

## **EGNATIA HIGHWAY AND PAN-EUROPEAN CORRIDOR 8: COMPLEMENTARITY OR COMPETITION?**

**Andrianos Theodoros <sup>[1]</sup>, Karakotsoglou Michalis <sup>[2]</sup>, Rizos Charalampos <sup>[3]</sup>**

<sup>1</sup> Rural and Surveyor Engineer, MSc, Aristotle University of Thessaloniki PhD. Candidate,  
Scholar of the Onassis Foundation  
Thiramenous 1, 546 34 Thessaloniki  
tel.: +30 2310 245807, e-mail: theoandrianos@yahoo.gr

<sup>2</sup> Planning and Regional Development Engineer, MSc  
Kimonos Voga 1, 546 43 Thessaloniki  
tel.: +30 2310 841960, e-mail: mkarakotsoglou@yahoo.com

<sup>3</sup> Rural and Surveyor Engineer, MSc, Aristotle University of Thessaloniki PhD. Candidate  
Ipsilantou 62 – 64, 542 48 Thessaloniki  
tel.: +30 2310 300383, e-mail: xrizos@mycosmos.gr

### **1. INTRODUCTION**

In an attempt to cover the needs in transportation infrastructure the European Union promoted the construction of transportation networks (the so-called Trans European Networks) connecting the countries of the Union with each other, as well as with other countries. The concept of the Trans European Networks (TENs) emerged at the late 80s and has been officially introduced in 1991 during the Maastricht Treaty (Andrianos and Rizos, 2002; Karakotsoglou and Koukos, 2001). According to the White Book of the European Commission for Development, Competitiveness and Employment the reasons dictating the construction of the TENs, which as well consist their aims, were the following:

- Financial development
- Improved operation of the European market
- Improved competition
- Improved financial and social coherence
- Improved quality of life
- Decreased pollution
- Easier integration of new members in the European Union
- Improved relationship between the European Union and its neighbors

During the European Council held in Corfu in 1994 a list of projects of immediate priority was approved. Egnatia Highway was among those projects as it was believed that it would comprise an important factor of development in the North Greece and the Balkan region generally. This fact was more than positive for Greece, as for several years such a transportation corridor was considered to be the means for serving the socioeconomic development and improving the connectivity between cities and regions in Greece and between Greece and neighboring countries as well.

Meanwhile, a second road corridor of immediate interest for the Balkan region was among the nine priority corridors, which the 2<sup>nd</sup> Pan European Transportation Conference, held in Crete in 1994, decided to promote. This was the Pan European

Transportation Corridor 8, connecting Durres with Varna/Burgas, via Tirana, Skopje and Sofia. Because of the somewhat parallel laying out of the corridor to Egnatia, it is believed that Corridor 8 is competitive to Egnatia. Nevertheless, the European Union insisted that the two corridors would be complementary, since they have different functional and technical characteristics (Chrysostomidou, 1996).

The scope of the present paper is to investigate the relationship between Egnatia and Corridor 8. The technical and financial characteristics of these two transportation corridors are presented together with their consequences in the development of the Balkan Region. The advantages and disadvantages of these two corridors are described and how they affect each other. The cities and regions connected by these two corridors are portrayed and their prospective effects on the area are presented. Furthermore, an investigation is made on whether or not Egnatia succeeds in achieving the predefined objectives. Finally, an analysis is made about the complementarity of the two corridors in several fields.

## **2. EGNATIA HIGHWAY**

### **2.1 Technical – Financial – Traffic characteristics of Egnatia Highway**

Egnatia Highway is a revival of the Roman Egnatia Road which connected the Adriatic coast of the empire with Thrace and the Black Sea. Its construction took place between 148 – 118 B.C. The length of the road was approximately 800 kilometers (Karakotsoglou and Koukos, 2001).

The modern Egnatia Highway crosses North Greece. It has a length of 670 kilometers and connects Igoumenitsa at the western coast of Greece with Alexandroupoli and Kipi at the eastern border of the country. The travel time between these two points after the complete construction of the Highway is expected to be 6.5 hours. The comparison with the 11.5 hours needed to travel from Igoumenitsa to Kipi before the construction of Egnatia makes apparent the time saving Egnatia offers. To make obvious the importance of the project it is mentioned that the completion of Egnatia Highway will provide with immediate access: (Ministry of Environment, Land Planning and Public Projects of Greece, 2000; [www.egnatia.gr](http://www.egnatia.gr))

- 19 cities
- 5 ports
- 6 airports
- 10 industrial areas

The highway will have two lanes per direction and a total width of 24.5 meters (22 meters where terrain conditions do not allow for 24.5 meters). The construction includes 1650 bridges (total length of 80 kilometers), 74 tunnels (99 km) and 50 interchanges ([www.egnatia.gr](http://www.egnatia.gr)). These features make obvious the size of the project.

Up to now 453 kilometers of the highway have been constructed and 70 kilometers more are to be completed in the present year ([www.egnatia.gr](http://www.egnatia.gr)). Several problems resulted in the delay of the completion of the project. Among those the most severe were some geotechnical problems, namely ground instability, mainly at the western section of the highway. In addition, the axis of the highway had to be redesigned

because it crosses significant environmental sensitive areas, as well as during the excavations important archaeological findings came to light (Karakotsoglou and Koukos, 2001; [www.egnatia.gr](http://www.egnatia.gr)). Figure 1 presents the construction progress of the project. The black line shows the constructed sections, the green line the sections under construction, the red line shows sections in the phase of survey and the cyan line shows sections for under auctioning.



