

Land Use Policies and Their Impacts on Tourism Development. The Prefecture of Achaia in Greece as a Case Study

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Abstract

Recognising changes in land use over time, particularly in light of tourism and urban development, plays an important role in exploring the evolution of the landscape. Human activity in various land uses cannot be observed directly; only the remaining evidence, such as human interventions and construction or the appearance of the landscape itself, can. The aim of this analysis, through the case study of Achaia Prefecture, is to highlight all of the economic effects that these changes in land use have on income, employment, property values and other matters, as well as on the main microeconomic aggregates of the regions.

Keywords: land-use changes, tourism development, regional economic development, spatial planning, Achaia Prefecture

1. Literature Review

According to an international literature review, the emerging growth strategy is directly linked to a model of spatial development adopted at a regional-local level. Quite often, land use is determined through a complex of economic development factors. All of these economic factors, though each on a differing scale, are interlinked and as a whole exert pressure on the natural and man-made environment, frequently resulting in conflicts between stakeholders over matters regarding land use, the most marked factor being competitiveness between the primary sector and tourism.

In addition, in studying the evolution of landscapes, great importance is placed to the investigation of causes and factors that impact on and instigate the evolutionary process. According to the literature, landscapes change under the influence of numerous factors (biophysical, socioeconomic, demographic, management, geographic, among others) (Poudevigne et al, 1997; Skelton, 1998; Gunilla et al, 2000; Verburg et al, 1999; Englesman et al, 2002; Lambin, 2004; Briassoulis, 2000; Soeboer, 2001; Willemen et al, 2002; Vos, 1993).

Furthermore, Farina (1998) finds that in man-made landscapes, the parameters that influence terrain changes are numerous and mostly related to changes in socioeconomic conditions. Human influence on the landscapes of Mediterranean countries is marked, which is why these landscapes are particularly vulnerable to socioeconomic changes. Supplementing Bankov (1998) says that the present situation in all of the Mediterranean landscapes is the result of a change in land use over time and in their management regimes or policies. Skelton, 1998; Di Pasquale et al, 2004a; Bonet et al, 2004; Skelton (1998) states that landscapes today are the product of the socioeconomic and political systems in which they are located and that they are rapidly changing under the influence of factors such as rural population depletion, the expansion of urban areas and the use of modern technologies. These changes create landscapes more homogeneous and uniform (Gunilla et al. 2000).

According to Verburg and Veldkamp (1999), Englesman et al. (2002) and Lambin (2004), the comparable variables affecting landscape change are called driving factors of land use change. Briassoulis (2000) reports that there are two main categories of land use / land cover factors and, therefore, landscapes, depending on their origin. These categories include: (a) bio-physical drivers, such as climate, topography, physiography, geomorphological processes, vegetation evolution, soil and natural resource availability, and (b) socio-economic drivers.

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Socioeconomic drivers, such as demographic, social, economic factors, population technological and industrial change, trade policies and rules, tourism development. Soeboer (2001) states that the factors that shape and predict the evolution of landscapes must include three main dimensions, socioeconomic, biophysical, and soil management. Lambin (2004), different from previous researchers, states that land use factors must be divided into 4 different categories: (a) factors affecting land use demand in landscapes, (b) factors controlling land use intensity. (c) factors related to access to or control of natural resources; and (d) factors that create incentives that motivate land managers to exploit their landscapes.

The importance of investigating the causes or factors of landscape development is particularly important for Mediterranean landscapes. Vos (1993), commenting on the socio-economic development in the Mediterranean countries in the second half of the 20th century, states that the causes that trigger changes in Mediterranean landscapes have to do with either the intensification of production processes (intensification of agriculture and forestry, increase in livestock production), tourism development, etc. or the reverse phenomenon of land abandonment (abandonment of traditional forms of intensive farming, agro-forestry systems, reduction of mountain livestock, etc.).

Skelton (1998) also states that Mediterranean landscapes are rapidly deteriorating, with the main reason for abandoning their traditional management practices, which is directly related to the phenomena of economic and social diversification. The above finding agrees with Di Pasquale et al. (2004a), who report that abandoning human activities in the Mediterranean landscapes will radically change the form they are today, and Bonet et al. (2004) report that socio-economic, demographic and climate factors play a key role in shaping Mediterranean landscapes. Finally, Ispikoudis and Chouvardas (2005) report that Mediterranean landscapes under the influence of demographic, social, physical, and economic factors are subject to rapid changes that are often irreversible, while finding that management practices and particularly livelihoods in shaping the landscape characteristics of the Mediterranean countries.

