

**OTALEX-C, BASIS FOR OPPORTUNITIES OF NEW RESEARCH
PROJECTS AND DEVELOPMENTS.**

GENERAL STUDIES: THE EURO-CITY ELVAS-BADAJOS

OTALEX-C, BASES PARA LAS OPORTUNIDADES DE NUEVOS
PROYECTOS DE INVESTIGACIÓN Y DESARROLLOS.

ESTUDIOS GENERALES: LA EUROCIUDAD ELVAS-BADAJOS

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RESUMEN

La civilización es una realidad evolutiva continua que fomenta la reformulación de las metodologías de planificación y la ordenación del territorio para adaptar los viejos métodos a las necesidades actuales. Requiere una presencia ineludible del proceso empírico, con herramientas e indicadores que pueden, en la gestión territorial y la intervención local, contribuir a la implementación de la sostenibilidad creciente y el desarrollo funcional.

Este trabajo, además de detallar el alcance global del proyecto, pone de relieve las metodologías utilizadas para la identificación y análisis de áreas territoriales específicas y también contempla el nuevo marco de investigación y las oportunidades de desarrollo creadas por el Proyecto OTALEX-C.

Enmarcado dentro del ámbito de la región EuroACE y del Proyecto OTALEX-C, un estudio de caso relacionado con la Eurociudad de Elvas-Badajoz será analizado y evaluado. Un protocolo establecido en 2013 entre las ciudades de Elvas y Badajoz condujo a la creación de la Euro-ciudad. Sin embargo, tres años más tarde, varias cuestiones muestran poca claridad. A este respecto, la identificación, el análisis y la evaluación de los factores que pueden influir en el éxito territorial en las zonas transfronterizas se consideran fundamentales para lograr un desarrollo sostenible mediante proyectos y estrategias de cooperación transfronteriza, lo que conduce a una mejora de las normas de vida de los habitantes transfronterizos.

Hoy en día, la investigación muestra que los efectos e impactos que los proyectos de CBC representan en la región no son visibles.

Las regiones europeas donde se han encontrado similitudes pueden verse como un paso más en el que se pueden aplicar descripciones y métodos idénticos. Algunas de estas soluciones pueden encontrarse en el Proyecto de CBC de Elvas-Badajoz.

Palabras clave: Areas transfronterizas; Cooperación Transfronteriza; Proyecto OTALEX-C; Planeamiento urbano; Sostenibilidad.

ABSTRACT

Civilization is a continuous evolving reality fostering to reformulate planning methodologies and spatial planning in order to adapt old methods to current needs. It requires an unavoidable presence of the empirical process, with tools and indicators that can, in territorial management and local intervention, contribute to the implementation of increasing sustainability and functional development.

This paper, besides detailing the overall scope of the project, highlights the used methodologies for the identification and analysis of specific territorial areas and also envisions new research framework and development opportunities created by the OTALEX-C Project.

Framed within the EuroACE and OTALEX-C project scope, a case study related to the Euro-city Elvas-Badajoz will be analysed and assessed. A protocol established in 2013 between the cities of Elvas and Badajoz and which conducts to the creation of the Euro-city. However, three years later, several issues show only small clarity. In this regard, the identification, analysis and assessment of which factors may influence the territorial success in transboundary areas is taken as critical to achieve a sustainable development through cross-border cooperation projects and strategies, which leads to an improvement on the lifes standards of the cross-border inhabitants.

Nowadays, the research shows that the effects and impacts that CBC projects represent in the region were not visible.

Also, European regions where similarities were found can be seen as a further step which identical disclosures and methods might be applied. Some of these solutions may be found in the CBC Elvas-Badajoz.

Key-words: Cross-Border Cooperation (CBC); OTALEX-C Project Spatial planning; Sustainability; Transborder areas.

1. INTRODUCTION

Integrative projects and strategies of Cross-border cooperation (CBC), undertaken throughout the world, have the purpose of creating a global network among people and also promote the so called *win-win situations*⁽²⁾ (Bacova *et al.*, 2015; Fadigas, 2015; Castanho *et al.*, 2017a). Thus, reaches in recent decades a new influence on their possibilities and integrative functions, as shown along the unification of Europe (Fadigas, 2010; Martin, 2013; Batista *et al.*, 2013; Dominguez Castro & Varela Alvarez, 2015; Trillo Santamaria *et. al.*, 2015).