Figure 1: The construction progress of Egnatia Highway ([www.egnatia.gr](http://www.egnatia.gr))

Concerning the financing of the project the final cost of is estimated to reach € 5.735 billions. The next graph presents the financial sources of the project. The large rate of the European sources shows that the European Union considers Egnatia Highway as a very important project in the area. It is worth to mention that 75% of the National Funds come as a loan from the European Investment Bank.

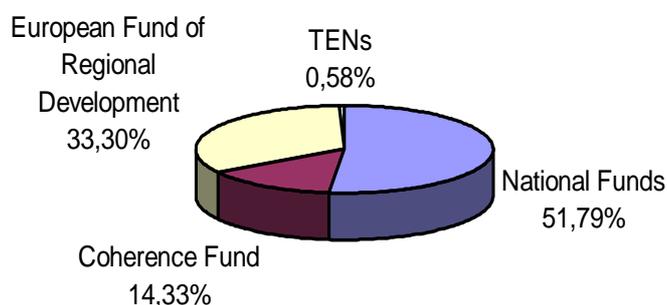


Figure 2: Financial sources of Egnatia Highway ([www.egnatia.gr](http://www.egnatia.gr))

Concerning the synthesis of the traffic volume of Egnatia Highway the initial estimation showed that approximately 78% would be private cars and 32% would be heavy good vehicles (Eratosthenis Ltd, 1997).

## 2.2 Zone of Influence of Egnatia Highway

Egnatia Highway running through the northern department of Greece from its eastern to its western utmost constitutes an important axis that influences drastically the regions from where it goes through. Beginning from Igoumenitsa, the western point of the axis, Egnatia Highway crosses the following 4 regions of Greece:

- Region of Epirus
- Region of Western Macedonia
- Region of Central Macedonia
- Region of Eastern Macedonia and Thrace

Having as a base the elements of recent inventories the zone of influence of Egnatia Highway represents: ([www.egnatia.gr](http://www.egnatia.gr))

- 36% of total population of the country
- 33% of total gross national product
- 54% of total agricultural ground of the country
- 65% of the irrigated agricultural ground
- 41% of the total employment in the industry of the country
- 51% of the mining activity of the country



*Figure 3: Zones of influence of Egnatia Highway ([www.egnatia.gr](http://www.egnatia.gr))*

Figure 3 presents the zones of influence of Egnatia Highway. The yellow colour next to the road axis presents the most intense zone of influence of 1 kilometre from both sides of the road. The dark brown colour presents the Prefectures crossed by Egnatia, while the light brown colour shows the Regions Egnatia crosses.

Taking into consideration the connectivity that it offers between cities, airports, harbours and industrial regions (section 2.1), as well as the fact that along Egnatia exist 30 areas of tourist interest (archaeological sites, national parks etc) the importance of the project becomes easily perceptible. This axis, not only raises

geographic, social, economic and cultural isolation of several regions of Greece, from Thesprotia and Epirus to Evros and Thrace, but at the same time constitutes the vaulting horse for a new dynamic and multifaceted growth in the regions and the prefectures of Northern Greece.

### *2.2.1. Region of Epirus*

The Region of Epirus includes the Prefectures of Thesprotia, Preveza, Ioannina and Arta. It is one of the most degrading regions of the European Union. As it does also happen with other corresponding regions in Greece and abroad, the ascendant sector of its economy is agriculture. (Ministry of Environment, Land Planning and Public Projects of Greece, 1999c).

The sector of transformation mainly deals with the production of foods and drinks. Most manufacturing units are of small size and are addressed in the local markets of region. Characteristically, in the total of the Region only 40 industries with employment over 20 individuals exist.

In the Region of Epirus the low level of transportation infrastructure combined with the intense mountainous terrain of the area and the harsh weather conditions prevailing during most time of the year constitute the most significant factor of isolation of the Region. It is important to mention that the complete absence of railroad in the Region of Epirus.

The more important share in the regional GNP emanates from the very rapidly evolving tertiary sector, with percentage 61%. This sector is supported in trade and tourism because of the important comparative advantages the Region has. The growth of trade is supplied by the nodal position of the Region in the system of marine transports between Greece and Italy. The completion of Egnatia and the new harbour of Igoumenitsa will upgrade radically the importance of the Region. It is estimated that the land uses relating with trade will have an increase of 50% to 60% (Dimitriou et.al., 1994), while there will be an annual increase of up to 2.5% concerning GNP and tourism (Karakotsoglou and Koukos, 2001).

### *2.2.2 Region of Western Macedonia*

The Region of Western Macedonia is constituted by the Prefectures of Grevena, Kastoria, Florina and Kozani. Although it is characterized as a mountainous region, the cultivated extents occupy an important percentage (24.26%). The transformation concerns primarily two types of activities, the generation of electricity and fur dressing. The electricity output activities are assembled in the Eastern department of region. The tourism sector remains to a significant extent degrading, even though important possibilities exist. (Ministry of Environment, Land Planning and Public Projects of Greece, 1999b).