The existing land use situation in Greece for the most part remains chaotic and disorderly, despite measures for systematic forest management. It may well be the main cause of misaligned economic, demographic and spatial planning organisation in the country and of the waste of national resources. It is a fact that nowadays, land use by humans, particularly in the outlying regions, has clearly become more complex in comparison to the past. These days, the same section of land is consciously required to fulfil and provide a variety of functions which are sometimes dissimilar or seemingly disparate. (Rindfuss et al, 2004). Such multi-functioning in land use makes it more difficult to effectively and substantively study the phenomenon of land use transformation.

This type of complexity, combined with the general inability of political leaders and very often the opportunistic policy choices regarding land use (Bastian, O.2001; Claval, P.,2005), result in the failure to fulfil the goals set for sustainable spatial development on a programming level. However, the rapidly occurring economic and social changes on a European and global level lead to processes of intensive transformation of mainly coastal areas, including through reorganisation of productive activities and thus of land use, thus directly affecting the viability of regional socioeconomic units.

At the same time, pressure for land-use changes in Greece has markedly increased during recent decades, mainly in light of tourism development. High growth rates and a lack of a sustainable development planning, in combination with the fragmented spatial and urban planning legislative framework, have led to a negative outcome. In quite a few areas, the greatest pressure is concentrated on forests and forested areas in order to secure space for urbanisation, tourism investments or agricultural or animal husbandry activities, with significant effects on the natural environment as well as on the economic life of many regions, such as in the case study examined in this analysis.

2. Methodology

2.1 Secondary research elements

The Prefecture of Achaia in Greece possesses highly geomorphologic features with great diversity that enable it to develop in almost all sectors of the economy. Its level of growth would certainly have been higher, and possibly above the country's average, had it not been for the troubled local economy of the 1990s where the local productive system was in a difficult position when it suffered severe losses. in production units and in jobs. In the same period, however, the crisis of de-industrialization spread throughout the country and particularly affected traditional regional industrial systems. However, one would say that the region generally has a growth potential that ranks it in the top fifteen prefectures of the country.

The primary sector in the Prefecture of Achaia, which is based on three main axes, agriculture, livestock and fisheries, is extremely dynamic and growing and is of particular importance to the region's economy, but faces critical problems. The manufacturing sector in the prefecture of Achaia in recent years has begun to overcome the crisis it faced in the 1990s, which led to the complete de-industrialization of the county with the closure of significant industrial units and small and medium-sized enterprises and ultimately to a high unemployment rate. Tourism, commerce, transport and education are the main services sectors of Achaia's tertiary sector and have a high share of local GDP. The existence and operation of higher education institutions in Rio and Patras (Hellenic Open University) as well as the Technological Educational Institute of Patras, attach special importance to the cultural and economic life of the region.

In particular, in terms of tourism development, the Prefecture of Achaia, while possessing natural and cultural resources and enjoying comparative advantages in terms of climate and geographical location, has not so far acquired a significant specialization in tourism and cultural activities and has not been able to . The participation of the Prefecture of Achaia in the formation of GDP in the tertiary sector at country level increased, but this increase was due to the increased contribution of the transport and communications sectors, public administration and education and the health sector.

The reasons for the relatively limited tourism development of the Prefecture of Achaia are mainly related to the following factors:

- The absence of systematic rescue and maintenance planning both of its natural advantages and of its cultural values. Characteristic is the incomplete and unreasonable exploitation of the thermal springs, the endless coasts, the rich archaeological finds and sites, the areas of particular natural beauty and ecological interest.
- The reckless pollution of the marine and land environment by both malevolent and rough drafts, as well as out of control.
- The low rates of promotion and modernization of key projects infrastructure, namely ports, marinas, airports, roads and rail network, green and recreational areas, parking cars, sidewalks, sewer networks and biologicals cleaning and water supply networks.
- Poor tourist awareness - tourism education but also low relative investment interest in the creation of private tourist facilities and businesses.

In addition, with regard to tourism, the incomplete exploitation and promotion of the comparative advantages of the natural and cultural environment to date has largely led to the representation of tourism for the most part in hotels and restaurants which are not considered to be specialized.

2.2 Primary research

The goal of this study is to explore the economic effects of changes in land use in view of pressure from tourism development, as well as other human activities, so as to formulate succinct proposals for balanced economic development for the Prefecture of Achaia in Greece.