As an example, are the growing literature that has been published in the last years or decades (Antrop, 2000,2004; Spirkova & Ivanicka, 2009; Domínguez *et al.*, 2015; Domínguez Castro & Varela Alvarez, 2015; Gajdova, 2015; Sohn & Giffinger, 2015; Trillo Santamaria *et al.*, 2015; Castanho *et al.*, 2016; Gartzke & Westerwinter, 2016; Gonzalez-Gomez & Gualda, 2016; Kurowska-Pysz 2016; Szmigiel-Rawska, 2016; Zimmerbauer, 2016; Castanho, 2017).

According with Martín (2013): *“This issue gains greater emphasis, when more than a third of the European population lives in border areas which are the best knowers and the most affected by EU policies, as well as the gaps these policies still shows”*.

Cohesion policies have been a key factor in the onset of several CBC Projects, as the ones carried out by EU (Martins, 2015). In that direction, more than fifty operational programs Interreg A were carried out during the fourth Interreg programming period (2007-2013), with the purpose of territorial cooperation (Castanho *et al.*, 2016; Evrad, 2016). Thirteen other programs are being developed in neighboring countries of the

² Win-win-situations: guaranteeing a favourable outcome for everyone involved. One example of win-win Situations, was the creation of EFTA (European Free Trade Association), on January 4, 1960, by Austria, Denmark, Norway, Portugal, United Kingdom, Sweden and Switzerland, who had joined the "Common Market", the establishment of a free trade area in which the products imported from member states were not subject to the payment of customs duties which has facilitated trades between territories in European Space (Fadigas, 2015).

EU through the tool of Neighbourhood and Partnership (Evariste *et al.*, 2016; INTERREG EUROPE, 2016).

In this sense, EUROACE Region (where OTALEX-C Project operated), by they environmental, social and economic features, are particularly sensitive to the changes that are occurring in their cities and to the challenges this new urbanism requires to achieve the desired sustainable development (Blanco Castro, et al., 2005; OTALEX-C, 2013; Castanho, 2017; Castanho et al., 2017b).

The cooperation between these two territories (Portugal and Spain) aims the collaboration and data exchange between both sides of the border (Lima, 2012).

In this perspective, the present study deals with the new methodologies and tools that were released, regarding territorial planning, by OTALEX-C Project (Territorial and Environmental Observatory of Alentejo-Extremadura-Centro), matching with the Euroregion EUROACE (figure 1).



Figure 1. EuroACE (Alentejo, Centro and Extremadura Regions) area delimitation
Source: www.euro-ace.eu.

The study aims to show new opportunities about the territorial reality of the Iberian Peninsula territories, specially to the inner border of Alentejo-Centro-Extremadura (Portugal-Spain), as well as to promote the available tools for the sustainable use and management of resources and the development of new methods of approach such as: sustainability indicators and the identification and assessment of critical factors for territorial success on border areas.

As example a case study, framed within the OTALEX-C area, will be analysed considering data and researches collected and conducted by OTALEX-C - the Euro-city Elvas Badajoz, which seems to be a depressed region, regarding economical and social levels (CESUR, 2007; Castanho, 2017). The concern around this area increases when the region benefits from a CBC project between Portugal and Spain, which raise questions, and also an opportunity for assess the actual state of that CBC project.

Contextually, the research is based on OTALEX-C database and public perceptions. Furthermore, the paper is organized as follow (Figure 2):



Figure 2. Paper organization.

2. OTALEX-C Project and the CBC

With a territory of approximately 93000km², 16% of the peninsular territory, the OTALEX-C Project its an ambitious project, innovative, and for extreme importance at national and international levels, not only for territorial cohesion, but also for their growth and sustainable development.

Framed within the INTERREG Spain-Portugal Projects, and funded through ERDF³ funds from POCTEP⁴ programme, the OTALEX-C Project addresses the study of several territorial, socio-economic and environmental indicators. In order to provide open data, in a way that the contained information could be helpful in the decision making process relating to spatial planning and, consequently, leading to a sustainable development, a geoportal have been created.

³ ERDF is the acronym for European Regional Development Fund.