The transport infrastructure in the region of Western Macedonia is developed in very small degree, mainly because of the fact that the region presents very intense relief. The road connections go through areas with problems at the wintry months, while the technical characteristics of the roads do not correspond to the high traffic volume. Moreover, in the particular region the existing railway infrastructure does not suffice in order to serve the transport of bulky charges. Thus road transports have to take over the task, with several economic and time delay costs.

The completion of Egnatia Highway is estimated to yield an annual increase of the GNP up to 1.5%, while it is expected that there will be an increase of urban development, tourism and services (up to 0.75% annually) (Karakotsoglou and Koukos, 2001).

### *2.2.3. Region of Central Macedonia*

The Region of Central Macedonia includes the Prefectures of Pella, Imathia, Pieria, Kilkis, Thessaloniki, Chalkidiki and Serres. It includes five from the most developed agricultural Prefectures of country. In the region basic products of Greek agriculture are produced, among which peaches, cotton, tobacco and asparagus. An important percentage of the region, around 26%, is occupied by the forests. Regarding livestock-farming, the region constitutes the main centre of stockfarming of cattle of Greece. Finally, in the Prefectures of Thessaloniki and Chalkidiki the fishery is developed (Region of Central Macedonia, 2001).

The sector of trade and transports is characterized by the nodal place that the region has in the national system of transports. In its territory the two main road axes of country are crossed: the Patra – Athens – Thessaloniki - Evzoni axis and Egnatia Highway. Moreover the harbour of Thessaloniki and its connection with the railway network have rendered Thessaloniki a point of expense for all the products of the wider region. Air transports have been growing as well (Region of Central Macedonia, 2001).

The sector of tourism presents important growth, even if it is based on the mass tourist attendance. This has as a consequence a seasonal movement as well as overexploitation of existing resources. The main regions of reception of tourists are the coastal area of central Macedonia and mainly Chalkidiki, in smaller degree Pieria, as well as the coasts of wider region of Thessaloniki. The forms of tourism offered concern mainly summer tourism. The region however can support as well other forms of tourism, such as wintry, mountainous, agricultural-tourism, cultural, archaeological, religious (Mount Athos is located in the southern part of the Region in Chalkidiki). The possibilities however remain currently unexploited (Region of Central Macedonia, 2001).

Concerning the estimated benefits originating from the construction of Egnatia Highway the following comments have to be made:

- The Metropolitan area of Thessaloniki and the surrounding regions will be the most favoured. The increase of GNP is estimated to reach 3% annually, which is the biggest of all the regions affected by Egnatia. This increase will be owed mainly to the urban growth and the development of services.
- Regarding the rest of the region of Central Macedonia it is expected that the increase of GNP will fluctuate between 0.5% and 0.75% (Karakotsoglou and Koukos, 2001).

### *2.2.4 Region of Eastern Macedonia and Thrace*

The Region of Eastern Macedonia and Thrace includes the Prefectures of Drama, Kavala, Xanthi, Rodopi and Evros. The role of agriculture is prevailing, with 29.5% of the area of the region used for agriculture. A very big percentage of surfaces of the Region is covered by forests (53%), but this important advantage has not been

developed suitably (Ministry of Environment, Land Planning and Public Projects of Greece, 1999a).

The trade and the transports can play very important role in the effort of region to escape from the developmental poverty that characterizes it. It is expected that the completion of Egnatia Highway and the upgrade of ports (mainly that of Alexandroupoli, because of the important distance from Thessaloniki), together with the energy pipelines being constructed (Burgas – Alexandroupoli) will turn the Region into an important centre of transit and combined transports.

The tourist growth in the region of Eastern Macedonia and Thrace was focused primarily in the attracting of mass tourism with destination the coastal regions, something that had as result the appearance of phenomena of environmental degrading.

The construction of Egnatia Highway will generate an increase in urban growth and services. The GNP is estimated to have an annual increase of up to 2%. More specifically the city of Kavala will have the potential to become a transit node (taking into consideration the existence of its port). The city of Komotini is expected to enforce its role as the administrative center of the Region. Finally, for the city of Alexandroupoli there is an expectation to become a nodal point of the area concerning transportation, energy and trade. The construction of Egnatia Highway, the Pan-European Corridor 9 abutting in Alexandroupoli, the significant geographical position, the port and airport and the energy pipelines justify this expectation.

### 2.3 Ports and Airports of Egnatia Highway

As mentioned earlier Egnatia Highway provides with immediate access 5 ports and 6 airports. Specifically, the 5 ports are:

- Port of Igoumenitsa
- Port of Volos
- Port of Thessaloniki
- Port of Kavala
- Port of Alexandroupoli

These ports are of primary importance for its complete exploitation. They will supply the road axis with movement of persons and merchandises. At the same time the 5 ports will be favoured by the presence of an important road axis such Egnatia is. The connection of the ports with Egnatia will help the faster travelling of people and goods leading to an increase of peoples and goods using the specific harbours.

The port of Igoumenitsa will have an inarguable advantage because it is located at one end of Egnatia Highway. The completion of Egnatia together with the connection of Volos with Egnatia through a road axis will definitely increase persons and goods moving through the port of Volos. The port of Thessaloniki is the second most important port in Greece. The strategic position of Thessaloniki assures the continuous and increasing activity of its port. The completion of Egnatia will give a boost to the port as it will service a significant part of the Balkan needs and will connect it with Black Sea. In Kavala Egnatia Highway will help the port to play a significant role for the transportation of goods. Finally the port in Alexandroupoli will

undoubtedly become a node for combined transportation, since except for Egnatia, the Pan-European corridor 9 and energy pipelines will end in the city, as mentioned earlier.

