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“Territorial Cohesion in Europe, The Role of Transport Corridors”

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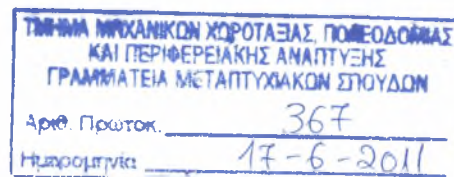


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ABSTRACT



The ‘territorial cohesion’; is in the latest focus of spatial science, after its incorporation into the provisions of the Treaty of Lisbon together with economic and social cohesion. CTP and TENs policies with their clear territorial character have the objective of a more efficient and environmentally friendly transport, while reinforcing economic, social and territorial cohesion across the European territory. However, these goals are partly in conflict with each other. In some cases transportation policy initiatives cannot favour all those goals at the same time. Phenomena such as ‘tunnel’ and ‘absorption effects’ are particularly expressed territorially, and are considered to be the polar opposite to territorial cohesion. So, the purpose of this Thesis is to investigate both developmental and spatial impacts of the TEN-T in the light of territorial cohesion. Conclusions given by this thesis may provide a benchmark for TENs and their developmental role. At last, a series of solutions are given for the cases where transport improvements cause territorial imbalances.

ΠΕΡΙΛΗΨΗ

Η "εδαφική συνοχή" βρίσκεται στο επίκεντρο των επιστημών του χώρου, μετά την ένταξή της στο διατάξεις της Συνθήκης της Λισαβόνας σε συνδυασμό με την οικονομική και κοινωνική συνοχή. Την ίδια στιγμή, η Κοινή Πολιτική Μεταφορών και η πολιτική των Διευρωπαϊκών Δικτύων Μεταφορών, με δεδομένο το σαφή εδαφικό χαρακτήρα τους, έχουν ως στόχο τη δημιουργία πιο αποτελεσματικών και φιλικών προς το περιβάλλον μεταφορών, με παράλληλη ενίσχυση της οικονομικής, κοινωνικής και εδαφικής συνοχής σε όλη την Ευρωπαϊκή επικράτεια. Ωστόσο, αυτοί οι στόχοι είναι εν μέρει συγκρουόμενοι μεταξύ τους. Σε ορισμένες περιπτώσεις, οι βελτιώσεις στις μεταφορές, είναι αδύνατο να ευνοήσουν όλους αυτούς τους στόχους ταυτόχρονα. Αυτό έχει ως αποτέλεσμα να παρατηρούνται χωρικά φαινόμενα γνωστά ως, ‘φαινόμενο σήραγγας’ και ‘φαινόμενο απορρόφησης’ τα οποία θεωρούνται τα άκρα αντίθετα της εδαφικής συνοχής. Έτσι, σκοπός αυτής της Διπλωματικής εργασίας είναι η διερεύνηση τόσο των αναπτυξιακών όσο και των χωρικών επιπτώσεων των Διευρωπαϊκών Δικτύων Μεταφορών, υπό το πρίσμα της εδαφικής συνοχής. Τα συμπεράσματα αυτής της εργασίας μπορούν να αποτελέσουν σημείο αναφοράς για τον αναπτυξιακό ρόλο των Διευρωπαϊκών Δικτύων Μεταφορών. Τέλος, μια σειρά από λύσεις δίνονται για τις περιπτώσεις όπου η βελτίωση των μεταφορικών υποδομών προκαλεί χωρικές ανισορροπίες.

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ACRONYMS

EU: European Union

EEC: European Economic Community

TEU: Treaty on European Union

TEC: Treaty establishing the European Community

TFEU: Treaty on the functioning of the European Union

CSG: Council of State Governments

ERDF: European Regional Development Fund

CEC: Commission of European Communities

ESF: European Social Fund

CAP: Common Agricultural Policy

ESDP: European Spatial Development Perspective

ESPON: European Spatial Planning Observation Network

COPTA: Cooperation Platform for Territorial Agenda

CoR: Committee of the Regions

TIA: Territorial Impact Assessment

SEA: Strategic Environmental Assessments

INTRODUCTION – METHODOLOGY

The purpose of this Thesis is to investigate both developmental and spatial impacts of the TEN-T in the light of territorial cohesion. In the first chapter territorial cohesion is conceptually clarified through its gradual integration with cohesion policy. The Second chapter is divided into two parts. Initially, the particularities and inequalities in European space are presented. Then, the purposes of Common Transport Policy (CTP) and TEN-T are identified. At last, the assessment of them regarding development and territorial cohesion in the European Territory is made.

The third chapter is dedicated in the presentation of some successful and some failure stories. These stories are referred to as paradigms, where transport corridors either succeeded territorial cohesion or caused the opposite effects. The cases are examined in order to approach the central issue of our thesis, in real evidence and to verify conclusions drawn from the whole Thesis arguments.

Territorial cohesion was incorporated into the provisions of the Treaty of Lisbon together with economic and social cohesion. The importance of the objective of territorial cohesion is based on the assumption that except of the social and economic disparities in Europe, territorial disparities also exist. Territorial disparities should be eliminated in order for the cornerstones of the EU, including its large single market and integration, to be successful. TEN-T policy has a clear territorial character, in this sense territorial impacts of TEN-T have a great interest.

From the beginning of European integration it was recognised that integrating markets would require regional policy to counteract imbalances. At its early years, a regional policy only in name, paybacks to national budgets for assisting them with regional policies was the solution. However this regional policy passed from several stages and was transformed into a more complete model. This model includes not only the budgeting for improving economic reform of each member state, but also the social and territorial aspects. This last recognition of territorial competitiveness and cohesion as an aspect in cohesion policy is needed for securing a more balanced economic and coherent space in Europe.

In this framework, Common Transport Policy (CTP) with a clear territorial character in its objectives aims to promote an effective and sustainable transport system. The fundamental objectives of the CTP are those of the promotion of sustainable and non inflationary growth, the respect for the environment, a high degree of convergence of economic performances, as well as of employment, social cohesion and solidarity among Member States (as it is also provided by fundamental objectives of EEC Treaty). A well-established element of the CTP is the development of the Trans-European transport network (TEN-Transport) which is intended to contribute to the functioning of the single market and the strengthening of economic and social cohesion.

Transport corridors are supposed to be developmental tools especially after programming and rational planning. Most studies on transport corridors are concentrated either in the social – economic impacts or in other issues such as environmental for instance (e.g. Environmental Impact Assessment of a Road). However the issue of territorial cohesion seems to be in the latest focus of spatial sciences. Phenomena such as tunnel and absorption effects are particularly expressed territorially, and are considered to be the polar opposite of territorial cohesion. Such kind of phenomena proves the conflict relation among the planning of transport networks and territorial cohesion in Europe and are of particular research interest.

By concluding, people who will come across this Thesis will have the opportunity to approach the territorial impacts of transport corridors. Conclusions given by this thesis may provide a benchmark for the TENs and their developmental role. In cases where transport improvements cause side territorial effects a series of solutions is given in order to avoid them.

1 DEFINING TERRITORIAL COHESION

Unfortunately there is no official definition of what territorial cohesion means and as Faludi says

“concepts changes depending on who uses them and definitions are either relative - depending on who gives them, when, and with which purpose – or attempts to get at the essence of the thing defined”

Territorial cohesion was a term that used to be translated with multiple interpretation relatively to spatial planning at a European level (Faludi, 2009). In this diploma thesis the notion of “territorial cohesion” will be aligned with the directives which stem from the Treaty of Lisbon and Lisbon’s Strategy (Luxembourg Presidency, 2005a,b). The message which is repeated over and over again is that territorial cohesion contributes to the achievement of economical and social cohesion and furthermore enhances the harmonious and balanced development of the Union.

The third Cohesion Report attempts to shed some light on what is a key definitional ambiguity with respect to territorial cohesion; how does it differ from social and economic cohesion? The Report states that, (Davoudi, 2005)

“the concept of territorial cohesion extends beyond the notion of economic and social cohesion by both adding to this and reinforcing it. In policy terms, the objective is to help achieve a more balanced development by reducing existing disparities, preventing territorial imbalances and by making both sectoral policies which have a spatial impact and regional policy more coherent. The concern is also to improve territorial integration and encourage cooperation between regions” (CEC, 2004a).

In concrete terms, this means adding to policies of reducing disparities, enhancing competitiveness and promoting sustainability (Baudelle and Guy, 2004). The added value lies in that ‘geography matters’ as it is emphasized by CSG¹. Thus, the essence of territorial cohesion policy is that, by attending to where policies are implemented and to

¹ The Council of State Governments (CSG) is a nonpartisan non-profit organization in the United States serving the state governments. <http://www.csg.org/index.aspx>

which effect, it promises more coherence, effectiveness and efficiency (Faludi, 2009). This implies that territorial cohesion is about targeting places rather than sectors as the focus of policy, and measuring success by examining the ways in which the ensemble of sectoral policies affect both the places and the life of people who live and work there (Davoudi, 2005).

On the other hand, the Lisbon Strategy comes through loud and clear in the third Cohesion Report. In addition to competitiveness, territorial cohesion relates to sustainability (including the prevention of natural risks). Lastly, it is about promoting greater coherence and coordination between regional policy and sectoral policies with a substantial territorial impact. Territorial cohesion does not require extra funding. It requires good territorial governance, from the EU to the local level. The pursuit of good territorial governance is thus the chief consequence of adopting territorial cohesion as an objective of the Union (Faludi, 2009). In other words, principles of good governance as proposed in the Commission's White Paper on this topic (CEC, 2001) form part of the agenda (Faludi, 2006).

1.1 CHRONICLE – THE INCEPTION OF THE NOTION OF TERRITORIAL COHESION

Evolution of Cohesion Policy includes the evolution of “Territorial Cohesion”. Nowadays territorial cohesion is a component – pillar/basic objective of the cohesion policy giving an added value in the existing pillars of economic and social cohesion. In this context, we could say that the starting point of territorial cohesion as a term and concept was hatched in regional policy's logic.

As regards the European Regional Policy, it was recognized from the beginning of the European integration, that integrated markets would require regional policy to counteract imbalances, but Member States were reticent about a Community role in this (Faludi, 2009). Even though the treaty of Rome (1957) – treaty establishing the European Economic Community (EEC), didn't include detailed directions for a common regional policy, it mentioned very briefly that

“The purpose of the Community is to promote a harmonious development of economic activities in its area” (Aggelidis, 2004).

Since then, the EU consciously recognizes in the early ‘70s that different levels of economic development between regions constitute an obstacle for the economic and monetary integration of European space. As a result, the promotion of a more effective regional policy was decided.

The first step in this direction took place at 1975 with the establishment of the European Regional Development Fund (ERDF), having as a main objective to decrease regional inequalities in Europe by funding major infrastructures in the less developed regions. Almost in the same time, other funding of the community such as those from the European Social Fund (ESF) and the fund for the Common Agricultural Policy (CAP) attempted to apply regional policy yet in a un-programmed, insufficient and non centrally proposed way. The result was a regional policy only in name, with paybacks to national budgets for assisting them with their regional policies (Faludi, 2009). Thus, it was completely understood that there was a need of an “integrated” and effective Common Regional Policy.

This ‘new’ Regional Policy was an important element of the Single European Act ² in 1986

(<http://www.eurofound.europa.eu/areas/industrialrelations/dictionary/definitions/singleeuropeanact.htm>). Delors introduced a programmatic approach to what was now called cohesion policy (Faludi, 2009). In this context, it was recognized that for the integration of the European Market, the relief of economic and social cohesion to decrease regional imbalances of Community was necessary. Based on those developments, the initial Common Regional Policy became known as Cohesion Policy³ (Angelidis, 2004). Later on, in 1999, the European Spatial Development Perspective (ESDP) initially, and the Agenda of Territorial Cohesion put the agenda for one more extension of Cohesion

² The Single European Act revises the Treaties of Rome in order to add new momentum to European integration and to complete the internal market. It amends the rules governing the operation of the European institutions and expands Community powers, notably in the field of research and development, the environment and common foreign policy. (<http://www.eurofound.europa.eu/areas/industrialrelations/dictionary/definitions/singleeuropeanact.htm>)

³ Terms like, Regional Policy, Regional Development Policy and Cohesion Policy are synonyms, and from now on are used alternatively to describe the same concept.