⁴ POCTEP is the acronym for Cross-Border Cooperation Operational Programme Spain-Portugal.

2.1. The Beginning

Over the last eighteen years several projects have been developed, with approaches since the standardization of data between Portugal and Spain, through the design of Geographic Information Systems (GIS), proceeding with the development of territorial indicators systems models, to culminate on what is currently known as the Spatial Data Infrastructure (IDE-OTALEX C – www.ideotalex.eu).

OTALEX-C is a CBC project co-funded by POCTEP 2007-2015 from the priority axis of cooperation and common management and planning. Those projects also aim to articulate projects of urban and rural regeneration.

It develops joint cartography, besides crossing territorial and environmental data, as well as their exchange, thereby contributing towards the European Spatial Strategy (ETE)⁵ goal.

It is intended the monitoring of territorial analysis, the study of pressures changes on both sides of the border, as well as the consolidation of the CBC strategies between institutions, providing continuity after the project.

The OTALEX Project starts in 2006. By this time at this the main objective is to meet ETE goals, which were, among many others, to create a territorial observatory to analyse and assess the effects of humans' activities over the territory. As support foundations it sought to give special focus to the environmental values and conciliate them with the desired economic and social development. Always chasing the goal of increasing the life's standards of the inhabitants of south-west Iberian areas. In its objectives were also highlights the common development of territorial and environmental management methodologies seeking a sustainable growth of spaces and even the implementation of a monitoring and analysis system of the territorial reality on both sides of the border.

⁵ One of the main goals of ETE is the harmonization of territorial practices among Europe.

The project has been held a line of interinstitutional and transboundary active collaboration, through the experiences exchange, geographic information and methodologies between Spain and Portugal.

The work carried out throughout the project has been adapting to the changes that came from the European Directives as well as to technological advances.

In order to understand and contextualize the applied methodologies, briefly, there are the different projects ordained chronologically with their respective objectives and results (figure 3).

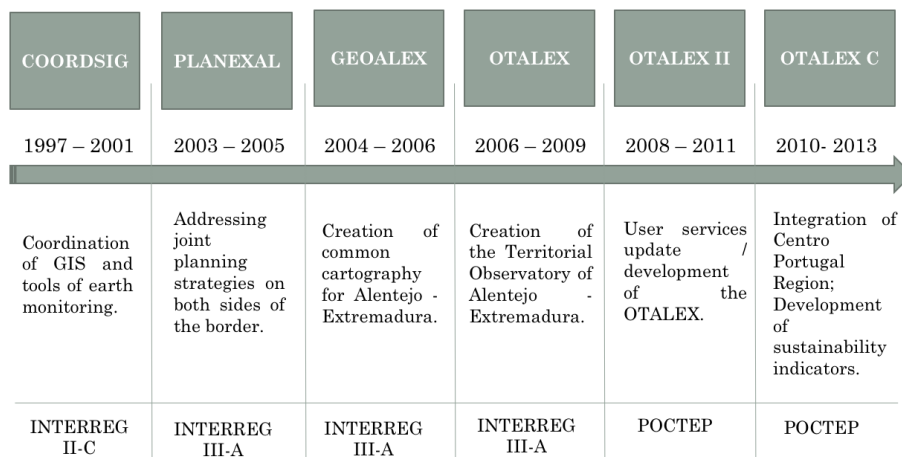


Figure 3. Background of the common cooperation projects between Alentejo, Centro and Extremadura Regions (adapted from Castanho et al., 2017b).

2.2. OTALEX-C Methodological Approach

Similar to what had been subject of study in previous projects, exemplified by: GEOALEX; OTALEX; OTALEX II, OTALEX-C project includes in the OTALEX Indicators System (OIS), the Central area of the Portuguese territory, with vectors, themes, and indicators (Table I) that supports the methodological framework. This method aims to provide, streamline, harmonize and compare data from territorial and environmental analysis (Batista *et al.*, 2013; Carriço *et al.*, 2013; Castanho *et al.*, 2016).

Table I. OTALEX-C methodological approach (adapted from Batista et al., 2013).