Concerning airports 6 Egnatia will provide with direct access 6 of them in Northern Greece:

- Airport of Ioannina
- Argos Orestiko – Kastoria
- Kozani
- Thessaloniki
- Chrysoupoli – Kavala
- Alexandroupoli

The completion of Egnatia Highway will give access to a larger portion of the population to the abovementioned airports. In this way helping the mobility of people will be increased and the isolation of certain areas will be decreased.

#### 2.4 Present Situation – Influence of Egnatia Highway

Up to now 453 kilometers of Egnatia highway have been constructed as mentioned earlier. These sections of the highway are in use and several impacts have already taken place in the regions crossed by these sections. The administrative agency of Egnatia Highway has set up an observatory in order to have detailed records of those impacts. The observatory collects several data and calculates 25 socioeconomic, environmental and traffic indices.

Figure 4 presents the potential accessibility of the urban population before and after the construction of Egnatia Highway. The light gray columns represent the pre-Egnatia situation and the dark gray columns the urban population with accessibility after the construction of Egnatia. It is obvious that in every region the accessibility is improved. The most impressive improvement is in the western Greece, where road infrastructure was poor before the construction of Egnatia. In the Region of Central Macedonia there is a slight improvement which is justified by the better existing infrastructure compared to the Regions of Epirus and Western Macedonia.

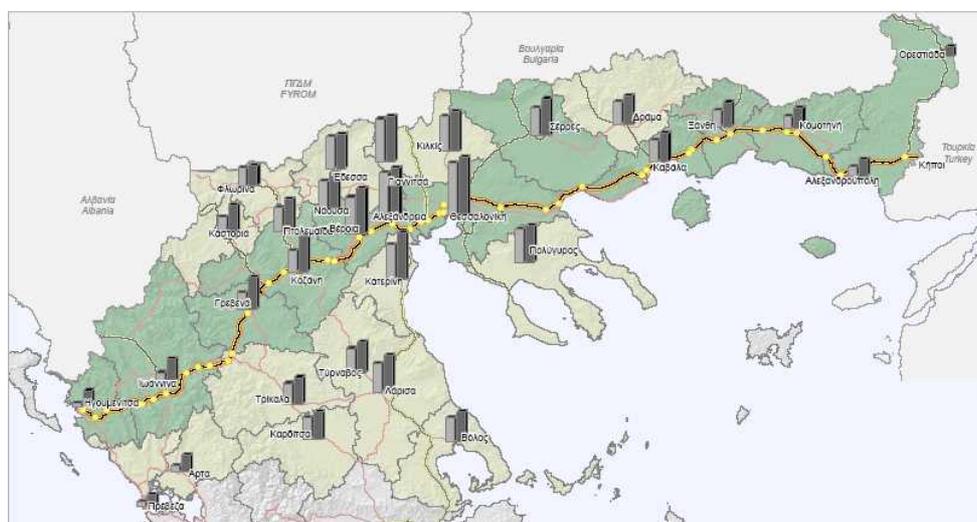
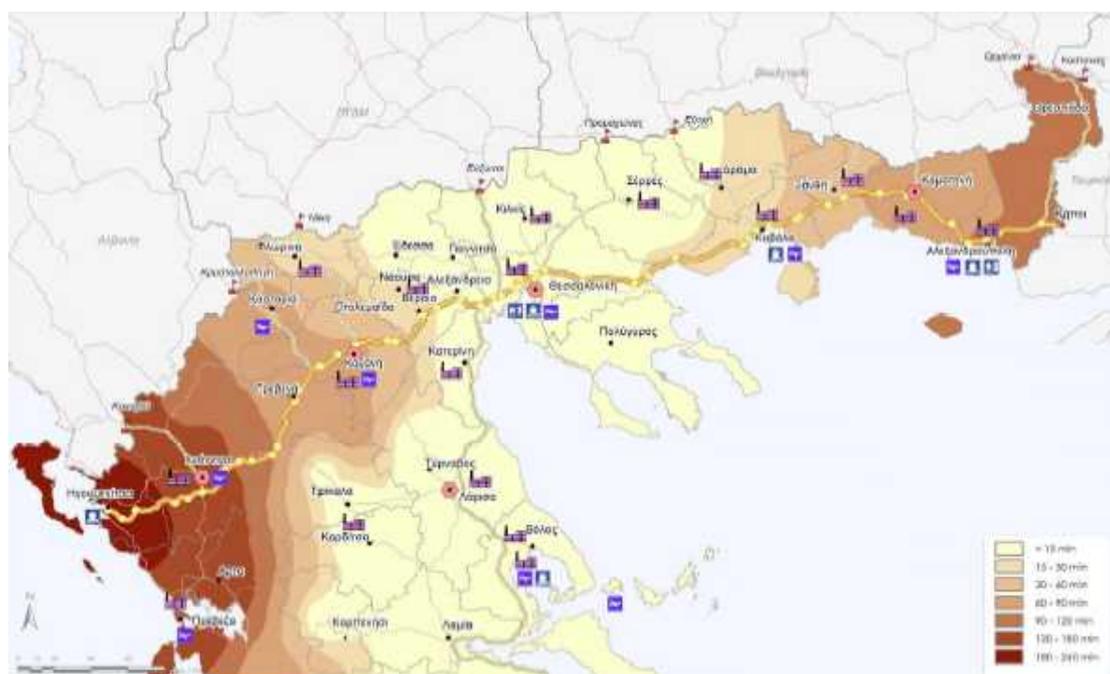