Policy. Subsequently, the Commission ceased supporting intergovernmental spatial planning (Faludi, 2009).

Cohesion policy as such is not new now. It is concerned largely but not exclusively with rectifying imbalances.

As a notion, “territorial cohesion” was introduced in the Amsterdam treaty in 1997, (Faludi, 2004). Since then, territorial cohesion has appeared in the Commission’s triennial reports first in 2001 as a part of the Second Report on Economic and Social Cohesion (CEC, 2001), which used the concept to describe the uneven development of the EU territory and particularly the concentration of population and economic activity in the core area of Europe, or as the ESDP called it, the pentagon (CEC, 1999); and then in 2004, when the concept was given prominence by its inclusion in the Third Report on Economic and Social Cohesion (CEC, 2004a). In the wake of the enlargement of the Union from 15 to 25 (and later to 27) member states, the Third Report highlighted that the challenge of achieving territorial cohesion would be of a different magnitude, as the disparities in the enlarged EU were greater than ever before. Another significant contribution to keep the concept on the agenda came from a six-year research programme under the European Spatial Planning Observation Network (ESPON) (Davoudi, 2005), which was to provide the evidence base for the discussions about territorial cohesion and attempted to measure and identify ways of operationalising it. The concept of territorial cohesion gained further momentum after its appearance in the Lisbon treaty which states that, (Davoudi, 2005)

“in order to promote its overall harmonious development, the Union shall develop and pursue its action leading to the strengthening of its economic, social and territorial cohesion. In particular, the Union shall aim at reducing disparities between the levels of development of the various regions and the backwardness of the least favoured regions”.

(Conference of the Representatives of the Governments of the Member States, 2004, Article 220)

A stable set of policies around territorial cohesion is promoted based on classic, distributive EU regional policy but adding the pursuit of competitiveness, endogenous development, sustainability and good governance into the bargain. The new objectives 2 and 3, ‘restructuring and job creation’ and in particular ‘promoting co-operation and

networking' as proposed in the third Cohesion Report, bear this direction of territorial cohesion policy out (Faludi, 2006).

The inclusion of territorial cohesion in the Lisbon Treaty was particularly significant and regarded as the reshuffling of the terminology which was seen to help overcome the issues surrounding the lack of EU competency in spatial planning (Davoudi, 2005). Under the territorial cohesion heading, the Treaty of Lisbon gives a role for the EU in spatial planning/policy. The present context for Cohesion Policy is shaped by the Lisbon Strategy and the Treaty of Lisbon (Faludi, 2009).

1.2 A EUROPEAN PERCEPTION IN SPATIAL (PLANNING) POLICY THRU TERRITORIAL COHESION

It is argued that the emphasis on territorial cohesion can potentially re-conceptualise European spatial policy by adding to it a spatial justice dimension (Davoudi, 2005). The notion of territorial cohesion, translated from the French original, "Cohesion territoire" (Hall, 2005) nowadays tends to spread around rapidly, and to become part of the everyday vocabulary, or as some suggest "new buzzwords" of spatial planning (Schon, 2005).

As pointed out by Davoudi (2004), among the myriad of definitions of territorial cohesion offered by various EU publications, none territorializes the European model more clearly than the Third Cohesion Report. It draws on a simple, yet powerful, rationale to convey the meaning of territorial cohesion, stating that,

"people should not be disadvantaged by wherever they happen to live or work in the Union" (CEC, 2004a).

It argues that individual's life chances are not only shaped by the extent to which "individuals are subjected to and protected from typical biographical risks (unemployment, disability, poverty, illness, old age) throughout their life course" (Martin and Ross, 2004). They are also shaped by where they live and work; in other words, by the location and quality of places and territories; by typical spatial risks (such as inaccessibility, isolation, pollution, exposure to natural and technological hazard, place stigma). It suggests that, the quality of places where people live and work in can influence their access to economic and social opportunities and the quality of their life.

Hence, the concept of territorial cohesion adds a spatial dimension, or in other words ‘spatializes’, the biographical risks that people face throughout their life course.

It is within this context that the territorial cohesion debate is closely linked to the wider debate about the European social model. It calls for an extension of the underlying principles of the European model from individuals to places and territories. It calls for solidarity not only amongst European citizens but also amongst European territories (Davoudi, 2005). Thus, the concept not only has the potential to replace the notion of ‘spatial planning’ in European Level as some commentators argue (Hague, 2005). It also has the potential to re-conceptualise it with an emphasis on a new rationality for organising European space. The discourse of territorial cohesion has added a spatial justice dimension to European spatial policy, extending and applying John Rawls’ theory of justice (Rawls, 1971), with its emphasis on equity, to territorial development (Davoudi, 2005).

European Spatial policy recorded pursuant⁴ in 1999 by ESDP which proposed polycentric development. Nowadays this is also part of the European Commission’s new thinking (CEC, 2003, 2004a,b). ESDP’s interest was concentrated in convincing that most of major common EU policies had a direct or indirect territorial effect on the EU. Thus, those policies had to be reconsidered in order to be included in a common spatial planning/strategy/policy. For a series of reasons regarding spatial planning in EU level, ESDP did not succeed to be a clear policy objective of EU. However it set a structured framework of directions and objectives for European spatial planning (Faludi 2009 & Davoudi, 2005). The term of territorial cohesion seems to be an alternative term including spatial planning in order to be more neutral and valid in European level (Davoudi, 2005).

Further documents regarding Spatial planning are the “Territorial Agenda”, and the “Green Paper on Territorial Cohesion”, but the European perception on Spatial Planning is finally succeeded by the more than ever legal report of territorial cohesion in the Treaty of Lisbon. All those documents, but also some programmers (ESPON, COPTA)

⁴ As regards “European regional planning”, there are two more documents that precede the ESDP. Those are the “Europe 2000” published in 1991 and the “Europe 2000+” published in 1994 (Tzimopoulos, 2009). However, it is not provided details on those two documents, because those were not improved intergovernmental documents.

and initiatives which supported the consolidation of Spatial Planning Policy (which competes Cohesion Policy) in a European level will be briefly discussed below.

1.2.1 ESDP

The European Spatial Development Perspective (ESDP) was an important step in the progress towards European integration (CEC, 1999). In 1999 at Potsdam of Germany, ministers of EU Member States responsible for spatial planning and the European Commissioner for Regional Policy assented to the ESDP (Faludi, 2006). By adopting the ESDP, the Member States and the Commission reached agreement on common objectives and concepts for the future development of the territory of the European Union (CEC, 1999). Its main objective is to define at Union level policy objectives and general principles of spatial development to ensure the sustainable balanced development of the European territory which respects its diversity. The underlying idea in the ESDP is that economic growth and the convergence of certain economic indicators are not enough to achieve the goal of economic and social cohesion, so concerted action on spatial development is needed to correct the disparities detected (http://europa.eu/legislation_summaries/regional_policy/management/g24401_en.htm).

ESDP firstly introduced the concept of a common Spatial Planning Policy on a European Level. The emphasis given by the term “Spatial Development” instead of the term “Spatial Planning” (which was not a competence of EU) gave a better understanding for Spatial Policy which has to include the coordination of sectoral policies. At the same time, this term gave a more active approach in the social - economic and territorial development of EU (Krätke, 2001). ESDP didn’t succeed to be adopted with the community method⁵, so was not a binding document for the member states. However it was considered as an intergovernmental political document and

⁵ The Community method is the expression used for the institutional operating mode set up in the first pillar of the European Union. It proceeds from an integration logic with due respect for the subsidiarity principle, and has the following salient features:

- Commission monopoly of the right of initiative;
- widespread use of qualified majority voting in the Council;
- an active role for the European Parliament;
- uniform interpretation of Community law by the Court of Justice.

(http://europa.eu/scadplus/glossary/community_intergovernmental_methods_en.htm)

constituted a policy framework encompassing the cooperation in sectoral policy's issues with major spatial impacts⁶ (Coccosis, Economou, & Petrakos, 2005).

The policy objectives and options of the ESDP are addressed to all those involved in spatial development at the European, national, regional and local levels. They are as follows:

- the establishment of a polycentric and balanced urban system,
- the promotion of integrated transport and communications concepts offering parity of access to infrastructure and knowledge throughout the Union,
- the development and conservation of the natural and cultural heritage (http://europa.eu/legislation_summaries/regional_policy/management/g24401_en.htm).

In addition, the ESDP addresses the competitiveness of Europe. Particularly, ESDP points out that EU territory differs from that of the USA with its several outstanding economic integration zones on a global scale (West Coast [California], East Coast, Southwest [Texas], Mid West') (CEC, 1999, p. 21). US territory is more balanced, giving, or so it is suggested, the USA a competitive advantage based on its polycentric character. As far as the EU territory is concerned is suggested the development of more global economic integration zones outside the one and only such zone marked by its corners London–Paris–Milan–Munich–Hamburg and hence dubbed the pentagon. So the overall goal of ESDP is the formation of more global economic integration zones creating a polycentric territory:

“... has to be pursued, to ensure regionally balanced development, because the EU is becoming fully integrated in the global economy. Pursuit of this concept will help to avoid further excessive economic and demographic concentration in the core area of the EU. The economic potential of all regions of the EU can only be utilised through the further development of a more polycentric European settlement structure. The greater competitiveness of the EU on a global scale demands a stronger

⁶ sectoral policies with territorial impacts are: Community Competition Policy, Trans European Networks, Common Agricultural Policy, Environment Policy, Research Technology and Development Policy, Structural Funds and Loan Activities of the European Investment Bank http://ec.europa.eu/regional_policy/sources/docoffic/official/reports/pdf/sum_en.pdf

integration of the European regions into the global economy” (CEC, 1999).

Strategy in the ESDP is concentrated in developing global economic integration zones outside the pentagon. That shows the ESDP reflecting the shift to what has been dubbed as the contemporary paradigm of regional development (Bachtler and Yuill, 2001; Bachtler, 2003). By concluding as regards ESDP, polycentrism as a concept is the key element of “territorial cohesion” thinking (Faludi, 2006).

1.2.2 ESPON

For the better implication of ESDP, its right monitoring process, but also its better assessment and future review, a “European Spatial Planning Observation Network (ESPON)” was established. ESPON, the European Spatial Planning Observation Network, is an applied research programme in the field of territorial development financed by INTERREG and the Member States. The aim of the programme is to provide policy makers on the European, national and regional level with systematic and new knowledge on territorial trends and impacts of policies that affect regions and territories within Europe, a knowledge which can directly support the formulation and implementation of policies (EESC, 2007).

One of the most important features of the ESDP has been the growing realisation generated that many of the policy programmes and initiatives that form part of the process of European integration have spatial or territorial effects. This in turn has led to the development of the idea of Territorial Impact Assessment (TIA), which provides an evidence base for what the impacts of particular policies have been and therefore provides a more rational basis for shaping future policy developments.

Much of the ESPON programme has concerned itself with developing this evidence base in terms of what the territorial impacts of various European Union initiatives have in practice been. From this basis then future policy decisions can be better informed. Furthermore, many projects have been concerned with trying to evaluate the territorial impacts of particular sectoral policies and programmes and with developing an appropriate methodology to do so. Although many projects have dealt with specific sectors or particular policy interventions, they have often struggled to develop a coherent methodology that could be applied at a variety of spatial scales (EESC, 2007).

The objectives of ESPON 2002-2006 was about research and studies on territorial development and spatial planning seen from a European perspective in support of policy development.

With the ESPON 2006 Programme and by addressing an enlarged EU territory and larger territorial entities, the Commission and the Member States expected to have at their disposal:

- Diagnosis of the principal territorial trends at EU scale as well as potentials and imbalances within the European territory;
- Impact analysis of EU policies and their influence on the territory and on cohesion;
- European maps of major territorial structures and regional diversity within a wide range of themes important for the development of regions and larger territories;
- Integrated, cross-sectoral analysis and spatial scenarios offering a European perspective on regions and larger territories and their development opportunities;
- Indicators and typologies assisting a monitoring and setting of European priorities for a balanced and polycentric enlarged European territory;
- Integrated tools and appropriate instruments (ESPON database, indicators, methodologies for territorial impact analysis and spatial analyses, mapping facilities) in order to improve the spatial co-ordination of sector policies.