VECTOR	THEME
01. Territory	Climate
	Geology and Geomorphology
	Hydrography
	Soil
	Administrative Structure
02. Environment	Air
	Water
	Waste
	Pollution Sources
	Land Use
	Environmental Performance and Urban Spaces
	Noise
	Energy
	Nature Conservation
	Landscape
Soil Protection	
03. Social	Population
	Demographic Structure
	Equipment and Services Network
04. Economy	Economic Activities
05. Sustainability	Territorial Matrix
	Sustainable Transport

After their analysis and assessment, the information is stored in a geodatabase, which allows align and manage the set of data obtained. This format also enables the correlation of alphanumeric information with graphical information, which in turn allows a cartographic data representation.

By the territorial and environmental analysis, it is possible to find examples of CBC such as the Tejo International Park, or the measures carried out in order of territorial planning regarding to the Alqueva Lake.

2.3. Socio-economic Analysis

For a proper socio-economic analysis of the OTALEX-C Space, has been considered that the administrative level which best defines the study area would be the Municipality (Flores Guerrero *et al.*, 2013).

Through the OIS, it was possible to analyze the socio-economic and socio-demographics dynamics of the OTALEX-C Space which allowed to get an outlook of its current situation, considering that the administrative divisions that operate in these regions are different.

2.4. Sustainability Analysis

Once sustainability is a difficult task of analysis, as regards to its quantification and qualification, OTALEX-C has defined a method able to assign the degree of sustainability through indicators⁶.

In this regard, four levels/dimensions were defined: Environmental; Territorial; Social; Economic.

Based on the above-mentioned dimensions is established a relationship with consumption and productivity, which fosters a proper use of the resources and consequently a sustainable development of the territory.

Here, it is important to contextualize the concept of sustainable development, since it aims to define viable projects and seeks to reconcile economic aspects, social and environmental impacts of human activities (European Environmental Agency, 2015; Yigitcanlar *et al.*, 2015; Loures, *et al.*, 2016).

2.5. OTALEX-C on the Web

Sensibly a year before the European legislation “INSPIRE”⁷ took place, a predecessor to many of the current web portals existing in Spain and Portugal, the OTALEX Project has developed a Spatial Data Infrastructure (IDE-OTALEX) where it is possible to find all the particularities of the EUROACE territories (Batista *et al.*, 2013; Caballero, 2013).

⁶ A study conducted by Lagar Timón (2013) for the OTALEX-C Space, should be taken into account, once it analyzes the spatial accessibility, defined as the distance / time to a specific service, or a nearby population center.

⁷ Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007 establishing an infrastructure for Spatial Information in the European Community (INSPIRE).

The collected data is published on the OTALEX-C geoportal, implemented in 2007, and being the first trans-boundary IDE between Portugal and Spain, as also the first trans-boundary multilingual in Europe. It presents a three different languages interface: Spanish; Portuguese; and English; available by using a simple Web search engine (available at: <http://www.ideotalex.eu>). The geoportal includes a standard view with: Map Viewer; Nomenclature; Metadata Catalog; Publications; Indicators System; Semantic Search; and a Semantic Viewer; thus achieving a powerful transboundary IDE application.

In order to strengthen the IDE-OTALEX, some features were assigned such as the ability of crossing data contained in the network with the user's own data. Allowing to upload KML, SHP and GML files, and also given the possibility to design geometries with a quite acceptable edition level.

With the update carried out through OTALEX-C, an important qualitatively step has been taken. The Web 2.0, developing the social layer and the movable IDE module, allows the user to upload data to the IDE from everywhere, regarding to: Cultural Heritage; Natural Heritage; Toponymy; and Landscape. The data, once uploaded, is available for all IDE users.

Still on the scope of “OTALEX-C on the Web” a group task has been created: Advanced Technologies Working Group IDE-OTALEX; in order to generate intelligent geographical and cartographic data features from the territory. Which in turn was giving way to a Semantic Web with capture and dissemination of environmental data from this observatory area.

The objectives were achieved through two activities: an Semantic Web – where the results were published on the OTALEX web portal as open data, under the paradigm of linked data; and the activity inherent to the publishing of environmental data from sensors and meteorological - which works with data sources from Spain and Portugal (Vivas, 2013).

The sensor database server SOS V2.0, installed on the OTALEX portal server, includes an outreach designed service available online for thematic maps with the stored data. To achieve this goal, the team has installed a meteorological station at CIMAC (Évora-Portugal), as a research complement for the catch and processing environmental data, for its subsequent publication.

