.-Mexico border, Peña (2007: 1) claims that “existing cross-border planning institutions are the result of an adjustment process, to a great extent due to challenges to the status quo by border actors and organizations”. For the same author, urban conurbations located on both sides of the border face similar urban challenges related to urban planning which can be more efficiently tackled via cross-border urban plans: water supply, transportation, air quality, capital facilities, economic development, etc. Nevertheless, in border facing security issues, like this one, cross-border infrastructure planning has become so much more complicated, to the extent that “the USA and

Mexico agreed, for the first time, to craft a US–Mexico Border Master Plan, which presumably would help integrate infrastructure planning with security concerns” (Herzog & Sohn, 2019: 196).

As an intermediate step towards cross-border planning, some border cities have been implementing cross-border governance processes with the goal of developing cross-border relationships and interactions to consolidate cross-border relations, as is the case of San Diego (USA) and Tijuana (Mexico) (Mendoza & Dupeyron, 2020). Increasing state–city relations and the cementation of the border city as both a socio-economic and political-institutional space (Fauser, 2019) can also reinforce these cross-border governance processes, as well as functional cross-border integration processes (ESPON METROBORDER, 2013) over time. Furthermore, the acceleration of globalisation processes “have led to the development of border cities that are no longer confined to the boundaries of national territories and increasingly concern cross-border spaces” (Sohn & Licheron, 2018).

Based on the proposed dimensions of territorial development (see previous section), the border cities have a particular important role in developing the surrounding cross-border areas, which are usually lagging from a territorial development standpoint, at a national context. This role comes from the fact that cities act as magnets for territorial development (Nijkamp & Kourtit, 2013) and as concrete vehicles to achieving territorial cohesion processes (Medeiros & Rauhut, 2020). More specifically, border cities have the potential to attract innovation and knowledge via academic institutions and innovative companies, thus stimulating economic competitiveness and innovation processes. Moreover, social cohesion can benefit from the sharing of cross-border public services, which are normally located in border cities, and increase the efficiency and quality of the provision of such social services (ESPON, 2019). As regards environmental sustainability, the implementation of cross-border transports, for example, stimulates the reduction of vehicles which cross the border and consequently the reduction of atmospheric pollution (Medeiros, 2019a; Medeiros, 2021a). Likewise, cross-border planning can allow for the implementation of cross-border energy efficient infrastructure. At the territorial governance and planning domains, border cities can stimulate institutional collaboration via the establishment of institutional agreements, by supporting cross-border networking (i.e. Eurocities, Euroregions, EGTCs, etc.) and by implementing cross-border planning.

But more importantly, border cities have the potential to make the most of resources located on both sides of the border for their own development, as they concentrate all vital aspects of the territorial capital of the surrounding cross-border region (Camagni & Capello, 2013; Medeiros, 2020a). Some examples can be highlighted based on experiences verified by the authors, like the twin cities at the BR-UY border, with long lasting experiences on cross-border healthcare and education,

or Encarnación (PY)-Posadas (AR) across the Paraná River. Furthermore, many small cities at the AR-BR border host positive cross-border collaboration cases. Moreover, there is the well-known case of the ES-PT Eurocities with so many services shared (e.g. the case of Badajoz-ES and Elvas-PT in which the Elvas population use the Badajoz hospital), including interesting approaches to cross-border labour market; compared with the absurd case of the hospital in Valga (EE)-Valka (LV) (Medeiros et al., 2021b)

1.4. Territorial development trends in EU border cities - 2005-2015

Ultimately, the delimitation of a border area for any process and activity, such as policy implementation, cultural activities, and the implementation of a cross-border entity, is the area in which stakeholders from both sides materialise the cross-border cooperation process. In Europe, the delimitation of the border area can be simplified by the area (NUTS 3) covered by the EU cross-border cooperation programmes (commonly known as Interreg-a - see Reitel et al., 2018). For the identification of border cities, several criteria can be followed. For this chapter, which focuses on a European context, the analysis used the ESPON classification of the main European urban areas: (i) MEGAS - Metropolitan European Growth Areas; and (ii) FUAs - Functional Urban Areas. In addition, the authors identified several border twin cities, based on their urban relevance and proximity to the borderline, and to another border city on the other side (Fig. 1.2).

Insert here Figure 1.2. Border Cities in the EU Interreg-a border areas.

Other studies followed different criteria. For instance, Sohn and Licheron (2018: 1515) mention a studied carried out by the German Federal Institute for Research on Building, Urban Affairs and Spatial Development (BBSR - Bundesamt für Bauwesen und Raumordnung) in 2010, to study the metropolitan functions of the major urban areas in Europe. This study based the identification of metropolitan border areas “on a criterion of Euclidian distance between the metropolitan core – the place where metropolitan functions tend to concentrate – and the nearest international border”. Instead, the ESPON METROBORDER (2013: 7) report proposed to identify cross-border polycentric metropolitan regions (CBPMRs), understood as political constructions based on cross-border agreements which consider the existence of national borders as a resource for increasing interactions at the local level and based on the embeddedness of the metropolitan centre(s) in global networks. Because CBPMRs are composed of several urban centres located on either side of a border, these

regional political initiatives can mobilise different geographical scales in order to utilise the assets and complementarities of the morphological and functional polycentricity.