(http://www.espon.eu/main/Menu_Programme/Menu_ESPON2006Programme/objectives.html)

On November 7, 2007 the European Commission adopted the ESPON 2013 Programme. The programme budget of €47 mill is part-financed at the level of 75 % by the European Regional Development Fund under Objective 3 for European Territorial Cooperation.

The mission of the ESPON 2013 Programme is to:

“Support policy development in relation to the aim of territorial cohesion and a harmonious development of the European territory by (1) providing comparable information, evidence, analyses and scenarios on

territorial dynamics and (2) revealing territorial capital and potentials for development of regions and larger territories contributing to European competitiveness, territorial cooperation and a sustainable and balanced development”.

(http://www.espon.eu/main/Menu_Programme/Menu_Mission/)

1.2.3 *Territorial Agenda – COPTA*

As Giannakourou says,

“Rejection of the proposed European Constitution, revived after 2005 intergovernmental initiatives in the field of spatial planning on a European level” (Giannakourou, 2008a).

In this context, even earlier in the informal Ministerial meeting in Luxemburg on May 2005, Ministers responsible for Territorial Development endorsed the scoping document entitled “The Territorial State and Perspectives of European Union: Towards a Stronger European Territorial cohesion, in the Light of the Lisbon and Gothenburg Ambitions” (Luxembourg Presidency, 2005a,b). The document is based on the outcomes of the previous ministerial meeting in Rotterdam and on analyses of the territorial development of the EU and the spatial impact of Community policies. As has been its mission, the European Spatial Planning Observation Network (ESPON) has provided a solid analytical base for this document regarding Europe’s geography and territorial development. The document approved by the ministers argues for territorial development policies to help areas to develop their territorial capital as part of the overall effort to increase Europe’s competitiveness. The substantive priorities as laid down in the document are to strengthen polycentrism and urban–rural partnership, promote clusters of competitive and innovative activities, strengthen the trans-European networks, promote trans-European risk management, and strengthen trans-European ecological structures and cultural resources (Faludi, 2006).

The Territorial State and Perspectives of the EU document is an assessment of the current territorial development of the EU. It takes advantage of the latest spatial research outcomes of the ESPON Programme (European Spatial Planning Observation Network) and the different spatial visions and strategic aims of Transnational

Cooperation Areas, which have been supported in the framework of the EU Community Initiative INTERREG III B (ESPOO Presidency, 2006).

This was the background document for the “Territorial Agenda of European Union”. The last was a political document approved in the informal Ministerial Meeting for Urban Development in Leipzig in May 2007 (Camhis, 2008).

Ministers responsible for spatial planning and development, present the Territorial Agenda as an action-oriented political framework for our future cooperation, developed together with the European Commission (Leipzig Presidency, 2007). Through the Territorial Agenda they are contributing to sustainable economic growth and job creation as well as social and ecological development in all EU regions. Hereby supporting both the Lisbon and the Gothenburg Strategies of the European Council, which are complementary strategies (Leipzig Presidency, 2007).

In order to achieve its objectives, the Cooperation Platform for Territorial Cohesion (COPTA) was designed to support information and communication among all concerned with the Territorial Agenda of the EU and its implementation process. Developed within the framework of the First Action Programme for the Implementation of the Territorial Agenda, COPTA has a public area, dedicated to public information and awareness-raising on territorial cohesion of the EU, and a restricted area, where partners and stakeholders participating in the Territorial Agenda process can exchange documents and share information (<http://www.eu-territorial-agenda.eu/Pages/Default.aspx>).

The Territorial Agenda’s content and logic was based on relatively earlier political documents, of which more influential was ESDP. The policy guidelines of ESDP concerning balanced and sustainable development in EU are extended by Territorial Agenda in priorities for measures regarding Spatial Development. The Territorial Agenda deals with the whole range of European regions and focuses on the links between them as well as on the emergency role of some special space categories such as coastal and mountain areas. It also deals with the challenge of coordinating EU or State policies respectively with their territorial impacts. Based on what is referred in the specific document, the best combination of available resources in European territory will be succeeded by polycentric development and the main future objective is the enhancement of territorial cohesion (ESPOO Presidency, 2006).

Territorial Agenda sets the “Priorities for Territorial Development in Europe” as follows:

- Promoting Urban Development in a Polycentric Pattern
- Strengthening Urban-Rural Partnership
- Promoting Trans-National Competitive and Innovative Regional Clusters
- Strengthening Trans-European Technological Networks
- Promoting Trans-European Risk Management
- Strengthening Ecological Structures and Cultural Resources (Leipzig Presidency, 2007).

These 6 priorities are supported by the three key blocks of ESDP as far as of the CEMAT’s guidelines for sustainable development (Andrikopoulou & Kafkalas, 2008). Thus we see that Territorial Agenda essentially redefines and enriches the objectives of ESDP.

1.2.4 The Treaty of Lisbon (Reform Treaty)

Territorial cohesion enriches the content of cohesion policy. It introduces the territorial dimension and balances the territorial with the economic and social priorities of cohesion policy. On October 29, 2004 the 25 Heads of Member States signed the Treaty for the establishment of European Constitution. This Constitution would be the result of the multi annual procedure of European integration⁷. The establishment of a European Constitution would give the EU a Federal character. This means that the EU would have the scope in a set of policy areas that till that moment were strictly under the sovereignty and jurisdiction of State governments. Territorial cohesion is included in the set of those policy areas. However, the proposed constitution never succeed to be signed and thus the preparation of an alternative to this, of a reform treaty, was required (Andrikopoulou & Kafkalas, 2008).

The proposed constitution incorporated territorial cohesion as a component of cohesion policy and defined it as a competence shared among Member states and the Union (Faludi, 2006). Thus in the subsequent Lisbon/Reform Treaty, Territorial Cohesion is included as a statutory objective of EU (Giannakourou, 2008b).

⁷ This integration process refers either in deepening the institutions of Union or in enlarging its borders (Mousis, 2004) .

The Treaty of Lisbon amending the Treaty on European Union and the Treaty establishing the European Community, was signed in Lisbon, on the 13th of December 2007 (<http://eur-lex.europa.eu/JOHtml.do?uri=OJ:C:2007:306:SOM:EN:HTML>) and was put to force on January 1, 2009 (Duff, 2009).

After more than two decades of discussions on the EU's functioning and institutional set-up, the Lisbon Treaty intends to adapt the European Union to the challenges of the 21st century by making it more democratic, transparent and efficient (<http://www.cor.europa.eu/pages/PressTemplate.aspx?view=detail&id=bbf4ad63-706c-43e8-9236-91d9e67acc0c>).

The Treaty of Lisbon amends the Treaty on European Union (TEU) (essentially the Treaty of Maastricht) and the Treaty establishing the European Community (TEC) (essentially the Treaty of Rome), which is renamed as the 'Treaty on the Functioning of the European Union' (TFEU). Both treaties have the same legal status. Even though the new Treaty is no longer overtly a constitutional treaty, it manages to preserve most of the important achievements of the Treaty establishing a Constitution of Europe which was signed in 2004 but was never ratified (Duff, 2009).

The Lisbon treaty provides two fundamental leaderships as regards future development of European Territories and improves the standing of regions and cities in the European Union's political system. The first one is the improvement of the Committee of the Regions (CoR) and the second one is the enhancement of territorial cohesion in regional policy (<http://www.cor.europa.eu/pages/PressTemplate.aspx?view=detail&id=bbf4ad63-706c-43e8-9236-91d9e67acc0c>).

As CoR President Luc Van den Brande declared:

“With the Lisbon Treaty, European legislation will be adopted more democratically in future, with a stronger Parliament and a Commission which listens to the people, is sensitive to the regional and local impact of European initiatives and is committed to respecting the subsidiarity principle. In addition, the Lisbon Treaty gives territorial cohesion, which is the cornerstone of future regional policy, a fundamental legal basis.”

For the first time in its history, the European Union explicitly recognises “territorial cohesion” as a fundamental objective in addition to economic and social cohesion. For instance, Article 3 of the modified Treaty on European Union states that the EU:

“shall promote economic, social and territorial cohesion, and solidarity among Member States.”

This explicit recognition of the Union's territorial dimension is a huge step forward for the Committee's efforts to mainstream this concept in all EU policies (<http://www.cor.europa.eu/pages/PressTemplate.aspx?view=detail&id=bbf4ad63-706c-43e8-9236-91d9e67acc0c>).

In this point it should be mentioned that the term “territorial cohesion” is preferred than the term “European spatial planning” or “European spatial policy”. This term seems to be adopted by all European Member States. As it has already been noted, the term “Spatial planning” was a chronic obstacle in the promotion of a common spatial policy. This happened because of the different understanding regarding the content and the institutional background of spatial planning in each Member State. In contrast, “territorial cohesion” is a nascent term and thus more neutral, that manages to reconcile the different national perceptions and to promote a common European Spatial Planning Policy (Giannakourou, 2009).

1.2.5 The Green Paper on Territorial Cohesion

The debate on territorial cohesion began in the early nineties and led in 1999 to the adoption of the European Spatial Development Perspective (ESDP) by the member states. The Commission developed the ESDP by reinforcing cooperation through the INTERREG programme and through establishing the European Spatial Observatory Network (ESPON). The debate culminated in the adoption of the Territorial Agenda and its Action Plan by Member States (<http://europa.eu/rapid/pressReleasesAction.do?reference=IP/08/1460&guiLanguage=en>). On 6/10/2008, in Brussels, the “Green Paper on Territorial Cohesion: Turning territorial diversity into strength” was adopted by the Commission. This Green Paper goes on, as regards the debate on territorial cohesion, to argue that the territorial diversity of the EU is a vital asset that can contribute to the sustainable development of the EU as whole. To turn this diversity into strength, we have to address territorial

cohesion through focusing on new themes, new sets of relationships binding EU territories at different levels and new forms of cooperation, coordination and partnerships

(http://ec.europa.eu/regional_policy/consultation/terco/consultation_en.htm).

The initiative of this green paper was in response to the demands from the European Parliament, the ministerial meeting in Leipzig in 2007 and the contributions that many stakeholders made during the public consultation on the 4th Cohesion Report. The paper also builds on the Territorial Agenda and its Action Programme, approved under the German and Portuguese Presidencies during 2007 (http://ec.europa.eu/regional_policy/consultation/terco/consultation_en.htm). The

adoption of this green paper signalling the start of a major consultation with regional and local authorities, associations, NGOs, civil society and other organisations, aimed at achieving a better and shared understanding of territorial cohesion and its implications for the future of the EU's regional policy (<http://europa.eu/rapid/pressReleasesAction.do?reference=IP/08/1460&guiLanguage=en>).

The goal of the ensuing debate has been to come to a better and shared understanding of territorial cohesion and its implications for policy. (http://ec.europa.eu/regional_policy/consultation/terco/consultation_en.htm). So the Green Paper gives a territorial perspective on economic and social cohesion, as it notes that:

“The EU harbours an incredibly rich territorial diversity. Territorial cohesion is about ensuring the harmonious development of all these places and about making sure that their citizens are able to make the most of inherent features of these territories. As such, it is a means of transforming diversity into an asset that contributes to sustainable development of the entire EU” (CEC, 2008).

The main issue of this Green Paper is to give an answer to the question of what is territorial cohesion, how do we define it, how is it approached by the document? Interestingly, we do not yet have any operational conclusion on this central issue. Many contributors argued for a clear-cut definition while others replied that this would be contrary to the very diversity of the European context, in all its dimensions. At least a

common understanding of the basic principles and key elements emerged. Territorial cohesion is about:

- Ensuring the harmonious development of different territories;
- Enabling citizens to make the most of the inherent features of these territories;
- Transforming diversity into an asset which contributes to the sustainable development of the entire territory of the European Union;
- Complementing and reinforcing economic and social cohesion

(http://ec.europa.eu/regional_policy/consultation/terco/consultation_en.htm).

