

**PILOT STUDY OF LAND USE AND LAND VALUE CHANGES IN 3 SELECTED URBAN
AREAS IN THE DIRECT IMPACT ZONE OF EGNATIA MOTORWAY**
SUMMARY OF RESULTS



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1. Introduction

The “Pilot Study of land use and land value changes in 3 selected urban areas in the direct impact zone of the Egnatia motorway” was carried out by the Aristotle University of Thessaloniki, and in particular the Cadastral, Photogrammetry, and Mapping Department of the School of Rural and Surveying Engineering of the Polytechnic School, under the scientific supervision of Professors Apostolos Arvanitis and Petros Patias with the collaboration-consultancy services of Mrs Evangelia Balla (Surveyor Engineer, MSc Real Estate & Urban Planning).

The purpose of the research was to investigate at a pilot stage the changes occurring in the direct impact zone of Egnatia motorway as regards the aspects of land uses, establishment of enterprises, and land value. The study was focused on particular urban areas, which are in close proximity to Egnatia Motorway interchanges. In particular, having the year 1998 as a basis and without taking into account the year 2007, the following areas have been examined:

1. Zone 5x5 Km in Ioannina city, with Ioannina I/C at its centre.
2. Zone 5x5 Km in the outer area of the city of Thessaloniki, from Efkarpia I/C (K4) to Ionia I/C (K2).
3. Zone 5x5 Km in Komotini city, with Komotini East I/C as its centre.

Ioannina I/C area	Thessaloniki Efkarpia I/C area	East Komotini I/C area
		



As far as the land use changes are concerned, the following indicators have been incorporated:

- Changing of land use: Changes from rural to non rural use, as a result of pressures anticipated at certain points of the axis (particularly close to settlements, industrial areas etc) and especially the rate of changing of (a) agricultural land (cultivated areas) on urban land (b) natural areas on urban land and (c) natural areas on agricultural land.
- Changing of urban land: Changing of urban land in the direct impact zone of the motorway, on the basis of a three- categories list of urban land: continuous, linear and discontinuous urban land development.
- Changing of the industrial and commercial land uses in the direct impact zone of the motorway: Changing of the industrial and commercial land use on the basis or the following categories of land uses: urban areas, commercial areas, areas of public and private services, areas of public transport plants.
- Installation of enterprises: Number, type and size of new enterprises located in the direct impact zone of the motorway.

As regards the parameter land value changes (real estate) the following indicator have been incorporated:

- **Changing of land value:** Differentiation over time in the prices of grounds and fields, as they result from the collection of guiding and market values' data.

The clarification of the aforementioned changes at a pilot level has been necessary, as in this way a scientifically accepted methodology and technique for the “Study of land use and land value changes in the direct impact zone of Egnatia Motorway” have been determined (incorporated in the Observatory Studies Programme and currently under the stage of notice, information may be retrieved from EOAE website: <http://www.egnatia.eu/page/default.asp?la=1&id=68>), as well as a system of monitoring of the aforementioned indicators.

2. Results of indicators

A brief presentation of the basic results of this pilot design follows further below. It should be noted that **detailed tables and maps, incorporated into the Information System of the Observatory's spatial data are given for each indicator.**

2.1 Indicator: Changing of land use

In the zone of Thessaloniki, an important increase of the urban land has been ascertained, meaning the ground surface where constructions have developed. Important parts of rural and natural land have been transformed into urban land. The urban land in this zone has been increased by 22%, while the rural land has been reduced by 30%. In the areas of Ioannina and Komotini, the urban land has been increased by 12% and 8% respectively.

2.2 Indicator: Changing or urban land

In relation to the changing of building activities, meaning the extent of urban land located within the limits of settlements in the research area, the major change has been recorded in Komotini zone (19.5%) and in Thessaloniki zone (18.2%). Ioannina zone presents the highest increase (30.27%) of linear construction, meaning the extent of urban land located within zones of a width of 500m along the main road axes of the area that has been studied. An important (23%) increase of the linear construction has been observed in the zone along Egnatia Motorway in the area of Thessaloniki, while in the area of Komotini the increase has been extremely low (3%). The highest increase (by 160%) of the discontinuous construction has been observed in Komotini, meaning the extent of urban land located within the area

outside the areas of continuous and linear urban construction, as opposed to 59% in the area of Thessaloniki and 11% in the area of Ioannina.

2.3 Indicator: Changing of industrial and commercial land

The most important increase of land occupied for use in industrial and commercial activities, plants of transport and other services, has been generally observed in the area of Ioannina. In detail:

- As regards the industrial land, in the area of Ioannina there has been an increase by 31%, while in the area of Thessaloniki there has been an increase by 5.4%. In the area of Komotini a reduction of 14% has been observed.
- In the area of Ioannina we have observed the highest increase of land use regarding commerce (50.3%), while a lower increase has been observed in the areas of Komotini and Thessaloniki (18,6% 13.9% respectively).
- As regards the land use in relation to plants relative to transport services, the area of Ioannina presents an increase of 100%, the area of Thessaloniki presents a significant though much lower increase (12.7%), while the area of Komotini presents a reduction by 14.5%.

2.4 Indicators: Changing of land value of roadside plots

The results of the research prove that this indicator should not be calculated on the basis of the ratable value, while there is a big difference in the way the market and ratable values have progressively changed for all three interchanges during the period examined (1998 – 2007). For this reason, we have been in favour of calculating the indicator on the basis of non-deflated market values.

In the area of Thessaloniki, the highest changing in the non de-inflated market values has been observed along Egnatia Motorway, in relation to other nearby axes. In particular, as regards the two buildings located close to the interchange facing Egnatia Motorway, the changing of land use has been calculated to approximately 600%, while after the airport road in the direction of Ionia K2 I/C, this changing is calculated to approximately 700%. As regards the remaining linear zones (Lagathas, Oreokastro- Thessaloniki, Thermaikos), the changing range from 200% to 300% approximately, while in surface zones on both sides of the axis of Egnatia Motorway, they range from 200% to 270% approximately.

In the area of Ioannina, the changing of surface zones of market values located in a distance reaching 1,000m on both sides of the axis and Egnatia Motorway is approximately 300% (ranging from 292% to 325%). This changing in parts of the linear zone of the National Road ranges from 314% to 533%, where the most important change regards the section prior to the intersection to the direction of Pedini and Bafra until Egnatia Motorway interchange, since for the market values of the year 2007, the difference in the values on the National Road is observed at the borders of the junction and not of the aforementioned intersection, which had been the case prior to the construction of the interchange.

The changing in the market values of Komotini range at approximately the same levels meaning from 500% to 600% on the National Road Komotini- Alexandroupoli and around Egnatia Motorway interchange. On the contrary the prices of land properties of Kosmio south of Egnatia Motorway have been slightly changed reaching only 20%.

2.5 Indicator: Installation of enterprises

The area of Ioannina presents the highest increase (26%) in the number of new businesses, meaning businesses installed in the research areas after 1998, which have been located mainly along the vertical road of the national road which intersects Egnatia Motorway. The area of Komotini follows with an increase of 14% followed by the area of Thessaloniki with an increase of 11%. This regards mostly commercial businesses (retail and bulk sale), while the majority of persons occupied in new businesses concerns mainly the retail and bulk sales.

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