The evolution of transfrontier metropolitan regions is, according to Herzog and Sohn (2014) a very recent phenomenon. In order to verify any type of correlation between the location of urban settlements and the territorial development trends in EU border regions, the analysis was supported by data collected at the EU NUTS 3 level for all the EU Interreg-a v NUTS 3. Firstly, a territorial development score from 0 (low territorial development degree) to 4 (very high territorial level degree) was built based on data associated with four territorial development dimensions: (i) institutional building (quality of government index - source: EC); (ii) territorial articulation - global potential accessibility - source: ESPON; (iii) socioeconomic-cohesion - EU human development Index - source: EC; and (iv) environmental sustainability - green infrastructure - source: EC Joint Research Centre. The end result shows the usual divide between some northwest leading regions vis-à-vis southern and eastern lagging regions (Fig 1.3). The relevance of this map, however, is the fact that it allows the identification of the border twin cities located in widely asymmetric border areas from a territorial development standpoint. These include, for instance, Vienna-Bratislava and all German border cities with their Polish neighbours on the other side of the borderline.

Insert here Figure 1.3. Territorial development scores in the Interreg-a v NUTS 3 - 2015.

In a European context, defining what is urban and what is rural is not an easy task, since rural areas may be of urban character in certain countries (ESPON ATLAS, 2014). For this analysis, however, the identified border twin cities were all clearly urban areas, despite the significant differences in size of population (Table 1.3). Curiously, there are only five European capitals: Vienna (AT), Bratislava (SK), Helsinki (FI) Tallinn (EE) and Copenhagen (DK). Predictably, the demographic trends in the NUTS 3 in which these cities are located are some of the most positive (Fig. 1.4). Conversely, smaller (in population) border twin cities do not seem to have contributed to significantly augment the demographic contingent of their related NUT 3. For instance, in the Portuguese-Spanish border area, the presence of a widely asymmetric (from a demographic lens) cross-border urban twinning (Elvas - Badajoz) did not influence the demographic change on the other side of the border, despite the fact of Badajoz's (ES) proximity to the Portuguese borderline and the significantly smaller size of the Elvas (PT) border city.

One possible conclusion from the collected data is that the contribution of border cities to the territorial development of cross-border areas largely depends on their size and socioeconomic vitality. It is one thing to have a large and vibrant border metropolis like Vienna, with almost two million

inhabitants, or Luxembourg city, which attracts thousands of cross-border commuters on a daily basis from surrounding countries, thus attracting knowledge, skills and innovation, favouring its territorial development process. This has nothing to do with two relatively small cities located on each side of the border with similar functions, socioeconomic status and number of inhabitants. In the latter case, the influence of such twin cities to the territorial development process is expected to be far more limited. Based solely on the population size of the city and its location in a leading or lagging region, six distinct types of border twin cities are proposed (Table 1.4 and Figure 1.5).

Table 1.3. EU border twin cities population (2019)

Twin City	Population	Country	Twin City	Population	Country
Elvas	20000	PT	Charlottenberg	2215	SE
Badajoz	150702	ES	Kongsvinger	17825	NO
Vila Real Santo Antonio	19156	PT	Haparanda	4856	SE
Ayamonte	20540	ES	Tornio	22331	FI
Chaves	41243	PT	Helsinki	632000	FI
Verin	13817	ES	Tallinn	426538	EE
Tui	16902	ES	Valga	12452	EE
Valenca	14127	PT	Valka	4573	LV
Irum	61983	ES	Frankfurt - Oder	753056	DE
Hendaye	16638	FR	Slubice	16816	PL
Lille	232741	FR	Copenhagen	602481	DK
Kortrijk	73941	BE	Malmo	316588	SE
Liege	196000	BE	Guben	20049	DE
Maastricht	122397	NL	Gubin	16619	PL
Aachen	245585	DE	Görlitz	57000	DE
Luxembourg	613894	LU	Zgorzelec	30374	PL
Metz	117492	FR	Vienna	1897000	AT
Forbach	5343	DE	Bratislava	428428	SK
Saarbrücken	178151	DE	Ostrava	289629	CZ
Strasbourg	277270	FR	Katovice	302297	PL
Kehl	34596	DE	Gorizia	34742	IT
Basel	171017	CH	Nova Gorica	13031	SI
Saint-Louis	24401	FR	Pyce	218566	BU
Geneve	500000	CH	Giurgiu	266194	RO
Saint-Julien-en-Genevois	14085	FR	Záhony	4156	HU
Menton	28231	FR	Chop	8837	UA
Ventimiglia	24171	IT	Varnsdorf	15857	CZ
Dundalk	31148	IE	Seifhennersdorf	4371	DE
Newry	28946	UK	Gmund	6892	DE
Gronau	46553	DE	České Velenice	3526	CZ
Enschede	158553	NL	Sighetu Marmatiei	41246	HU
Flensburg	85942	DE	Solotvyno	8931	UA
Padborg	4445	DK	Calais	75961	FR

Source: Authors' compilation

Insert here Figure 1.4. Border twin cities and population density change in the Interreg-a NUTS 3 (2005-15).