Based on what is written in the Green Paper, territorial cohesion is not about changing the fundamentals of Cohesion Policy which remains a development policy with its emphasis on enabling and not on compensating, while keeping a close eye on subsidiarity concerns. Through its objective of promoting harmonious or balanced development, territorial cohesion has a solidarity dimension, arguing for the reduction of territorial disparities and working for fair access to opportunities. In this sense, the economic objective of achieving the proper functioning of the single market ties in with the current development rationale of Cohesion Policy (COM, 2008).

Territorial cohesion certainly does not mean automatic compensation based on particular geographic situations. On the other hand, it can imply that public policies might be more responsive to the different needs and potentials of all kinds of territories across Europe. That is to say that the territorial dimension needs to be reinforced at all levels and at all stages in policy design and implementation. Within this area of the debate there was consensus on the following 6 strands:

- Coordinated public policies at different levels
- Better account of territorial impacts
- Improved multi-level governance
- The need for functional approaches - regions yes, but also consideration of other geographies where appropriate; river basins, mountain areas, networks of towns, metropolitan areas, deprived neighbourhoods for example. A question of flexibility.
- Territorial cooperation as a clear EU asset
- Reinforced evidence base - better territorial knowledge is needed

(http://ec.europa.eu/regional_policy/consultation/terco/consultation_en.htm).

1.2.6 *The Fifth report on economic, social and territorial cohesion*

The fifth Cohesion Report is the first report adopted under the Lisbon Treaty, which added territorial cohesion to the twin goals of economic and social cohesion. The Lisbon Treaty has added territorial cohesion to the goals of economic and social cohesion. This cause the necessity to address this objective in the new programmes, with particular emphasis on the role of cities, functional geographies, areas facing specific geographical or demographic problems and macro-regional strategies (COM, 2010).

According to the 5th cohesion report, territorial cohesion also means addressing urban-rural linkages in terms of access to affordable and quality infrastructures and services, and problems in regions with a high concentration of socially marginalised communities.

This is the first Cohesion Report adopted under the Lisbon Treaty. To cover this new dimension, this report includes more analysis on four issues:

- First it examines the territorial dimension of access to services.
- Second, it pays more attention to the environmental dimension of sustainable development.
- Third, it focuses on functional regions and territorial cooperation.
- Fourth, it considers how the territorial impact of policies can be measured (COM,2010).

1.3 A BRIEF GENERAL CONCLUSION

The territorial component of European integration, even though it initially encountered disbelief, has managed to be recognised as an objective and at the same time constitute a mission of the European Union. This mission is nowadays considered as equal to the remaining European objectives such as the integration of internal market, the sustainable development etc. Convergence is considered as the key objective of regional policy, however it should undoubtedly, have its own boundaries. The spatial dimension in Union's policies, introduced by the incorporation of territorial cohesion, not only is expected to have an intensive contribution to decreasing the negative side and inside

effect of those policies but also expected to have a great contribution to regional policy's missions for reducing disparities (Dionelis & Giaoutzi, 2008).

The European Union has been characterised as an ambitious and risky bet, and as far as is still an experiment in progress nobody can determine and safely predict its final form. Integration process is not linear and has its ups and downs. Steps to integration are performed whenever the internal and external conditions of the Union permit it and depending on the developments and the focus of interest of all the Member States (Mousis, 2004; Stubb, 2006). Today, more than 50 years after, the EU seems to be mature enough to understand all the aspects that could arise and make difficult the way to European integration. The complexity of EU's functioning, was the reason of the delayed enhancement of the "spatial dimension" in the former EU policies. However the incorporation of Territorial Cohesion in objects of EU is regard as a step in achieving this and subsequent European integration. Nevertheless, all this procedure in order Territorial cohesion to achieve European recognition is based in a long-term cooperation among Member States. Cooperation among Member States accompanied with a more flexible framework of making and implementing decisions will help in achieving more effective results in this field.

2 EUROPEAN TERRITORY AND TRANSPORT POLICY

European Union's territory is characterized by its specificity in comparison to other politico-economical organizations. After the second world war, European Community began as a relatively homogenous area in economic terms however it evolved in an uneven area. Nowadays European Union is a territory with great inequalities, either economical or in infrastructures or in employment or in technological development.

Given the particularities of European space and its structure, TEN-T as an element of Regional policy has a clear aim to reduce inequalities.

Common Transport Policy (CTP) with a clear territorial character on its objectives aims to promote an effective and sustainable transport system. The transportation policy constitutes an integral part of territorial cohesion policy since determines the degree of connectivity within the EU territory. The degree of connectivity within the EU territory

constitutes a substantial factor which contributes in territorial, economic and social cohesion. The objective of integrated market, economic and social cohesion cannot be achieved without the existence of transport corridors which link the major urban concentration within the EU territory. The transportation policy was emerged as an substantial policy of the EU after the Rome Treaty, focusing mostly on promoting an effective and sustainable transport system entitled as Common Transportation Policy.

(http://www.europarl.europa.eu/parliament/expert/displayFtu.do?language=en&id=74&ftuId=FTU_4.6.1.html).

The fundamental objectives of the CTP are those of the promotion of sustainable and non inflationary growth, the respect for the environment, a high degree of convergence of economic performances, as well as of employment, social cohesion and solidarity among Member states (as it is also provided by fundamental objectives of EEC Treaty) (http://www.europarl.europa.eu/parliament/expert/displayFtu.do?language=en&id=74&ftuId=FTU_4.6.1.html).

A well-established element of the CTP is the development of the trans-European transport network (TEN-Transport) which is intended to contribute to the functioning of the single market and the strengthening of economic and social cohesion. The basic policy objective of the TEN-T is the establishment of a single, multimodal network. This will be consisted by both the traditional transportation infrastructures of each member state and the deployment of innovative and contemporary transportations systems with an objective to contribute to more efficient and safer traffic management.

(http://ec.europa.eu/transport/infrastructure/networks_eu/networks_eu_en.htm).

Nowadays, after many years of implementing CTP and TEN-T in Europe, there are cases where inequalities have been reduced and cases where the opposite effects have been caused. In the following section the purposes of Common Transport Policy (CTP) and TENs will be presented. In the same time the appraisal framework of TENs and their effect in territorial cohesion in Europe are also be presented.

2.1 STRUCTURE AND SPECIALITY IN EUROPEAN SPACE

European Union is a single unitary political organization, however it is consisted by 27 different member states composing a mosaic.

EU's space is continuously transformed as a result of the several expansions. From six members, European Community was enlarged in twenty seven members at the last fifty years. After the inclusion of last twelve member states, Union's area increased by twenty eight per cent (28%) and its population by thirty four per cent (34%) (Camhis, 2007).

The Population of Union is unevenly distributed. Densities vary from 50 inhabitants per square kilometer in Sweden, Finland, Estonia, Latvia to more than 450 per square kilometers in the Netherlands (map 2). Europe is also geographically fragmented with exceptions in the great plains of Germany and Poland. Big mountains divide broader spatial sections and states. But apart from all those physical fragmentations, Europe is divided by the administrative boundaries beyond the member states (Thebault, 2006). Those boundaries have been stable for years especially in western Europe however in central and eastern Europe those have been transformed several times through wars. There are some areas that were passed from the one to the other side of borders especially among Germany and France (Rosiere, 2007). As regards those border areas, after more than 20 years of European Cross-Border Cooperation Programs, big improvements were caused in terms of the consolidation of the border (CEC, 2004a) .

Map 1: Population Densities in Europe



Source:

http://upload.wikimedia.org/wikipedia/commons/0/02/Population_density_Europe.png

Moreover there is a big range in size and population among member states but also in civilizations, traditions and languages. Despite the global dominance of English, the Union has 23 official languages and many local ones that often cause problems of

understanding. Language barriers are one of the major obstacles in promoting the integration process. On the other hand, the domination of Christianity gives a homogenous religious character to the Union instead the internal differences (Camhis, 2007).

Additionally, each one of 27 member states has a different institutional organization at the central, regional and local levels. This is one more contradiction at the European level and it is very difficult. This, in combination with the fact that some EU policies have shared responsibilities among EU and member states, makes the application of them very difficult (Camhis, 2007).

Taking all the above into consideration, European territory can be thought of as a mosaic of its member states. Macroscopically, EU's territory is characterized by a relative polycentricism, while at the same time its territory is divided when we look at it microscopically, as the central regions are more developed than the peripheral ones, with a few exceptions.

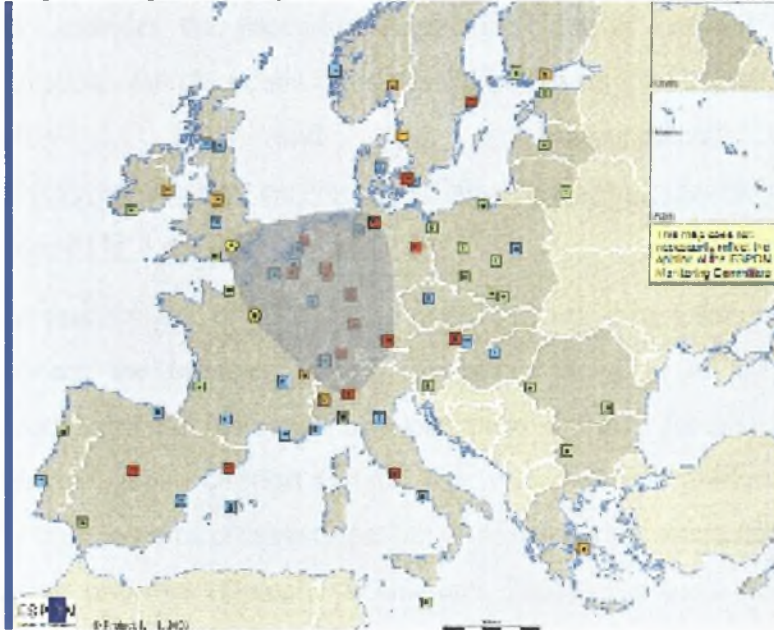
In development terms, the majority of economical activity and urban concentrations in Europe is concentrated in the central pentagon: North Yorkshire, France Compte, Hamburg, Milan. In the late eighties Datar⁸ had expressed the opinion that European space was characterized by concentration tendencies along those axes (the well known 'Blue Banana') (Camhis, 2007). The 'Banana' identifies a more or less continuously urbanised European core, an emerging Mediterranean axis, and a Western Atlantic periphery (map 3). Policies based on such a representation seek to connect these different parts so as to achieve a higher degree of overall territorial cohesion, or to focus on the specific challenges of certain types areas (INTERREG, 2006)

However, those tendencies were not confirmed by the third cohesion report which states that the traditional economic core of Europe (London, Paris, Berlin, Munich, and Hamburg) participated in a significantly lower percentage of GDP of EU-27 in 2004 than in 1995, while the population remained the same. This trend is due to the emergence of new growth poles such as Dublin, Madrid, Helsinki and Stockholm, Warsaw, Prague and Budapest. On the other hand, within the member states, economic

⁸ Datar: Delegation a l'aménagement du territoire et a l'action regionale, is the service of Planning and Regional Development of France.

activity is mostly concentrated in capitals with the exceptions of Berlin and Dublin (CEC, 2004a).

Map 2: European Pentagon



Source: INTERREG, 2006

Centrality and peripherality in Europe is also measured on a continuous scale as accessibility or lack of accessibility. Central regions are the most accessible ones and peripheral regions the more remote ones, with different levels of centrality, or peripherality, in between. This division suggested that there is an additional dimension of classification of regions, cutting across the core-periphery one, which we term corridor and shadow (Vickerman, 1995). Corridors are linear regions with good transport, lying on networks; shadow regions are those apart from the networks. This fact makes very important the contribution of TEN in polycentric development in Europe and in achieving territorial cohesion.

2.2 PURPOSES OF COMMON TRANSPORT POLICY (CTP)

Transport is one of the most important factors in European economic, social and political development, with a critical strategic role in the integration process. In addition the Enlargement of European Union is expected to have serious consequences on the structure of the existing European transport infrastructure. The Common Transport Policy (CTP) is formed by a coherent set of rules and provisions (the transport acquis

communautaires). With its origins dating back to the Treaty of Rome, CTP, after the 1980s, has emerged as one of the most dynamic policy areas in the Union. In more detail, EC Treaty refers to Transport Policy in Articles 70-80. The Transport acquis also includes the secondary legislation, that is, several hundreds of Regulations Directions and Decisions. This legislation covers a wide area of social, technical, fiscal, safety and environmental requirements (http://www.europarl.europa.eu/parliament/expert/displayFtu.do?language=en&id=74&ftuId=FTU_4.6.1.html).