The major research questions being examined, on the basis of the goals we have set, relate to three main axes:

- a) What is the degree of conflict among the productive sectors of Achaia Prefecture through the changes in land use?
- b) What are the economic effects and to what degree do these influence the future of the inhabitants and human activities in the area?
- c) What economic policies could be developed toward achieving balanced development of the area?

As independent variables for hypothesis testing in this study, we used the following characteristics of stakeholders in the production process and in the changes in use of land belonging to stakeholders: 1. the **type of area** (urban, mountainous, coastal); 2. the **professional capacity**, specifically a) for inhabitants, the type of production sector to which they belong (primary, secondary, tertiary, b) for the remaining stakeholders, the type of official body (private, public); and 3. the **educational level** (higher education, non-higher education). Consequently, the null (H₀) and alternative (H₁) respective hypotheses formulated in the study are as follows:

H₀: there is no difference in perception of the economic effects of land-use changes on the basis of the type of area, professional capacity and educational level of stakeholders; or

H1: there is a difference in perception of the economic effects of land-use changes on the basis of the type of area, professional capacity and educational level of stakeholders.

Using the appropriate statistical techniques to test the specific hypotheses, we must either show that the null hypotheses are false and therefore the alternative acceptable.

2.2.1 Sampling Plan and Research Subjects:

The study population was defined as the total of inhabitants and organisations-bodies in Achaia Prefecture who are involved in any way in the realignment of land and the production process.

The final sample included 200 inhabitants and 20 official bodies from the study area (Table 1). The inhabitants and bodies for each study area were selected through simple random sampling.

Specifically, the sample of inhabitants included residents-bodies from the three different types of geographic units (mountainous, urban and coastal) from the study area, while the sample of official bodies included both public and private.

Table 1: Prefecture of Achaia: Sample Survey, Leakage and Response Rate

Population Categories of the Research	Sample	Leakage		Response Rate	
	N	N	%	N	%
Residents (Mountainous, Urban & Coastal Areas of Regional Unit)	200	45	22,5	155	77,5
Bodies (Public&Private)	20	4	20	16	80

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2.2.2 Research tool

Questionnaires were chosen as the tool for collecting research data. Specifically, for the needs of the study, two questionnaires were formulated for the two different subject categories (inhabitants, bodies), while in both cases, closed-ended questions were used (dichotomous questions, simple choice scales, multiple-choice scales, Likert scales):

As regards the main questionnaire: a) in addition to the general information asked of the respondent at the start, the inhabitants questionnaire consists of a total of 15 closed-ended questions, 1 of which includes a sub-question, and is divided into 5 axes-sections that examine, in order: the main demographic characteristics of the respondents; the intensity and type of employment; the factors affecting employment; the factors affecting income; and the factors affecting property values; b) in addition to the general information at the start, the official bodies questionnaire consists of a total of 7 closed-ended questions, 2 of which have one sub-question, and is also divided along 5 axes-sections which examine, in order: the main demographic characteristics of the respondents; the factors affecting employment; the factors affecting income; the factors affecting property values; and the potential conflicts-interaction among production sectors on issues of land use and development.

2.2.3 Data Analysis – Statistical Criteria

The statistical processing of the data in this study, which was collected from the separate preferred measurement instruments with the cooperation of the subjects, was conducted using the Statistical Package for the Social Sciences (SPSS).

For both the description of these variables and for the investigation and verification of any potential relationships between them, we used quantitative measurements as well as a series of statistical analyses.

The statistical analyses and methods used to test the hypotheses were relative to the type of data collected. Thus, the following were used:

For the section of the survey where descriptive statistics were used, we took into account: Frequency Distribution, Average, Standard Deviation and Standard Error of the data.

At the same time, the cross tabulation of answers from the sample are presented, cross-referenced with the variables we set as independent (type of area, professional capacity, educational level).

In addition, the following were used in each case:

- Calculation of correlation coefficient between variables (Pearson's r);

- Comparisons of differential groups with one independent variable and one or more dependent variables (one-way analysis of variance (one-way ANOVA), t-test);
- Comparisons of differential groups with one independent variable and more than one dependent variable (one-way multivariate ANOVA);
- Analysis of multiple regression in statistical prediction of trends in the subjects' responses by the individual factors in the survey and strategies to address the problem.

3. Results and Discussion

A review of the averages using the F criterion for independent samples, based on all three independent variables, showed systematic differences in opinions among the individual groups of subjects in the survey in the area under study (Table 2).