Figure 4: Potential accessibility of urban population ([www.egnatia.gr](http://www.egnatia.gr))

In Figure 5 the decrease in travel time because of the use of Egnatia Highway is presented. The darker areas represent the areas which are benefited the most from Egnatia Highway. It is obvious that travels having one end in the Region of Epirus will have an improved travel time varying from 90 to 240 minutes. The Prefecture of Evros at the Eastern Border of Greece gains significant benefits from the construction of Egnatia Highway, while the Region of Central Macedonia is availed, but not to the extent of Region of Epirus. The explanation to this is the improved existent infrastructure Central Macedonia has compared to the rest Regions.



*Figure 5: Decrease of the travel time with the use of Egnatia Highway*  
([www.egnatia.gr](http://www.egnatia.gr))

Concerning the composition of traffic on Egnatia Highway the data of the observatory shows that 80% - 90% of the traffic is private cars, while the rest 10% - 20% are heavy good vehicles. The composition of the traffic is rather stable throughout the whole length of the Highway. The seasonal fluctuations of traffic volume partly affect also the composition of traffic. During summer months, the average daily traffic is generally higher compared to other time periods. Passenger cars constitute the majority of the extra travels, while the number of heavy good vehicles remains relatively constant throughout the year ([www.egnatia.gr](http://www.egnatia.gr)).

### **3. PAN-EUROPEAN CORRIDOR 8**

#### **3.1 General Information about Pan-european Corridor 8**

The delays in the completion of Egnatia Highway as well as certain interests of countries such as Italy had as a result the promotion of another road axis that would connect the Adriatic Sea with the Black Sea running through the Balkan Peninsula. This road is the Pan-European Corridor 8, which begins from Dures – Albania and ends in Varna/Burgas – Bulgaria via Tirana – Skopje – Sofia.

The ancient version of Pan-European Corridor 8, contrary to that of Egnatia, never constituted a unified road axis. It is speculated that the main reason for this was the difficulty arising in its construction, because of the particularly difficult terrain. It is worth to mention that another important fact was the sparsely populated areas around Pan-European Corridor 8. Consequently the demand for such an important road axis has always been hypotonic. The absence of a significant number of residents, contrary to the adjacent in the Egnatia Highway regions constituted an inhibitory factor for the construction of a street similar to Pan-European Corridor 8 (Karakotsoglou and Koukos, 2001).

The idea of unification of the streets, existing in the area of proximity of the Pan-European Corridor 8 connecting the Dures and the Adriatic Sea with Varna and Black Sea, emerged in early 40s and belonged to Adolf Hitler (Douroudi, 1998). This road would help the German army to move throughout the area rapidly. However this plan never came true (Makris, 1995). Later, during the era of "cold war", Albania and Yugoslavia have been detached from the influence of the Soviet Union, contrary to Bulgaria which remained faithful to the alliance with the Soviet Union. This created frictions between these countries. So the construction of such road axis could not be promoted. Recently with the support of European Union the construction of Pan-European Corridor 8 constitutes a realistic objective (Nikoloulia, 2000).

Pan-European Corridor 8 crosses Albania, FYROM and Bulgaria. A Memorandum of Understanding on the development of Pan-European Corridor 8 has been signed in 2003. Italy will have the chairmanship of the organising committee. The corridor will constitute of a road axis with an approximate length of 960 kilometres and of a railroad with a length of 1270 kilometres. The cost for the construction of the corridor is expected to reach € 1419.5 millions. (Pan-European Corridors of the TINA network (IV, VIII, IX and X), 2005; [www.secretariat-corridor8.it](http://www.secretariat-corridor8.it)). Figure 6 presents the cost of the sections of the corridor in the three countries being crossed by it.

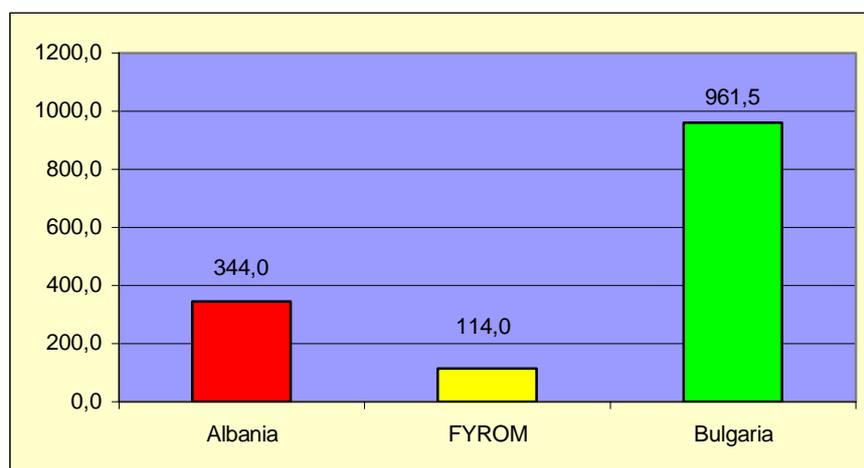


Figure 6: Costs for infrastructure investment along Corridor 8 (in million €)

The satellite picture in Figure 7 shows the proposed route of the Corridor.