The primary goal of CTP was to remove the existing technical and institutional barriers between the Member States. Nowadays the goal of CTP goes far beyond and incorporates the insurance of sustainable mobility for people and goods to create a coherent global transport system. This system should produce the best possible returns not only in terms of investment but also in securing safety and other environmental and social priorities (Dionalis & Giaoutzi, 2008). The basic priority of this system is to ensure the free mobility of the people and goods within EU, an idea which constitute the substantial principal of the EU internal market. Furthermore CTP aims to decrease the external cost which come from the transports such as road accidents, respiratory diseases, environmental pollution and traffic jams

(http://www.europarl.europa.eu/parliament/expert/displayFtu.do?language=en&id=74&ftuId=FTU_4.6.1.html).

As regards the general policy guidelines for CTP those were gradually integrated.

The first reference took place at the 1985 White Paper on the completion of the internal market which attempted to guarantee the free movement of people and goods and established the general guidelines for the Common Transport Policy.

Later on, on 2 December 1992, the commission adopted the White Paper on the future development of the common transport policy. In this document the main emphasis was given on the opening of transportation markets. Simultaneously was aiming to promote an intermodal transport network.

The Commission Green Paper of 20 December 1995, entitled 'Towards fair and efficient pricing in transport', dealt with the external costs of transport (COM, 1996). In the subsequently published White Paper of 22 July 1998, 'Fair payment for

infrastructure use, the main objective was the implementation a common transport infrastructure charging framework among the Member State of the EU. The commission took into account the difference which exist between the EU regarding with the imposition of transport charges which constitute an obstacle and led to various intra- and intermodal distortions of competition (COM, 1998).

In the White Paper: 'European Transport Policy for 2010: Time to decide', the Commission first took into consideration the challenges which may arise as a result of the upcoming Eastern enlargement of the EU. The document focused on assessing the impacts of the enlargement of the EU in terms of transportation both of freight and people. It predicted a massive increase of traffic and potential increase of external costs (COM,2001).

According to the Commission, the imbalance in the development of individual modes of transport is one of the biggest challenges. The goal of the White paper is the development of environmental friendly transportation network by promoting the less harmful transportation modes such as rail transport, sea and inland waterway transport. Additionally, endorse the development of intermodal transportation network by promoting the interlinking of all available modes of transport. Furthermore, the Commission announced a revision of the guidelines for trans-European networks (TEN-T), to adapt them to the enlarged EU.

(http://www.europarl.europa.eu/parliament/expert/displayFtu.do?language=en&id=74&ftuId=FTU_4.6.1.html).

Thirdly, the White Paper gave an emphasis on improving the road transport safety and harmonize the transportation infrastructure charging system between the Member State of the EU. Finally the Commission highlights the necessity to deal with the impacts of globalization of transport sector. Thus, it proposed that the Community's role should be stronger in international organisations such as the International Maritime Organisation and the International Civil Aviation Organisation (http://www.europarl.europa.eu/parliament/expert/displayFtu.do?language=en&id=74&ftuId=FTU_4.6.1.html).

2.3 TRANS EUROPEAN NETWORKS – TRANSPORT (TEN – T)

The idea of Trans-European Networks (TEN) emerged at the end of the 1980s in connection with the proposed integrated single market. As it has already been mentioned we could not talk about integrated market or free movement of goods and people without providing a common integrated framework of transportation infrastructure which link the region within the EU

(http://ec.europa.eu/transport/infrastructure/basis_networks/basis_networks_en.htm).

As regards TEN- T, those are a mean in providing the CTP.

The revised Community guidelines for the development of the trans-European transport network (TEN-T) were adopted in April 2004 (Decision No 884/2004/EC). These were aimed at giving a new boost to TEN-T projects, particularly in light of the forthcoming ‘Enlargement’ of the Community, and identified 30 ‘priority projects’ to be implemented by 2020. This series of 30 transnational projects have been selected on the basis of proposals from the Member States, according to their European added value and their contribution to the sustainable development of transport and the integration of the new Member States

(http://ec.europa.eu/transport/infrastructure/maps/30_priority_axes_en.htm).

Map 3: TNT-T priority projects



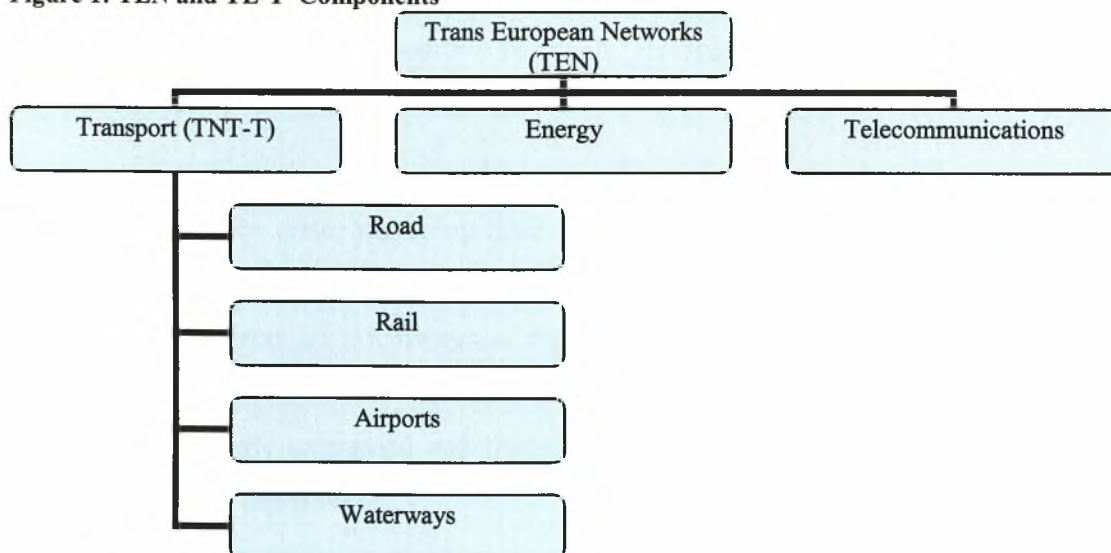
Source: <http://ec.europa.eu/ten/transport/maps/doc/axes/pp00.pdf>

TNT – T’s policy objective is the establishment of a single, multimodal network covering both traditional ground-based structures and equipment (including intelligent transport systems) to enable safe and efficient traffic. The Trans-European Transport Network shall be established gradually by integrating land, sea and air transport infrastructure components, and by including the necessary technical installations, information and telecommunication systems to ensure smooth operation of the network and efficient traffic management (Banister et al, 2000).

Thus the transport infrastructure components are road, rail and inland waterway networks, motorways of the sea, seaports and inland waterway ports, airports and other interconnection points between modal networks (combined transport) as we can see in the next diagram.

The contribution these Trans-European Networks make to the cohesion objectives of the EU is important as they are designed to raise the quality of the infrastructure in each of the Member States. They are not necessary the thirty most critical projects, but they are symbolic of the wider European ideal. Most of those projects improve the infrastructure between two or more EU countries.

Figure 1: TEN and TE-T Components



The missions of the TEN-T are to:

1. Insure mobility of persons and goods
2. Offer high quality infrastructures
3. Support all the modes of transport

4. Optimal use of existing capacities
5. Interoperability in all of its elements
6. Cover the entire territory of EU
7. Predict its possible expansion to the European Free Trade Association countries (EFTA) the Central and Eastern Europe and the Mediterranean countries (Banister et al., 2000).

2.4 THE APPRAISAL FRAMEWORK OF TEN – T

Transport Network of a country, ensures the movement of people and goods and supports all those additional activities that enhance its effectiveness, constructing a single transport system (Skayannis, 1994).

From the early stages of European integration, transport infrastructures in a wider sense, are considered as one of the most important factors supporting regional development. This fact was mostly based on believing that improved transport infrastructures, not only decrease the transport costs but also increase the accessibility and thus impulse regional development. Additionally it was also believed that the creation of transport links in European space rises positive effects by linking developed with less developed regions and spread development in the interim areas.

However, apart from those obvious advantages that transport infrastructures have, some concerns have been arise, regarding their operating process, the modes and the cases that those are efficient. It is yet recognized that TEN-T infrastructure's spatial and developmental effects are not always as expected, so there are side and negative effects. Emphasis is given in TEN-T's infrastructures as far as those are the way that the TEN-T's policy is mostly expressed and through them we precept the developmental and spatial impacts of this policy.

Transport infrastructure investments may have significant impacts for the economy, the environment, and potentially for other aspects the regions concerned. In the global scheme of an appraisal process, there are four main groups of impacts likely to be considered, namely:

- Effects on transport efficiency and safety
- Financial implications for transport providers
- Environmental impacts and
- Policy impacts beyond the transport system (Dionelis, Giaoutzi and Mourmouris, 2008)

In each case, the impacts are defined as the differences between particular indicators in the do-something scenario (with the project) and the do-nothing (or do-minimum) scenario (without the project) (Dionelis, Giaoutzi and Mourmouris, 2008).

2.4.1 Effects on Transport Efficiency and Safety

Some of the direct effects of network projects will be on transport users (people and freight) and transport providers. The cost and the time expended in getting from place to place will be reduced, both for personal travel and freight movement. Transport efficiency effects together with safety effects (reduce of accidents) are expected to be included within a social cost-benefit analysis (CBA) (Dionelis, Giaoutzi and Mourmouris, 2008).

More detailed, developments on transport sector, contributed in decreasing the time-distance and increasing accessibility. This had a direct effect in reducing geographical space and lifting isolation in some areas. By improving a transport system, transport cost are decreasing and mobility is increasing. But even if mobility is higher with the improvement of infrastructures the traffic congestion subsides. The car accidents are also reduced (Vlachopoulou and Papatheochari, 2005).

2.4.2 Financial implications

The financial analysis, required to meet the second aim of the appraisal framework, excludes non-market impacts for which social values are not adopted in the social CBA and instead limits itself to:

- Financial investment costs
- Financial infrastructure maintenance and operating costs
- Vehicle operating costs (VOCs) met by operators
- Infrastructure and service operator revenues

The financial analysis is concerned with the impact of these items on transport operators, infrastructure providers and governments in cash flow terms (Dionelis, Giaoutzi and Mourmouris, 2008).

2.4.3 Environmental impacts

It is essential that the cost of environment damage is included in the costs of any individual project. However, transport system changes and the resulting changes in transport use, affect not only participants within the transport system itself, but also those who are exposed to the system or its emissions without being directly involved. Environmental impacts occur at a local or regional level: for example, changes in exposure to noise and vibration, or to airborne pollutants. In this context it is important to fully respect the provisions for Strategic Environmental Assessments (SEA) according to European acquis (Dionelis, Giaoutzi and Mourmouris, 2008) .

2.4.4 Developmental impacts

The next group of impacts concerns those affecting broader public policy beyond the transport system. Governments (central and regional) typically invest in transport not only because of the expected national gain in economic efficiency and mobility but also because of the positive socio-economic effects that investment is expected to have on other policy areas of interest. Such areas might be:

- Regional/local economic development policies
- Land use policies
- National EU policies relating to other objectives (Dionelis, Giaoutzi and Mourmouris, 2008)

Table 1: TEN-T’s Investment Impacts

TEN-T’s Investment Impacts			
Effects on transport efficiency and safety	Financial implications	Environmental impacts	Development impacts
<p>Direct - Positive:</p> <ul style="list-style-type: none"> • Decreasing the time-distance and increasing accessibility • Transport cost are decreasing and mobility is increasing • Traffic congestion subsides and car accidents are reduced 	<p>Direct – Positive:</p> <p>is concerned with the impact of these items on transport operators, infrastructure providers and governments in cash flow terms</p>	<p>Direct – Negative</p> <p>occur at a local or regional level:</p> <ul style="list-style-type: none"> • changes in exposure to noise and vibration • or to airborne pollutants <p>need of SEA</p>	<p>Indirect – Positive/ Negative</p> <p>In areas such as:</p> <ul style="list-style-type: none"> • Regional/local economic development policies • Land use policies • National EU policies relating to other objectives

Source: Dionelis, Giaoutzi and Mourmouris, 2008

So Effects of TNT-T’s infrastructures can be either positive or negative, whereas in the same time are separated in two categories, the direct and indirect effects. Direct effects mostly refer on changing mobility in crossing areas, as far as on changing landscape at construction phase. On the other hand indirect effects are about the consequences after the operation of the network concerning changes in the developmental profile of the crossing area.