Table 2. Testing averages with criterion F on indicative dependent variables

		Sum of Squares	df	Mean Square	F	Sig.
Q3b_d	Between Groups	37.508	2	18.754	13.071	.000
	Within Groups	662.870	462	1.435		
	Total	700.378	464			
Q4b_d	Between Groups	22.568	2	11.284	7.456	.001
	Within Groups	679.503	449	1.513		
	Total	702.071	451			
Q5a_2	Between Groups	121.878	2	60.939	69.058	.000
	Within Groups	365.330	414	.882		
	Total	487.209	416			
Q5a_3	Between Groups	111.665	2	55.833	42.914	.000
	Within Groups	450.163	346	1.301		
	Total	561.828	348			

Based on the reliability analysis of the responses from the individual subject groups in the survey, in relation to the independent variables we set to test the hypotheses, a particularly high significance emerged, a fact which allows us to extrapolate the data to a more generalised population and to reliably draw conclusions from the entire study.

As such, inhabitants and official bodies in the Prefecture of Achaia agree that:

- There was a significant reduction in terms of employment in the primary sector with a parallel increase in the other two sectors, with particular emphasis on the tertiary sector;
- Changes in land use and specifically the shift in economic activity appear to have had a particularly positive effect on employment, income and property values in the area, with the exception of the latter in the category of agricultural/animal husbandry properties;
- Among other factors, the high level of bank financing of small, medium and large undertakings in Greece, and to a lesser degree, Greek and European subsidy policy, played a particularly positive role in the economic aggregates of the area over the last 15 years;
- In contrast, the often inadequate regional government policy on issues of development and spatial planning appears not to have brought the hoped-for results for the area's economic aggregates, with the exception of the particularly beneficial effects it had through the development of services in the urban areas of the prefecture;
- There is a great difference of opinion among stakeholders as regards land use and economic activities and development, while at the same time there is a small degree of synergy among stakeholders, which has a particularly unfavourable effect on the area's economic life.

Significant statistical differences are noted among the sub-groups of the subjects in the Regional Unit of Achaia study, based on the independent variables we set to test the hypotheses, as arising from the cross-referencing of two or more statistical criteria (X^2 - ANOVA - T test), mainly in the following cases:

- The positive effect of land-use changes and the shift in economic activity in Achaia Prefecture from primary to secondary and tertiary, as an opinion is mostly supported by the inhabitants of the urban and coastal-island areas

of the prefecture, as well as by those employed in the tertiary and partly in the secondary sectors. Only official bodies from urban areas shared a similar belief.

- As for the effect of Greek and European subsidy policy on employment and income in the area, the inhabitants of the coastal-island areas appear to have benefited the most;
- As for regional government policy, employment and income mainly in urban areas appear most enhanced;
- As for property values, changes in land use appear to have benefited commercial values of all categories of real property, except agricultural and animal husbandry holdings, which is supported as a belief by inhabitants of mostly mountainous areas and those employed in the primary sector, as would be expected.

In this manner, based on the hypotheses of this study and the data analysis, we are forced to reject the null hypotheses (H₀) and accept the alternative hypotheses (H₁), according to which there is indeed a significant difference in perception among the subgroups of the inhabitants and official bodies of Achaia Prefecture in relation to the economic effects of land-use changes, as indicated by all three independent variables we set to test the hypotheses.

3.1 Proposals - Policies

The continually receding primary sector and the very small or non-existent participation of the secondary sector in Achaia Prefecture's economy highlight the necessity to develop regional support policies for the primary and secondary sectors with an emphasis on processing within the latter. The marked difference of opinion among stakeholders on issues of land use/policy and economic development highlight the need to develop spatial planning policies as a result of powerful synergies among productive bodies and particularly between the public and private sectors. In particular, it is recommended that a model be developed to institutionally distribute responsibility between the public and private sectors with properly defined goals and realistic expectations so as to form a functional and effective framework of cooperation.

In this manner, we believe there will be a balanced structure with clearly defined roles and responsibilities, with a flexible approach on the part of all participants, combined with the ability to understand the needs of the other participants. Spatial planning, in relation to other sectors, and the policy in practice are in a relatively diminished position in Greece. The most important undesirable changes in the land use grid are associated with pressure exerted by distinct but cumulative activity by a large segment of the population, particularly by tourism development and other human activities.

For this reason, it is difficult to address the above-mentioned phenomena; there is a need for timely diagnosis, research and understanding of the underlying factors and incentives guiding them, planning of appropriate policies and consistency in applying them. Moreover, the degree to which consent can be achieved at a social level is a significant parameter in successfully responding to the problem of sustainable spatial management and that of addressing regional inequalities.

4. References

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