Figure 7: Pan-European Corridor 8 ([www.secretariat-corridor8.it](http://www.secretariat-corridor8.it))

### 3.2 Zone of Influence of Pan-European Corridor 8

The construction of Pan-European Corridor 8 will have a positive affect in all three countries the corridor crosses. In the cities a tendency of residential development will appear, while a boost in services, trade, tourism and industry is expected to take place. This will have as a consequence an increase in the GNP. The connection of three major harbours in Adriatic and Black Sea (Durres, Varna and Burgas) will result in the faster transportation of goods. Moreover Pan-European Corridor 8 will connect 4 international airports (Tirana, Skopje, Sofia and Varna) and give access to 6 minor airports giving the opportunity to people for faster travelling in the area (Karakotsoglou and Koukos, 2001; [www.iata.org](http://www.iata.org)). Figure 8 depicts the zone of influence of the Corridor.



Figure 8: Zone of influence of Pan-European Corridor 8 (Pan-European Corridors of the TINA network (IV, VIII, IX and X), 2005)

#### 4. COMPARISON OF THE TWO CORRIDORS

##### 4.1 Connectivity of the two Corridors

The connection of Egnatia Highway with the Pan-European Corridor 8 and subsequently with the countries of the Balkan Peninsula as well as with the countries of Central and Eastern Europe will take place with the construction of 9 vertical to Egnatia corridors (Figure 9). The construction of these corridors is funded to a large extent by the European Union (e.g. INTERREG II). The following Table presents these corridors.

*Table 1: The vertical corridors of Egnatia (www.egnatia.gr)*

Number	Vertical Corridor	Length (in Km)
1	Ioannina – Kakavia (Borders with Albania)	62
2	Siatista – Krystalopigi (Borders with Albania)	72
3	Kozani – Florina – Niki (Borders with FYROM)	94
4	Thessaloniki – Evzoni (Borders with FYROM)	78
5	Thessaloniki – Serres – Promachonas (Borders with Bulgaria)	107
6	Drama – Nevrokopi – Exochi (Borders with Bulgaria)	40
7	Xanthi – Echinós (Borders with Bulgaria)	48
8	Komotini – Nimphea (Borders with Bulgaria)	23
9	Ardanio – Ormenio (Borders with Bulgaria)	134
	In Total	658

It is worth to mention that some of the vertical corridors constitute consecution of Pan-European corridors. Specifically the Pan-European corridors which abut in Egnatia through the vertical corridors are: (www.egnatia.gr)

- Pan – European Corridor IV: Berlin - Dresden - Prague / Nuremberg - Bratislava / Vienna - Budapest - Sofia - Plovdiv - Svilengrad/ Ormenio – Constantinople and its section Sofia -Kulata - Promachonas – Thessaloniki
- Pan – European Corridor IX: Helsinki - St. Petersburg - Pskov/Moscow - Kiev - Chisinau/Odessa - Bucharest - Dimitrovgrad - Haskovo - Makaza - Svilengrad.
- Pan – European Corridor X: Zagreb/Budapest - Belgrade - Nis/Sofia – Skopje – Thessaloniki and its section Titov-Veles - Vitola - Niki - Florina – Kozani

The total length of these nine vertical corridors (658 km) is somewhat equivalent to that of Egnatia Highway. This fact together with their role to connect Egnatia with the Pan-European corridors makes obvious how important their construction is.



Figure 9: The vertical corridors of Egnatia ([www.egnatia.gr](http://www.egnatia.gr))



Figure 10: Egnatia Highway and its connection to the Pan-European Corridors ([www.egnatia.gr](http://www.egnatia.gr))

#### 4.2 Advantages of Egnatia Highway

The advantages of Egnatia Highway are many and too significant not to be taken into account by a researcher that deals with the comparison of the two axes. Synoptically the following are reported:

- The length of Egnatia Highway is considerably less than that of Pan-European Corridor 8. The same stands if Istanbul is considered as the terminal point of both corridors. In that case the distance from Adriatic/Ionian Sea to the Black Sea via Egnatia reaches 950 kilometres, while via Pan-European Corridor 8 an extra of about 200 kilometres must be added (Asimos et.al., 1998).
- The terrain that Egnatia crosses is not so rough compared to that of Pan-European Corridor 8. Specifically, in the case of Egnatia, the terrain in Thrace and Macedonia is flat or slightly mountainous and only in the Region of Epirus the

terrain presents difficulties. On the contrary, in the case of Pan-European Corridor 8, the proposed motorway crosses permanently mountainous and rough terrain from Durres to Sofia. This makes necessary the continuous construction of technical works and other costly manufactures that increase the cost of the project. The time required for travelling between the two ends is more in the Pan-European Corridor 8, not only because of its larger length, but also because of the fact that this Corridor crosses three different countries (Albania, FYROM and Bulgaria) and the inevitable procedures at customs are time-consuming. In Egnatia such problems do not exist, as the corridor is constructed entirely in one country.