2.5 TEN-T AND TERRITORIAL COHESION

This section is dedicated for the impacts that TEN have in broader public policy beyond the transport system. Effects in regional economic development as in land uses are in the focus of interest of this section. This make it initially clear that those territorial effects are considered as indirect. As we have already notice TEN-T is a well established element of CTP and in extension of Cohesion policy. This seems to ensure the effectiveness of TEN-T infrastructures in providing regional development. However after a long year observation and registration of transport infrastructures footsteps in

space, it is yet recognized that those treat differently in each case, and have either positive or negative impacts in regional development and territorial cohesion.

2.5.1 Positive Effects

Developments on transport sector, contributed in decreasing the time-distance and increasing accessibility. This had a direct effect in reducing geographical space and lifting isolation in some areas. Those effects caused a series of diverse territorial or not transformations in EU. Some of them are the redistribution of population, the development of cities, the reorganization of productive activities and the development of new social structures. The development or improvement of a transport infrastructure usually cause the concentration of economic activities (scale economies), because of high mobility. High concentration of activities change the previous land uses and following land values. In general, the development of transportation can contribute in empowering the productivity of a region.

At the same time those developments, contributed in the improvement of mobility and make easier the access in a wider range of information sources. At last the indirect contribution of transport sector is present in improving innovation as regards the development of new techniques and products in constructions sector (Lambrianidis, 2002).

2.5.2 Negative Effects

Beyond the proposes of TEN-T policy and its positive effects that were underlined above, in this point we have to refer the negative effects that networks of high performance have. Decrease in time-space had also spam consequences. There are several cases that networks in some regions were suspending factors in their development. In those cases, high mobility and prosperity created an extroverted productive activity, loss of human capital and income and in general a strong dependence from neighbor areas.

The limitation of geographical space, was an direct effect of TEN-T's development. However this geographical limitation was not uniform. Although there was an territorial integration in a significant part of European space, same areas were more marginalized. This happened because of the lack of an effective connection with those areas and thus they remain isolated apart from the others.

Specifically, as regards the transport network, even if it is approved that in short term improves the mobility, it is however accepted that also affect the economic and territorial structure of the crossed areas. In a country of region the transport network is considered as one of the main developmental factors. Of high importance is, not only the development of new transport networks but also the improvement of till existing in order to produce a single transport system. However there is the danger of polarization and inequalities in access. This happens because of the distance or the morphology of ground in some areas (Vlachopoulou and Papatheochari, 2005).

Transport systems are closely related with urban systems. In this sense, TNT-T support the relations among the big urban centers that they cross. As a result the distance between those centers is decreased and the contact is increased. As regards rural areas and smaller cities, they benefit in a different way from transport networks. The question here is the degree of connection and interchanges between the main and secondary networks. It has to be noted that high level improved networks cause a series of problems in the smaller and intermediate rural cities. This problem is mostly expressed in spatial phenomena characterized by Vickerman as “corridor effects”

According to Vickerman there is a division among the effects that transport infrastructures have in “poorer peripheral regions” and in “congested central regions”. Location is always a strong factor which determines the development of a region; even its accessibility is improved. There are some cases in peripheral regions where improved connections can not push the development. This is mostly explained by the fact that the most peripheral regions suffer by purely intraregional networks. In those regions the absence of high quality roads, classic rail and well developed modern combined transport will contribute to increasing tension between core urban centres and the non urban peripheral periphery. Mobility should have some limits especially among the more developed central regions and less developed peripheral ones. The explanation is that increased mobility has external effects which surpass the limits of sustainable development (Vickerman, 1995).

Vickerman also highlights the difference between the objective of improving global competitiveness of EU and the objective of socioeconomic cohesion thru the development of TEN. On one hand when the object is global competitiveness then the proposed TENs which mainly connect central with peripheral regions are successful. On

the other hand when the object is socioeconomic cohesion, this could not be succeeding by the same way.

“Improving the links between the central and the more peripheral regions may make it easier for firms to market their products in central regions, but also enables producers in these central regions to invade peripheral markets previously protected by their remoteness. At the same time the tendency to link the major cities of the peripheral regions into the higher-level European networks may be increasing the disparities between these cities and their hinterlands in peripheral regions” (Vickerman, Spiekermann and Wegener 1999).

Either in central and more developed regions or in peripheral lagging behind regions, in intraregional level the distribution of infrastructures occurs to metropolitan areas, advantaging them and causing “corridor effects” which disadvantage the non urban areas.

It is suggested that there is an additional dimension of classification of regions, cutting across the core-periphery one, which we term corridor and shadow. Corridors are linear regions with good transport, lying on networks; shadow regions are those apart from the networks.

The emphasis on corridors is very significant. The issues to be considered here are the imposition of costs from transit traffic on locations within the corridor, but also the abstraction of traffic away from other routes or corridors and the creation of ‘shadow areas’ outside the corridors. The effectiveness of this corridor will also depend on the development of other links in the macro-regional network (Vickerman, 1996).

As it is already highlighted phenomena such as “corridor effects” are proof of the opposition that TENs can not succeed the purpose of convergence and cohesion in the European territory. TENs have to be re evaluated and re designed in order to faith this purpose.

In general, relative gains in accessibility of peripheral regions may be beneficial to their economic development; however these gains will always be over-shadowed by the larger gains in accessibility of the regions in the European core. In other words, TENs can not be unambiguously instruments to promote the cohesion between regions in

Europe and the reduction of interregional economic and social disparities. To achieve this, European transport Policy should be focused on the investment of links within and between the peripheral regions, not in addition to, but at the expense of, transport investment in the European core.

Table 2: TEN-T's Infrastructures Developmental Effects

TEN-T'S INFRASTRUCTURES DEVELOPMENTAL EFFECTS	
POSITIVE	NEGATIVE
1. Reducing geographical space and lifting isolation in some areas	1. lack of effective connection create isolated areas
2. Redistribution of population, the development of cities, the reorganization of productive activities and the development of new socio-economic and spatial structures	2. polarization and inequalities in access
3. Improving innovation as regards the development of new techniques and products in constructions sector	3. Corridor effects - developed areas advanced
4. Concentration of economic activities change the previous land uses and following land values → empowering regional productivity	4. disadvantaged small - rural less developed cities
5. strengthening economic and social cohesion by reducing disparities between regions and linking peripheral regions with the central regions of the Union	5. high mobility creates an extroverted productive activity, loss of human capital leading in strong dependence from more developed neighbor areas

2.6 CONCLUSIONS

European space is characterized by a relative polycentricity. However this polycentricity mostly refers to the metropolitan and in general to the big urban concentrations, who are relatively dispread in European territory. Of course, there is a difference in the density of big urban concentrations in central and west Europe in contrast to eastern and northern parts of it, however the lack of polycentricity is mostly observed in the intra regional level anywhere in Europe but especially in south and east. So, European space is neither uniform nor coherent as a whole. Regional policy has the purpose to decrease the disparities, and so has the TEN-T.

The main objective or regional policy in general is to ensure a sustainable development for the entire of the European Union. Competitiveness as well as efficiency and growth should be enhanced, while paying attention to a balanced spatial development and

environmental sustainability. However, these goals are partly in conflict with one another. For this reason in some cases transportation policy initiatives cannot favour all those goals at the same time. Commonly the more developed regions are mostly favored by linking while at the same time less developed lagging behind regions are leaking (CEC, 1999). This conflict between efficiency and equity should be solved. The poorer countries should receive compensating transfers such that they can develop their secondary networks and let their peripheries gain from the spread effects of more rapid growth in the centers. The decision on those secondary networks, however, should be assigned to the national and local level, where the respective benefits appear.

3 SUCCESS AND FAILURE STORIES OF TEN-T IN EUROPE

Given the particularities of European space and its structure, TEN-T as an element of Regional policy has a clear aim to reduce inequalities. Nowadays, after many years of implementing CTP and TEN-T in Europe, there are cases where inequalities have been reduced and cases where the opposite effects have been caused. In the following section some of the most representative cases will also be presented.

3.1 SUCCESS CASES

The success cases, refer to regions/ mega regions which are part of the core area of Europe. There, the improvement of transportation linkages led in a very coherent territory. In those regions, cities were linked with transport corridors of each kind of modes, decreasing the time distances and increasing the accessibility so the movement of inhabitants was improved. To be more specific areas in turn discussed below is the Randstad in the Netherlands, the Rhine-Ruhr metropolitan region in Germany and the Belgian 'Flemish Diamond'.

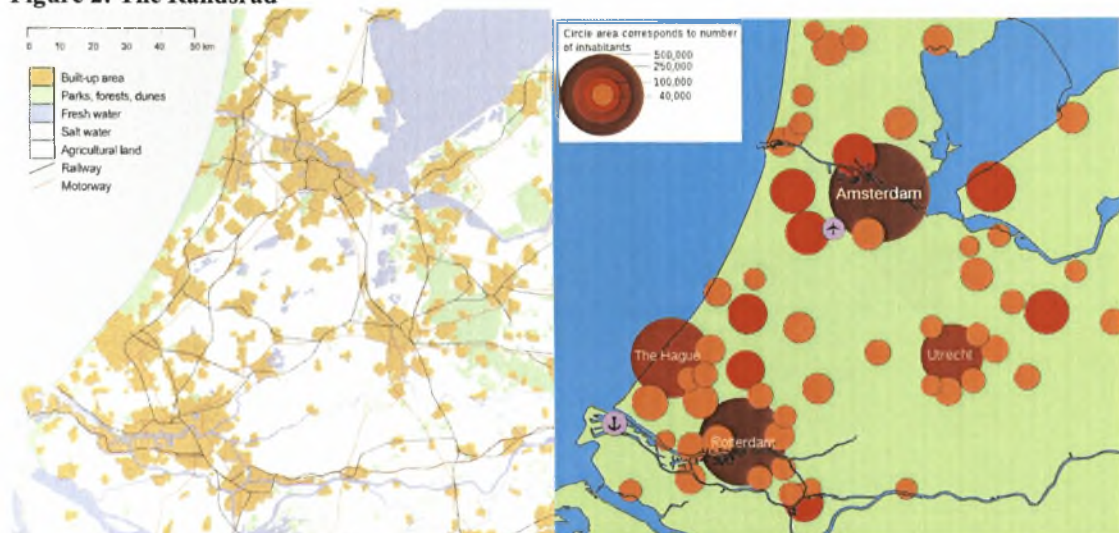
3.1.1 Randstad

The Randstad (figure 1) is a conurbation in the Netherlands. It consists of the four largest Dutch cities (Amsterdam, Rotterdam, The Hague and Utrecht), and the

surrounding areas. With a population of 7,100,000 it is one of the largest conurbations⁹ in Europe. The cities of the Randstad more or less form a crescent or chain. This shape has given the Randstad its name (rand means rim or edge and stad means city or town). The area that is enclosed by the larger cities is called the Green Heart (Groene Hart) (Ministerie van Verkeer en Waterstaat, 2007).

The Randstad possesses a large infrastructure system, with many railways, motorways, trams and subways in various cities. Home to various mainports, transport is an important issue in the Randstad, with the port of Rotterdam, and Schiphol airport. At the same time there are various smaller ports and airports. Randstad has also various motorways, most of them starting around Amsterdam and Rotterdam. Many international corridors start in the Randstad, including the A1, A2, A4, A7, A12, A15, A16 and A20 motorways, as well as various commuter routes. Moreover a well established network of railways is also established in Randstad. Most intercity connections in the Netherlands terminate in one of the key cities in the Randstad. The railway network in the area is dense and heavily used. Larger cities in the Randstad have many railway stations, as well as light rail, subway and/or tram networks (Ministerie van Verkeer en Waterstaat, 2007).