3. PRACTICAL APPLICATION TO A STUDY AREA – EURO-CITY ELVAS-BADAJOS

Through the powerful database provided by OTALEX-C, has been possible to start developing researches and studies on the identification and assessment of critical factors to achieve territorial success.

To clarify the reading of the paper, this section, is subdivided into: (i) a brief description of the CBC project of the Euro-city Elvas-Badajoz; (ii) research hypothesis formulating; (iii) and methodological approach.

3.1 Eurocity Elvas-Badajoz

The Euro-city Elvas-Badajoz (figure 4) is a CBC project, located into the Euro-region EuroACE, that aims the link between both cities. During the planning process of the Euro-city Elvas-Badajoz, has been defined that the CBC project should cover several priority areas, such as: economy; culture; recreation; tourism; trade; employment; among others.

In 2013, a protocol between the cities of Elvas and Badajoz has been signed, which conducts to the creation of the Euro-city Elvas-Badajoz. Resulting into the highest urban agglomeration in the interior of Portugal, about 211 thousand inhabitants, through the union of Elvas, Alto Alentejo (Portugal), and Badajoz, in Extremadura Region (Spain) (Castanho *et al.*, 2017a).

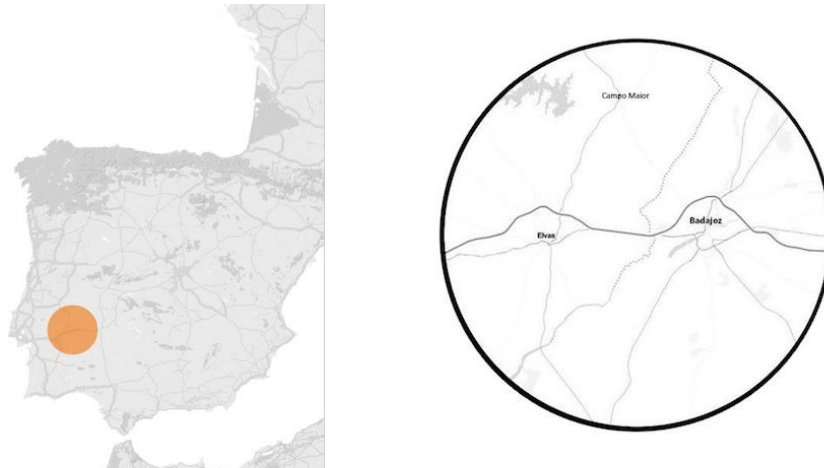


Figure 4. Study area location.

3.2 Research Hypothesis

Three years after the establishment of the Eurocity, several issues show little clarity, such as:

- Which are the priorities of the CBC Project between Elvas and Badajoz?
- What effects and impacts the project represents in the region?
- Which are the critical factors for success and development of those territories?

In this regard, the identification, analysis and assessment of which factors may influence the territorial success in border areas is taken as critical to achieve a sustainable development through CBC strategies, which leads to an improvement on the life's standards of the border inhabitants.

3.3 Methodological Approach

The methodological approach was based in a case study research method (CSR). In this regard, four main phases should be highlighted: (i) data collection - from similar researches and from the OTALEX-C database; (ii) select a study area - based on the collected data; (iii) case study analysis – through direct and indirect methods and tools, such as Territorial Impact Assessment (TIA) or public perception's questionnaires; (iv) data analysis.

3.3.1 Questionnaires

The questionnaires design was developed based on previous discussions and debates such as the “Seminary on Sustainable Urban Planning”⁸, where it was possible to reflect and discuss about the challenges that urban planning will face on the EUROACE region. Which also aims to, once again, assess the interest of the present research.

In person interviews method was considered in the development of the questionnaire. The selection of this type of interview was based in the fact that it is a very reliable method of data-collection in which: the researcher has full range and depth of information; the respondents have the opportunity to ask for clarifications during the interview process; the target population may be easily located and defined (Kaur, 2004; Creighton, 2005; Bird, 2009; Loures, 2011; Castanho *et al.*, 2016; International Survey Programme, 2016).

The sample population consisted on the citizens of the Euro-city Elvas-Badajoz. The sample was composed by individuals, from the cities of Elvas and Badajoz.

The questionnaires were carried out between October and November of 2016.