- The transport cost is lower in the case of Egnatia. This is concluded by the above mentioned, as distance and time are smaller. Of course if the cost of ferry - transport in the Adriatic Sea is added (which are bigger in the case of Egnatia – from Italy to Igoumenitsa), then the total cost of the transport is likely to be balanced with that of Pan-European Corridor 8. This should be further investigated, but the impression is that the cost of transport will be increased in the case of Pan-European Corridor 8 (especially regarding heavy good vehicles, it is very likely that Egnatia will be preferred, because in this way the distance travelled in land will be decreased and accordingly and the deterioration of vehicles will be smaller).
- The political instability prevailing in an area which Pan-European Corridor 8 crosses (conflicts in the northern FYROM) will discourage the future potential users of the corridor.
- Conditions of development and particularly regional are created, in a state - member of E.U. Specifically for the Regions of Epirus and Thrace which are among the less developed Regions in the EU the presence of an axis of such importance for transportation in European level, will create the suitable conditions of growth (Chrysoulakis and Papadakos, 1994).
- The insufficient connection of the European Union with the Middle East will be revived and it will contribute in the economic growth of both sides. This will be done with the scheduled construction of a motorway which will connect the Egnatia, Igoumenitsa - gate of entry to Egnatia - with the harbour of Volos, where the Ro –Ro connection, to and from Syria is planned to function. In this way EU will have the opportunity to percolate to a bigger extent in a market of its direct interest, as the Middle East is.
- The up to now progress of construction of Egnatia together with the fact that the financing for the completion of the project is secured constitutes a significant advantage. On the other hand the future for Pan-European is ambiguous.

#### 4.3 Advantages of Pan-European Corridor 8

Concerning Pan-European Corridor 8 the following advantages are presented:

- The faster transportation of goods and persons from the Italian harbours to Durres, the gate of entry of Pan-European Corridor 8. This admission is supported by the smaller distance that is needed to be covered coastwise from Bari or Brindisi to Durres than that to Igoumenitsa.
- The presence of this corridor will cause the growth of the countries which the Corridor crosses. More specifically Bulgaria's economic growth is of immediate interest not only for itself himself but the EU as well, since it is a country that in

the future will become its member. That means that the convergence of its financial indicators with the corresponding of the EU is essential.

- The beginning of a more intense collaboration between Albania, FYROM and Bulgaria and the narrower connection between the countries of Pan-European Corridor 8 with the European Union (Jackson, 2001).

#### 4.4 Relation of Egnatia Highway and Pan-European Corridor 8

##### Relation at a Pan-European Level

The completion of Egnatia Highway and the construction Pan-European Corridor 8, will completely change the transportation status between Europe and Asia. Up to the late 80s, the traffic followed the course of the proposed Pan-European Corridor 10, that is to say via Former Yugoslavia and Bulgaria, with conclusion either to Thessaloniki, or to Istanbul. The civilian war in Yugoslavia, with the involving important deterioration of road infrastructures has removed the possibility of use of the particular way. This resulted in the search for alternative roads of access to Asia, which is an imperative need for the European Union. This is why Egnatia Highway is financed to a large extent by E.U.

With the arrival of vehicles at the Italian harbours of Bari or Brindesi (or at a corresponding way in Istamboul) a dilemma will be placed: which one of the two corridors should be used? Firstly, provided that this movement has as destination the region of Caucasus, the Pan-European Corridor 8 is expected to be used since it will offer direct connection with two big harbours (Burgas and Varna) which are placed almost «opposite» to the desired destination. If the destination is Middle East or North-eastern Africa, then Egnatia Highway is likely to be considered as the best choice.

The above mentioned advantages of Egnatia place it to a beneficiary position. Nevertheless, the construction of both axes will lead to an increase of traffic through their regions. Consequently a question of competitiveness between the two corridors is raised, especially in the case that the countries of Pan-European Corridor 8 seek to decrease the disadvantages that now exist (e.g. with the signature of inter-country agreements that will decrease the bureaucratic formulations in the custom).

##### Relation at a Balkan Level

The importance of the construction of Egnatia Highway is obvious for the Balkan Peninsula, particularly if the lack in road infrastructures is considered, together with the importance a road axis of such a size has for regions with developmental delay.

The rise of accessibility in the regions which they two corridors will cross is expected to lead to the tightening of relations between the states of Balkan Peninsula. Specifically the commercial transactions will be greatly profited from such a development, especially if one takes into account the low transactions between adjacent countries, as Albania and FYROM. At the same time, the manufacture of the vertical axes that will link these two corridors might terminate the status of isolation for several regions.

Moreover, the complementarity of the system of the two axes will be obvious intensely in the case where the origin and the destination of inter-Balkan movements are not on

the same axis and do not have direct contact with any of the vertical corridors. This fact "imposes" the use of both axes.

On the other hand, the possibility that the two road axes create competitive relation between similar activities cannot be excluded. Characteristic example is the popular resorts of wintry tourism that exist in Southern Bulgaria and in Northern Greece as well or the coastal resorts that exist in all the countries. Competitiveness possibly exists also in the secondary sector of employment. Moreover the establishment of Greek enterprises in the greater Balkan region will probably play its role regarding the orientation of certain sectors of economies of these countries.

The following Table summarises the estimated relationship of the two Corridors at the two abovementioned levels.