Figure 2: The Randsrad



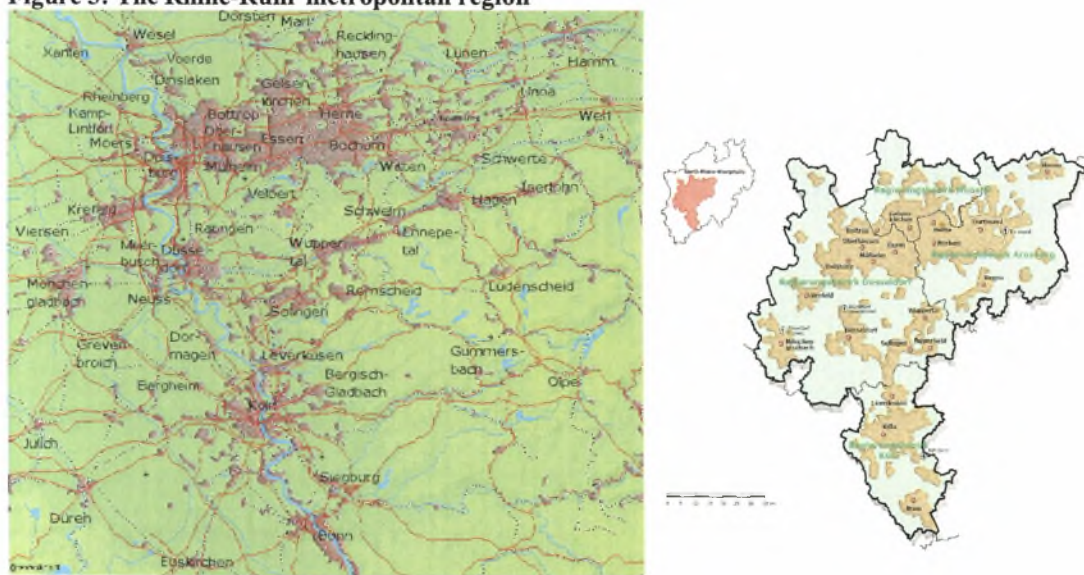
Source: Ministerie van Verkeer en Waterstaat, 2007

⁹ A conurbation is a region comprising a number of cities, large towns, and other urban areas that, through population growth and physical expansion, have merged to form one continuous urban and industrially developed area (<http://www.encyclopedia.com/topic/conurbation.aspx#1>).

3.1.2 Rhine-Ruhr metropolitan region

The Rhine-Ruhr metropolitan region (figure 2) is the largest metropolitan region in Germany with about 10,100,000 inhabitants. It is of polycentric nature and the only megalopolis¹⁰ in Germany. It covers an area of 7,110 square kilometers and lies entirely within the federal state of North Rhine-Westphalia. The metropolitan area is named after the Rhine and Ruhr rivers, which are the region's defining geographical features and historically its economic backbone. The location of the Rhine-Ruhr at the heart of the European 'blue banana' makes it well connected to other major European cities and metropolitan areas like Amsterdam and the Randstad, the Flemish Diamond and Frankfurt/Rhine-Main Region. In the same time transportation system is well developed to link all districts within the conurbation, so as to create a single urban labor-market or travel-to-work area. Today, the Rhine-Ruhr metropolitan region accounts for roughly 15% of the GDP of the German economy (Charles, 2002).

Figure 3: The Rhine-Ruhr metropolitan region



Source: Charles, 2002

3.1.3 The 'Flemish Diamond'

At last, the 'Flemish Diamond' (figure 3) is one of the larger European metropolitan regions, situated in the central provinces of Flanders and the capital region of Belgium (Vanhaverbeke, 1997). Its corner markers are

¹⁰ A megalopolis, also known as a megaregion, is a clustered network of cities with a population of about 10 million or more (<http://www.america2050.org/megaregions.html>)

the agglomerations of Brussels, Ghent, Antwerp and Leuven (Wintjes and Cobbenhagen, 1999). Thus roughly in the geometrical shape of a diamond, the term ‘Vlaamse Ruit’ (which has no connotation with any jewel) or ‘Flemish Diamond’, an infrastructural concept of the Flemish government (apart from the centre of the Brussels metropolitan area) has become a reference to the most urbanized and industrialized -and prosperous - area in Belgium (Vanhaverbeke, 1997). It links also its peripheral area for more than a hundred kilometres, exceeding Flanders, to the international and global economy (Vanhaverbeke, 1998). Over five million people live in this conurbation with a population density of more than 800 per square kilometer.

figure 4: The ‘Flemish Diamond’



Source: http://upload.wikimedia.org/wikipedia/commons/5/5f/Vlaamse_ruit.png

3.2 FAILURE CASES

In this section the fail stories refer to some regions where the improvement of transport corridors caused ‘corridor effects’ and subsequent ‘shadow areas’ (see chapter 2.4.2). High speed transport connections (TEN-T) usually link the big urban concentrations. However, developmental problems are noticed in the intermediate crossing areas, especially when there are no interchanges and secondary networks to connect them (tunnel effect). Moreover, some rural or medium size and quasi competitive cities are disadvantaged by transport improvements. This happens because the endogenous resources are absorbed by the more economically strong cities. The improvement of transport infrastructures and the subsequent decrease in time-distance lead to the

absorption of development from less to more developed cities (absorption effect) (Vlachopoulou & Papathechari, 2005).

A related example in European territory is the triangle London - Paris - Brussels in which the improved transport connection led to polarization of growth and sucking in the intermediate regions and consequently to growth of regional disparities. Other examples to this direction are the cases of the so called 'Greek Developmental S' and the region of Crete.

3.2.1 *The 'Greek developmental S'*

The 'Greek developmental S' links the regions crossed by the Egnatia Motorway (extended from Igoumenitsa to Kipi in Evros) and PATHE motorway (extended from Patra, Athens, Thessaloniki, Evzoni) which are both TEN-T. It took its name by its form as we can see in the next figure. This developmental 'S' links the north central and western Macedonia (Kavala, Thessaloniki), through the Egnatia motorway, and then Macedonia with Thessaly (Volos and Larisa) with the capital of country (Athens), and with western Greece (Patra) thru PATHE. The above development system, favours the development of eastern Greece against the West that remains geographically isolated (Vlachopoulou & Papatheochari, 2005).

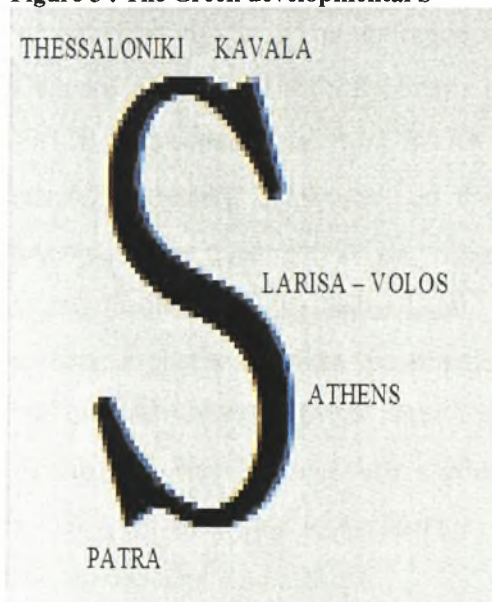
However as it is expressed by Skayiannis, developmental 'S' existed as a development pattern in Greece long before the creation of transport infrastructures of PATHE (Skayannis, 2009). So we could argue that the case of 'S' proves the opinion that transport infrastructures have a spatial selectivity. In this way 'S/PATHE' established the monotonic eastern development of Greek territory.

Polarization tendencies are noticed not only along the 'S' (development of eastern Greece) but also inside it. This polarization is observed by the economical and demographic dominance of Athens and Thessaloniki. The intermediate crossed by the 'S' cities of Patras and Thessaly (dipole of Larisa-Volos) have not yet succeed to become poles of development, because of this domination. This happens because those areas do not have productive dynamics to attract or maintain the subsequent development of axes, so are absorbed by the nearest and more attractive productive (urban) centers. However a set of policies accompanied by great infrastructures (Egnatia motorway, Ionian Motorway, Rio-Antirio, ets) in the Greek territory tend to

develop those secondary poles forming a new development structure in Greece, characterized by Skayannis as ‘σ’ (Skayannis, 2009).

Moreover a study on Egnatia motorway has shown that there are considerations as regards the role of the motorway in weakening local economy. Egnatia by increasing the accessibility in cities with moderate or low level of development, creates both opportunities and threats. In Kozani and Grevena, loses in purchasing power has been noticed. In the same time Kozani has been increase its tension to be absorbed by Thessaloniki in the sector of leisure (Petrakos and Tranos, 2008).

Figure 5 : The Greek developmental S



Source: Skayannis, 2009



Source: General Framework of Planning and sustainable development, 2008

3.2.2 BOAK

Crete is an island region of Greece, however even though it is an island with all posed problems (isolation, limited sources, etc), it has a sufficient size and the potential to develop a relatively self-sustaining and coherent territory. In this island region, BOAK (it takes its name from the acronyms of ‘ North Road Axis of Crete’ in Greek) is the main road network and also part of the country’s Trans European Network. As its name stands, BOAK is located in the north part of the island linking major urban centers (Kastelli of Kissamos, Chania, Rethymno, Heraklion, Agios Nikolaos, Sitia), ports, and airports of region. As it is provided not only by the General framework of spatial planning and sustainable development of Greece but also by Regional Framework of

Cretan Region, BOAK has strategic importance (YPEKA, 2003, 2008). The whole development section of Cretan Region and its near Islands is rallied in BOAK. So this road is not just a simple transport corridor but the developmental axis of Crete. BOAK ties the development of the region with the other developmental axes of continental country and the remainder insular space of North and South Aegean. Moreover international marine routes are related with the NRAC breaking the isolation that could characterize Cretan Region. So Integrating and upgrading infrastructures and services in North Road Axis of Crete (from Sitia to Kasteli) is identified as critical for the development of this insular region.

Nevertheless, this axis has undergone much criticism because of its nature (Agapakis, Klados and Giritas, 2008). Problems are focused in the fact that there are insufficient vertical road connections from BOAK both to transit areas and to the south part of the island (Kallionaki, 2009). So, on the one hand, a concentration of development is observed in the north part of the region while at the same time the south parts remain lagging behind. On the other hand, in some areas near the axis depopulation and isolation is observed. More specifically, in the prefecture of Rethimno, the old national road crossed several villages (Ano Viranepiskopi, Perama, Dafni, Damasta, Marathos, Astrino) (see map bellow) where after the opening of the new national road (part of BOAK from Heraklion to Rethimnon) were marginalized and desolated because of the lack of sufficient connections.

BOAK does not favor the balanced development of the region as far as it services the movement along the north part among the big urban concentrations. An integrated transport corridor should both consider the networking of the crossing areas and the polycentricity and should avoid tunnel and absorption effects (see chapter 2).

map 4: Region of Crete and its Motorways.



3.3 CONCLUSION

In the previous section we saw some examples where the improved transport linkages caused cohesion and other examples where this did not happen. In cases where the transport connections are integrated among developed and competitive areas the result is positive in contrast to cases where those are among areas with different levels of development. In those cases, the planning process has an important role to propose supporting measures for the weaker areas. Moreover, the secondary road network has an important role in networking properly the regions, thus enhancing territorial cohesion. Some areas were more marginalized because of the lack of an effective connection and thus remain isolated apart from the others. This is mostly explained by the fact that the most peripheral regions have insufficient intraregional networks (cases of Greece). Another conclusion is that either in developed areas or in less developed there is a spatial selectivity of transport infrastructures. This means that transportation linkages are developed among more developed poles of development where the competitions of movement is higher. So development attracts development and so on, and spatial inequalities are caused. The process of planning is also very important in this point as far as the proposed TENs should be designed in order to network EU's space in a balanced and not in selective way.

4 GENERAL CONCLUSION

European space is not homogeneous, since there are significant economic, social and territorial disparities among its member states. The objective of this diploma thesis was

the investigation of the role that TEN-T have in relation with territorial cohesion in Europe. Thus, initially territorial cohesion is conceptually clarified through its gradual integration in cohesion policy. Afterwards, the role that TEN-Ts have in affecting the territorial imbalances in Europe is investigated. At the same time some case studies are referred to as paradigms in order to approach the central issue of this thesis, in real evidence.