3.3.2 Data Analysis

Data analysis focused on people’s perception and inhabitants of the Euro-city Elvas-Badajoz. Thus, frequency tables were mainly used to present descriptive results from the invariable analysis. Although there has recently been an increasing tendency to neglect the use of basic descriptive statistics in favour of supposedly more ‘powerful techniques’, descriptive statistics may still provide strong insights for data interpretation (Özgüner *et al.*, 2012).

⁸ The “Seminary on Sustainable Urban Planning” organized in September 10, 2015 by OTALEX-C project in partnership with the ARAM Research Group. During the seminar were discussed the current urban planning strategies, both in Spain and in Portugal, with the participation of citizens and local mayors, where they have been speakers: Elena Hilberath, Pedro Plasencia, Luis Loures, Fernando Ceballos and Rui Alexandre Castanho as chairman of the discussion table (available on www.scapesart.com).

4. RESULTS

The results listed below are provided by direct analysis through questionnaires, and through indirect by the analysed and assessed European, similar, case studies.

4.1 Questionnaires

Two closed questions about citizens' beliefs and where should the funds of the CBC project Elvas-Badajoz have been invested (Table II), were carried out. In the first question, the results, as in total, as in Elvas, always found a higher per cent for culture and tourism (42.0 per cent in total, 52.0 per cent in Elvas). Only Badajoz results shows a higher per cent of other interests (36.0 per cent), regarding the investment of the funds. However, other interests are placed in the second position, as in Elvas, as in total. Being in the case of Badajoz city, the second position, occupied by culture and tourism.

Regarding the second question, all the results (Elvas, Badajoz, and total) show that have been denoted no impacts after the creation of the Euro-city. Only in the answers given by Badajoz citizens offer the values of the identification of no impacts as equal as the positive ones.

Table II – Closed questions results.

<i>Where do you believe that have been invested the funds of the CBC project Elvas-Badajoz?</i>	<i>Elvas</i>	<i>Badajoz</i>	<i>Total</i>
Stronger of the economy	12.0	12.0	12.0
Culture and tourism	52.0	32.0	42.0
Employment Generation	4.0	4.0	4.0
Accessibility and connectivity - movement between cities	0.0	16.0	8.0
Other interests	32.0	36.0	34.0

<i>After the creation of Eurocity denotes impacts in the region?</i>			
Positives	40.0	44.0	42.0
Negatives	12.0	12.0	12.0
None	48.0	44.0	46.0

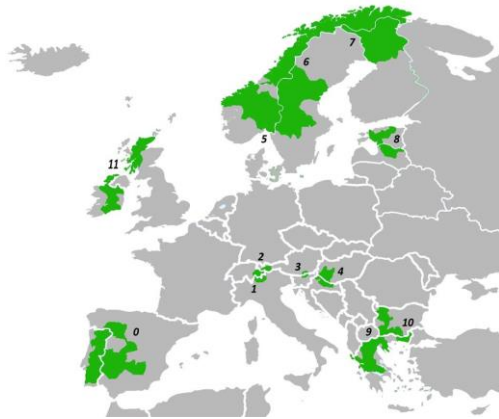
Participants were also asked, through an open question, where should the funds of the CBC project of the Euro-city Elvas-Badajoz be invested (Table III). Total results (values between Elvas population and Badajoz population answers – Euro-city), shows the three priority factors where the funds of this CBC project should be invested were employment generation (28.0 per cent), conectivity - movement between cities (22.0 per cent), and culture and tourism (19.0 per cent). Regarding the results shown by Elvas population, the funds should be invested on employment generation (36.0 per cent), connectivity - movement between cities (24.0 per cent), and stronger the economy (20.0 per cent). Concerning Badajoz population results differs, considering that the main factors were funds should be invested are culture and tourism (30.0 per cent), and with equal values connectivity – movement between cities and employment generation (20.0 per cent each).

Table III – Priority factors for investing funds.

<i>Considering that Elvas-Badajoz is a Eurocity where should be invested the funds?</i>	<i>Elvas</i>	<i>Badajoz</i>	<i>Total</i>
Conectivity – movement between cities	24.0	20.0	22.0
Culture and tourism	8.0	30.0	19.0
Education	4.0	16.0	10.0
Employment generation	36.0	20.0	28.0
Health	8.0	4.0	6.0
Stronger the Economy	20.0	10.0	15.0

4.2 Case Studies Analysis

Through case studies analysis and assessment, it was possible to find similarities to other European border regions by its demographic and development levels (figure 7).