*Table 2: Relationship between Egnatia Highway and Pan-European Corridor 8  
 (Karakotsoglou and Koukos, 2001)*

Reference Level	Relationship	
	Competitive	Complementary
<b>Pan-European Level</b>		
Transportation between Europe and Caucasus		√
Combined Transportation to Middle East	√	
Terrestrial transportation to Middle East	√	
<b>Balkan Level</b>		
Investments		√
Tourism	√√	√

## 5. CONCLUSIONS

Egnatia Highway and Pan-European Corridor 8 will constitute part of the road network of Balkans which will put this sensitive region in orbit of growth and convergence with the rest of Europe. The presence of these two road axes will incur several changes in the Balkan Peninsula, while at the same time the relations of Europe with the region will be considerably altered. However, the relation between the two corridors should be clarified thoroughly, that is if they will function competitively or complementary. This relation will determine to an important extent the efficiency of their exploitation and consequently the profit for the countries from which the two axes go through.

Therefore the relation of competitiveness or complementarity that will characterize the two axes has to be examined at two levels:

- At a Pan-European level, it is necessary to clarify whether the axes will operate competitively or complementary concerning the transportation from Europe to Asia or even Northern Africa and vice versa.
- At a Balkan level, it is essential to report the developmental effects the two corridors will have in the regions from which they will pass. It is also important to

examine whether the two corridors will cause competitive or complementary relations between the regions and the countries they cross.

In general lines Egnatia Highway and Pan-European Corridor 8 are expected to have more complementary than competitive relation. Their competitiveness will be possibly intensified regarding the transport of goods between Europe and Middle East and Asia generally and tourism emanating from countries outside the Balkan Peninsula.

Concerning Egnatia the up to now constructed sections of the Highway have already brought about a change in the habits of travelling. Residential development is taking place in cities and villages adjoining the Highway, while several enterprises seek to locate by the road axis. A larger amount of population has access to improved road infrastructure and to airports as well. The travelling times have been decreased contributing to people's mobility and confuted the isolation of several areas. The oncoming completion of the Project will indisputably magnify the positive impacts which have already taken place. As for Pan-European Corridor 8 the signing of the Memorandum of Understanding is a promising act for the beginning of the construction of the Project which will contribute to the development of the regions crossed by it.

## 6. REFERENCES

- Andrianos, Th. and Ch. Rizos (2002). *The connection of Greece with the Trans-European transportation and communication networks*, Project for the Post Graduate Studies Program "Organisation and Management of Resources and Development Projects", Aristotle University of Thessaloniki.
- Asimos, P., S. Basbas and P. Stathakopoulos (1998). *Roads and Nodes of the Balkans*, Thessaloniki.
- Chrysostomidoy, M. The European Union confirms the worries about Egnatia, article in Macedonia newspaper, Thessaloniki, 6 January 1996.
- Chrysoulakis I. and P. Papadakos. The importance of the completion of Egnatia Highway as a basic Trans-European axis. Its connection with Albania. Proceedings of the congress: Large land transportation axes in Greece. Technical Chamber of Greece, Athens, 27 June 1994.
- Dimitriou, D., A. Kiochou and B. Profyllidis. Alternative transportation means between Greece and Europe. Proceedings of the congress: Large land transportation axes in Greece. Technical Chamber of Greece, Athens, 27 June 1994.
- Douroudi, M. (1998). *Egnatia Highway*. Graduate Thesis, Technical Educational Institute of Serres.
- Eratosthenis Ltd. (1997). *Development of a model for future traffic predictions*. Thessaloniki.
- Jackson, M. Politics and Transition Lags in South – Eastern Europe: Will, Ability or (Im)Possibility?. Proceedings of the congress: Reconstructing and Development in South-Eastern Europe, Volos, 1 – 3 June 2001.
- Karakotsoglou M. and I. Koukos (2001). *Egnatia Road and Pan-European Corridor 8: Complementarity or Competition?*. Diploma Thesis, Faculty of Land Planning and

Regional Development, University of Thessaly, Volos.

Makris, P. The 3rd Reich's plan for the connection of Black Sea and Adriatic Sea. Article in *Kathimerini* newspaper, Athens, 4 June 1995.

Ministry of Environment, Land Planning and Public Projects of Greece (1999a). Land Planning of the Region of Eastern Macedonia and Thrace. Operational Project 'Environment', Athens.

Ministry of Environment, Land Planning and Public Projects of Greece (1999b). Land Planning of the Region of Western Macedonia. Development Trends – Objectives – Land Planning Priorities. Operational Project 'Environment', Athens.

Ministry of Environment, Land Planning and Public Projects of Greece (1999c). Land Planning of the Region of Epirus, 2nd Phase. Operational Project 'Environment', Athens.

Ministry of Environment, Land Planning and Public Projects of Greece (2000). Egnatia Highway: Its geopolitical importance, its contribution to development, the progress, the funds and the time-schedule of the Project. Athens.

Nikoloulia, B. The Pan-European Corridor 8 is promoted despite the lack of funds. Article in *Vima* newspaper, Athens, 31 October 2000.

Pan-European Corridors of the TINA network (IV, VIII, IX and X), (2005). Report of the Observatory of Egnatia Highway.

Region of Central Macedonia (2001). Regional Operational Program of Central Macedonia 2000 – 2006. Thessaloniki.

[www.egnatia.gr](http://www.egnatia.gr)

[www.iata.org](http://www.iata.org)

[www.secretariat-corridor8.it](http://www.secretariat-corridor8.it)