Nowadays, the policy of reducing inequalities within the EU territory constitutes a difficult task due to the economic crises which has been spread all over the Europe. Within this context, the key policy for achieving a harmonious development and reducing the disparities among the member states is the Cohesion Policy (COM, 2010).

In this line, the TEN-T's policy, as a basic element of Regional policy has straight spatial impacts. This fact puts it in the top of the agenda as regards territorial cohesion in Europe. TEN-Ts through closer cooperation with structural policy, by improving the links between international/national and regional/local transport networks, have as an objective to strengthen a polycentric and more balanced structure of the European territory and thus improve territorial cohesion (CEC, 1999).

Territorial cohesion is the third, new, objective of regional policy that is related with polycentricity. As an objective, it is very important taking into account the particularities of European territory. It provides an added value to the other two objectives (economic and social cohesion). It also enhances the role of spatial development policy on the European level. By adding this objective in regional policy, territorial impacts of policies are at the top of the interest, either if those are direct or indirect. The case of CTP and TNT-T policy has a special matter, since they have a clear direct impact on space which has to be evaluated.

The European territory in terms of development is divided into two parts. The first part is the core area which includes the central and well developed states/regions of the EU. The second part consists of the peripheral and marginalized lagging behind regions. Even though European space is characterized by a relative polycentric structure, this polycentricity depends on the spatial level. On European level, metropolitan areas and big urban concentrations, which are relatively distributed in the European territory, create a relative polycentric pattern. On state/regional level, polycentricism subsides

especially in peripheral regions. However the lack of polycentricism is mostly observed at the intra regional level anywhere in Europe but especially in south and east.

Those particularities of European space make it hard for the TEN-T policy either to be designed or to be implemented or to be evaluated overall.

The imbalances which exist in territorial terms (esp. lack of polycentricity) are directly associated with transport policy, as the last with its clear territorial character can crucially affect them, A special selectivity of transport infrastructures since are attracted by the most developed areas where the demands of movement is higher is also noticed. Thus, it is not coincidental the fact that the economically developed core of Europe has more developed transport systems than the less developed periphery (COM, 2010). Hence, policy is needed to ensure that all regions, even islands and the peripheral ones, have adequate access to infrastructure, in order to promote social and economic development and, therefore, territorial cohesion in the Community.

On the other hand, TEN-Ts are mostly located in EU-15 countries. More specifically, 8 of the 14 priority projects of the TEN are located in peripheral regions while 6 are mainly located in the “pentagon” (5th report). Efficient transport is a basic prerequisite for strengthening the competitive situation of peripheral and less favored regions. In combination with this, the connection of core with peripheral areas causes some indirect negative effects in some cases. High quality infrastructure, in some cases lead to the removal of resources from structurally weaker and peripheral regions (“absorption effect”). In some other cases areas are crossed without being connected (“tunnel effect”). In general, the overall impact of transport investments depends on the competitiveness of the regional economies. A peripheral area may benefit from better market access but its production may, on the other hand, be subject to a higher degree of competition from imports (ESPON, 2006)

Moreover even though the propose of TEN-T is sustainable development and territorial cohesion, the focus of policy is on strengthening links across the EU rather than on improving the intra accessibility of lagging regions. These countries — Greece, Spain, Portugal and (up until 2003) Ireland and the EU-12 countries since 2004 — present the most insufficient transportation infrastructure network across EU (COM, 2010). In each case, spatial development policy should work towards having high-quality transport infrastructure supplemented by secondary networks.

Policy and rational planning accompanied with ex ante intermediate and ex post evaluations in each specific project, is needed to ensure the proper implication of TEN-T policy. Territorial impact assessment should also be the basic prerequisite for all large transport projects. While, at the same time, improvement of co-operation between transport policies at EU, national and regional levels is necessary. All this programming would be useful in cases where a set of measures can be applied in order to avoid the negative effects.

Especially in less developed regions ('leaking by linking' (CEC, 2010)), investment in infrastructure needs to be combined with investment in education, enterprise, and innovation to ensure that local economies will be empowered in order to be competitive and sustainable by linking, avoiding the 'tunnel effects'. The accompanied investment not only will have a positive effect on development but this effect will be maximized by taking account of the complementary effects of this other investment.

In avoiding tunnel and in general isolation effects and monotonic development, the more peripheral countries should place particular emphasis on maintaining and developing links to the ultra-peripheral regions. The efficiency and density of these secondary networks will be vital for the integration of the regional and urban economies and their competitiveness. In particular, they serve to strengthen the smaller and medium-sized towns and their function in generating regional development overall. Apart from this, the secondary networks can contribute to managing the traffic flows on the TENs. In this respect, the timetable for linking the secondary networks to the trans-European networks can be crucial for their development and as ESDP states:

“The future extension of the Trans-European Networks (TENs) should be based on a polycentric development model. That means, in particular, ensuring the internal development of the globally important economic integration zones and facilitating their integration into the global economy. In addition, more attention should be paid to regions with geographical barriers to access, especially islands and remote areas. Spatial differences in the EU cannot be reduced without a fundamental improvement of transport infrastructure and services to and within the regions where lack of access to transport and communication infrastructure restricts economic development. A fundamental

improvement of infrastructure and accessibility requires more than just providing the missing links in the TENs” (CEC, 1999)

At least in the more congested central regions, reduction of negative effects by promoting the interconnection of inter-modal junctions for freight transport, in particular for transport on the European corridors, will be the solution.

At this point, it is worth to note the conclusions of ESPON 2.1.1., as regard the overall assessment of TEN-T policy. More specifically:

“Social and technical macro-trends (population, productivity and so on) tend to be more important for regional socio-economic development than transport infrastructure scenarios. Relatively large improvements in accessibility will translate into small increase in regional economic activity. Also a slight cohesion effect of transport investments in terms of accessibility and GDP cannot reverse the general trend towards economic polarization. The cohesion effect is likely to occur only if cohesion is measured in relative terms” (ESPON, 2006)

To conclude, transport policy can lead to considerable effects for certain regions or for certain aspects of development, mainly as a result of generally increased accessibility and economic performance in absolute terms. The impact of transport investments will depend on competitiveness of regional economies. Peripheral areas may benefit from better market access but its production may, on the other hand, be subject to a higher degree of competition from imports. The effects on polycentric development are likely to depend on the spatial level. On European level, polycentricity is more or less successful, while on regional or worst on intraregional level polycentricity has to be improved.

However, the impact (positive or negative) of transport investments on economic development can be expected to be greater in regions with less developed networks than in regions with a dense and well-developed network.

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APPENDIX I: THE STRUCTURE OF EUROPEAN SPACE

In the late eighties Datar¹¹ had expressed the opinion that European space was characterized by concentration tendencies along those axes (the well known ‘Blue Banana’) (Camhis, 2007). The ‘Banana’ identifies a more or less continuously urbanised European core, an emerging Mediterranean axis, and a Western Atlantic periphery (map 3). Policies based on such a representation seek to connect these different parts so as to achieve a higher degree of overall territorial cohesion, or to focus on the specific challenges of certain types areas (INTERREG, 2006)

However, those tendencies were not confirmed by the third cohesion report which states that the traditional economic core of Europe (London, Paris, Munich, and Hamburg) participated in a significantly lower percentage of GDP of EU-27 in 2004 than in 1995, while the population remained the same. This trend is due to the emergence of new growth poles such as Dublin, Madrid, Helsinki and Stockholm, Warsaw, Prague and Budapest. On the other hand, within the member states, economic activity is mostly concentrated in capitals with the exceptions of Berlin and Dublin (CEC, 2004a).

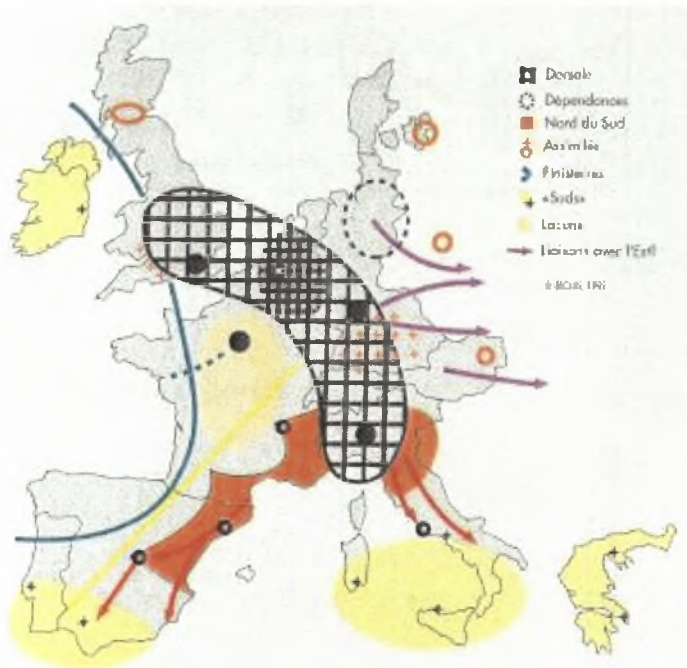
European territory was also characterized as a ‘Brunch of Grapes’ (Kunzmann and Wegener, 1991), whereas the distribution of population in cities of the Union is relatively balanced with a large number of small towns. The ‘Brunch of Grapes’ (map 4) approach of Europe departs from endogenous regional potentials across Europe, and seeks to develop these across Europe. Local success stories show that growth dynamics can develop in all parts of the European territory, even when there are significant structural (territorial) constraints. The determinant factors are the development of social, economic and institutional capacities capable of taking advantage of existing opportunities. This type of approach is typically illustrated by the well known Kunzmann and Wegener (1991) ‘Bunch of grapes’ representation of the European territory. Polycentric thinking¹² typically focuses on a ‘Bunch of

¹¹ Datar: Delegation a l’amenagement du territoire et a l’action regionale, is the service of Planning and Regional Development of France.

¹² Polycentricity is primarily about the creation of synergies from local assets through cooperation between cities and city regions. The idea of polycentricity relates to other political ideas such as balanced regional development (cohesion), taking local assets and endowments as the point of departure for regional development and economic growth (competitiveness) and

Grapes' type of approach, focusing on local actors' capacity to take advantage of opportunities. The underlying hypothesis is that this is the most efficient approach for the generation of growth in Europe (INTERREG, 2006). This approach is close to the polycentric model promoted by the European Commission. Even closer to the reality but also a desirable model would be a description of the European space as network site (map 4) (Camhis, 2007).

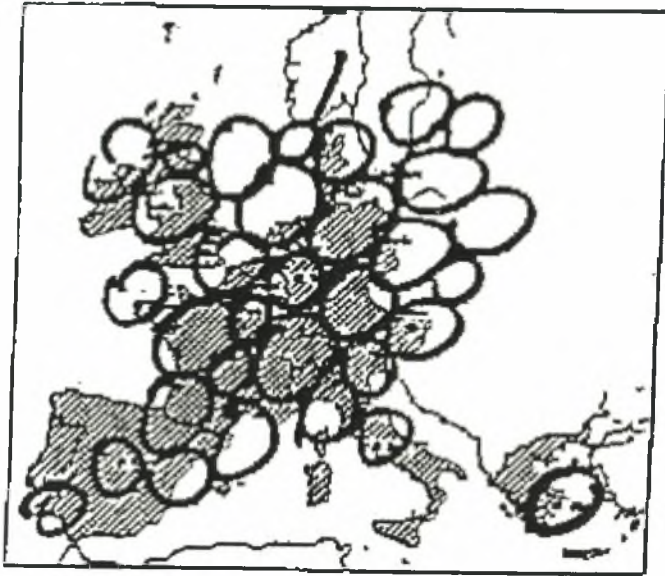
Map 5: The European 'Blue Banana'



Source: INTERREG, 2006

widening the ownership of political decisions (governance). Polycentricity is generally seen as the opposite to monocentricity, dispersal and urban sprawl (INTERREG, 2006).

Map 6: The European 'Bunch of grapes'



Source: INTERREG, 2006

Map 7: Europe as a Network site



Source: INTERREG, 2006



ΠΑΝΕΠΙΣΤΗΜΙΟ ΘΕΣΣΑΛΙΑΣ
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