Table 1.4. Main types of border twin cities

Type	Characteristics
A - Strong Symmetric	Presence of a large metropolis on both sides of the border
B - Strong Asymmetric	Presence of one large metropolis on both sides of the border located in a leading region
C - Medium Asymmetric	Presence of one large metropolis on both sides of the border located in a lagging region
D - Medium Symmetric	Presence of medium-sized cities on both sides of the border
E - Weak Asymmetric	Presence of a medium-sized city on one side of the border
F - Weak Symmetric	Presence of two small cities on both sides of the border

Note: Large metropolis > 250,000 inhabitants; Medium-sized city: 250,000-50,000; Small city: < 50,000. Source: authors compilation.

Insert here Figure 1.5 – Main types of Border Twin Cities.

Other potential indicators can complement the proposed method to analyse border twin cities. These include getting information related to the city: (i) its focus on a globalisation strategy; (ii) participation in territorial cooperation projects; (iii) participation in institutionalised cooperation networks; (iv) support for cross-border services; (v) cross-border functional integration; (vi) global market influence; (vii) governance capacity; (viii) information sharing; (ix) level of unification of administrative structures; (x) use of cross-border planning strategies; (xi) level of cross-border cultural homogeneity; (x) multilevel-cooperation efficiency - regional cooperation agreements; (xi) political and institutional cross-border integration; and (xii) level of cross-border branding.

1.5. Conclusion

In an ideal world, national boundaries would not pose significant constraints to transnational territorial development processes. In our era, however, despite EU integration and territorial cohesion, this is often not the case. In any of those possible scenarios, border cities play a crucial role to engage cross-border cooperation processes, thus contributing to systematically reducing the barrier effect posed by the presence of national boundaries, in all their dimensions (accessibility, economic, social, cultural, environmental and institutional).

Put plainly, border cities, even if they are of small and medium size, can be regarded as anchors of development of cross-border regions, which are normally placed in the group of lagging regions (at a national level), or places adversely affected by processes beyond their control. The border cities' territorial development potential is true because they commonly aggregate key ingredients to achieving positive territorial development, such as human capital, physical capital, innovation and other competitive advantages, for instance in terms of industrial employment, normally within the surrounding rural hinterland. As shown above, border cities not only have the potential to contribute to promoting processes of economic competitiveness (attracting business and public services), but also to improving social conditions of the inhabitants of the cross-border region and to avoiding brain drain, by potentially facilitating the sharing of public services located on the other side of the border. Moreover, the implementation of cross-border public transports can contribute to environmental sustainability. Finally, the implementation of cross-border governance (i.e. cross-border entities) and cross-border planning related activities has the potential to respectively foment territorial governance processes, and spatial planning processes, leading to a more effective and efficient use of public funding.

Based on the European case, 65 border twin cities were identified. These are, with few exceptions, small and medium-sized cities, located in lagging regions. This means that, despite their potential positive effects on the territorial development of the cross-border regions in which they are located, by themselves they cannot invert the common territorial exclusion processes faced by the majority of border regions. In other words, specific policies directed to the development of such small and medium-sized towns and cities are needed to increase their territorial development potential. Indeed, the analysis of the demographic trends during the decade 2005-2015, in the EU Interreg-a NUTS 3 clearly indicates that, for the most part, the border regions where large border cities are located have been able to experience a positive demographic dynamic, which is normally a sign of positive territorial development trends.

It is true that the analysis of the trends of border twin cities is insufficient to analyse the full contribution of border cities to the territorial development processes of cross-border regions. In fact, as the analysis of the Interreg-a programmes has shown, the European cross-border cooperation process, implemented via the Interreg-a programmes, normally favours the regional (NUT 2) capitals, many of which are not even located in border NUTS 3 (Medeiros, 2010; 2019c). There are several reasons for this. These regional capitals serve as the location of: (i) the regional development entities which manage EU funds; (ii) the main regional universities which have the human capital and innovation processes at the regional level; and (iii) several public and private entities which submit the large bulk of EU cross-border cooperation projects. As such, one possible way to invert the current

scenario would be to ringfence EU cross-border cooperation funding specifically for cities located closer to the national boundaries.

There is a clear need to deepen the presented analysis in future research, since it was mostly based on a relation between the size of the border twin cities and their location in either a leading or a lagging region. This methodological approach led to the elaboration of a border twin city typology with six different categories, from a ‘strong symmetric type’ (presence of a large metropolis on both sides of the border) to a ‘weak symmetric type’ (presence of two small cities on both sides of the border), the former being the most favourable to the territorial development process of cross-border regions, and the latter being the less favourable. Potential complementary indicators to improve this analysis, would be a more detailed overview of ongoing cross-border planning, institutional, social, cultural, economic and governance processes.

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