(0) Alentejo^(PT) - Extremadura^(ES) - Centro^(PT) - Trás-os-Montes^(PT) - Castilla y León^(ES); (1) Grison^(SU) - Lombardi^(IT); (2) Grison^(SU) – Tyrol^(AT); (3) Karnten^(AT) - Koroska^(SI); (4) Somogy^(HU) - Prigorje^(HR); (5) Hedmark^(NO) - Varmland^(SE); (6) Ostfold^(NO)-Dalarna^(SE); (7) Nord Norge^(NO) – Laponia^(FI); (8) Vidzme^(LV) – Pärnumaa^(EE); (9) Struma Valley^(BG) – Thessoloniki^(EL); (10) Thracian Valley^(BG) – Thraki^(EL); (11) Highland^(UK) – Donegal^(UK);⁹

Figure 7. Similar regions.

5. DISCUSSION AND CONCLUSION

The present work shows new research opportunities, which were only possible to start due to the powerful database provided by the OTALEX-C project. Which demonstrates, once again, the importance of CBC projects and strategies on the sustainable territorial development (Loures, *et al.*, 2016; Castanho *et al.*, 2017).

Through the crossing and analysis of OTALEX-C data, shows that the population is not distributed in an heterogenous way. By favoring the areas with higher economic development, major cities, leading into a ruralization process of the population. Consequently, originate migration flows from rural territories to urban centers, promoting the depopulation of rural areas and increasing the population in urban areas. Being thus established an imbalance in terms of the population distribution.

Regarding to the Euro-city Elvas-Badajoz, the questions raised on the hypothesis for practical application, have been possible to answer through the present research. However, further researches should provide insights about those answers.

According with the research, the majority of the funds have been invested on culture and tourism, and not equally divided from all the previous priorities the CBC project

⁹ The acronyms used to identify the countries to which regions belong, were obtained through the Interinstitutional Style Guide.

has previously defined. Besides, the study also identified that a higher per cent of the funds have been invested in other interests, which is a concerning issue, once, accordingly with Elvas-Badajoz citizens, that interests seems different from the ones that have been defined on the 2013 protocol.

The research shows that three years after the creation of the Euro-city Elvas-Badajoz, the effects and impacts the CBC project represents in the region were not visible. Moreover, in CBC projects positive impacts must be found (Spirkova & Ivanicka, 2009; Domínguez *et al.*, 2015; Sohn & Giffinger, 2015; Kurowska-Pysz, 2016), which demonstrates the need of rethink and reconsider this CBC project by the main actors.

The study was also defined three priority factors where the funds should be invested to achieve a territorial success in this particular CBC project, which are: (i) employment generation; (ii) connectivity - movement between Cities; and (iii) culture and tourism. Considering employment generation as the pivotal factor for the regional success, the main actors of Elvas-Badajoz CBC project, should place efforts and develop common policies and objectives to create an investor magnet for the region, fostering an increasing job opportunities for the resident populations (Lima, 2012; Martins, 2015; Castanho *et al.*, 2016).

Being the connectivity-movement between cities defined as a priority factor to invest the funds, it demonstrates the importance that public transportation has to achieve the territorial success on this CBC Project, corroborating by other studies based on public transportation over Europe (Spiekermann and Neubauer, 2002; Delbosc and Currie, 2010; Nicolini and Pinto, 2013; Vulevic and Dordevic, 2014; Castanho *et al.*, 2016; Naranjo, 2016; Castanho *et al.*, 2017). Regarding culture and tourism, and due to the importance citizens have given to that factor, and also the results obtained - where the funds have been invested - pointed in that direction, the authors see this as a positive indicator.

European regions where similarities were found can be seen as a further step where to apply some of the solutions which may be found in the Elvas-Badajoz CBC project. Should be taking into account that some of the case studies were already identified for

being fertile areas for CBC by the Luxembourg Institute of Socio – Economic Research (LISER) report “Opportunities of cross-border cooperation between small and medium cities in Europe”.

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Conflicts of Interest

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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