Social and Public Responsibility and Illegal Urban Land Uses in Greece: An Empirical Investigation

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Abstract
Land use changes in Greece have been the outcome of combining forces with mostly economic, socio-cultural and institutional origin. During the last 50 years, growing demand for urban (residential and industrial) space has resulted in unplanned residential development and illegal dwelling construction to the expense of agricultural and forest land uses. This situation - idiosyncratic to Greece - tents to become an acute problem with serious economic, social and environmental implications. Impacts are great and pressuring ranging from aesthetic deteriorations of landscape qualities, biotic diversity threats, desertification and forest and open land "squeeze" to increased vulnerability to human settlements, local water contamination, as well as to cultural degradation issues. In this article, the above problem is approached in an integrated manner although some emphasis is placed upon its spatial dimension. In particular, by using real data a comparative analysis regarding Greek prefectures is curried out, the most problematic areas are identified and categorized and the major driving forces that fuel the phenomenon of illegal development are described. The article concludes by commenting on likely policy action to be taken in order to contain or eliminate the problem.

Keywords: public and private responsibility, urban development, illegal dwelling, land use change.

1. Introduction

During the last few decades, a rapid and unprecedented transformation of the landscape is under way in almost all over the world. Urban development is consuming land and natural resources at an increasing rate raising serious concerns about the sustainability of current economic growth patterns, the quality of urban space and the state of natural environment . Agricultural land, forests, natural areas and open space are given to urban development and poorly planned (if at all) urban patterns appear threatening the quality of life in numerous ways. Ignoring past and current urban sprawl trends is not sensible, especially when those trends affect the foundations of human social and economic systems. Greece has experienced urban sprawling processes for some decades so far .

Land use changes in Greece have been the outcome of combining forces with mostly economic, socio-cultural and institutional origin . During the last 50 years, growing demand for urban (mostly residential and

industrial) space has resulted in unplanned residential development and illegal dwelling construction to the expense of agricultural and forest land uses. This situation, tents to become an acute problem with serious economic, social and environmental implications . Impacts are great and pressuring ranging from landscape aesthetic deterioration, biotic diversity threats, desertification and forest and open land "squeeze" to increased vulnerability to human settlements, local water contamination, as well as to cultural degradation issues.

Efforts to contain sprawl and revitalize older neighbourhoods through smarter growth practices, legislative initiatives and land use planning schemes have been contentious especially during the last two decades. Around the country, from the large metropolitan concentrations of Athens and Thessaloniki to the smaller rural municipalities, numerous land use planning initiatives have attempted to lower the pace of urban sprawl and integrated unlicensed residential constructions to the existing urban system. However, the results of such a policy do not seam to be encouraging. The illegal housing phenomenon proceeds at a high pace, so that about 3.000 unlicensed buildings each year (almost the size of a small town) are legalised and integrated into the existing urban system . Moreover, the annual number of illegal buildings that do not get into the legalising process is believed to be much higher .

Various studies have focused on proposing driving factors and theoretical schemata that underpin and explain the dynamics of illegal housing phenomenon . However, they are usually descriptive in nature, subjective in their reasoning and most of all they can not stand for complex systems analysis. This article discusses the issue of illegal housing in a quantitative manner employing for this reason correlation analysis. By doing this, we introduce some mathematical precision and objectivity into the analysis of the results and we formulate more coherent conclusions. The concern is on urban patterns that have predominated since the end of World War II. This is because, of a total of about 4.000.000 building in Greece only 600.000 have been constructed before the World War II . The great majority of buildings are post-war structures mainly constructed during the 60s, 70s and 80s.

The remainder of the article is organised as follows: Section 2 provides a mental framework for the empirical analysis by dealing with the urban land use theoretical schemata that describe the process of urbanization and that - at least to some extent - provide guidance and explanations as to why illegal housing practices occur. Section 3 discusses the urban land use planning system in Greece as well as the processes which have created the present building stock. Section 4 discusses the proximate and underlying causes of illegal housing creation while section 5 is devoted to the spatial analysis of illegal housing and legalisation processes. Finally, section 6 formulates the final conclusions drawn from the precedent investigation.

2. Theoretical explanations of informal housing

The morphology and evolution of land use patterns have been extensively studied and theorised by scientists of different disciplines . Thus, a plethora of theories have been developed so far in order to provide possible explanations regarding land allocation

processes. The relevant international literature reports two major categories of theories relevant to the illegal housing phenomenon. The main criterion of classification is the level of economic development of each country. Thus, in the first category belong the theories which apply to the developed countries and cities. This category comprises three theoretical perspectives:

- The Chicago School perspective which was formulated in the late '20s mainly by Burgess. He considered illegal housing as a result of income level differences of various ethnic groups who competed for urban land.
- The neoclassical economics theoretical schema by Alonso. He suggested that illegal housing was a reaction to the housing needs of the people who cannot afford to pay for a formal housing unit.
- The factorial ecology perspective which suggests that illegal housing is the product of professional and social segregation in urban areas.

The second category comprises the theories which can better explain illegal housing patterns in the developing countries. There are four theoretical schemata in this category:

- The first theoretical perspective suggests that informal housing patterns arise as a result of structural inefficiency found in urban authorities' organisation, poor land management practices and inadequate urban planning schemes.
- The second theoretical view suggests that informal housing patterns are caused due to political, historical factors.
- The third theoretical schema, which applies to countries with economies in transition, proposes that during the process of transformations in the economy deep socio-economic inequalities arise. As regards the housing sector, these inequalities result in the creation of illegal settlements.
- The final theoretical perspective suggests that the illegal housing phenomenon is a result of the disequilibrium between the demand and supply of urban commodities.

In the section that follows, it is given a selective representation of such theoretical schemata in light of the land allocation mechanism that each theory puts forward as well as the ability that each theoretical schema holds in explaining illegal housing. The purpose of doing this is to connect the underlying factors of illegal housing in Greece used in the analysis, with broader issues regarding economic functioning as well as social behaviour.

Theory of the spatial divisions of labour

In the debate about regional inequality Massey proposed the «theory of the spatial divisions of labour». This theory focuses on the restructuring effects of labour markets and on the spatial division of labour, stressing the re-organization of production . According to this theory, development accumulates in certain regions as new successive investments are applied and therefore, the needs for urban space scale. The concentration of numerous workers in certain places that they do not have the financial ability of acquiring a legal house induces processes of informal dwelling construction.

Theory of mass consumption

The theory of mass consumption was employed by Sack in the '90 in order to explain contemporary relationships between people and the

natural environment. This theory deals with the forms and ethics of social behaviour towards natural environment and states that present patterns of consumption adopted by humans have resulted in generating a chasm between people and the environment . Increasing patterns of consumption accelerate the rate of use of natural resources. Therefore, profound land use modifications appear. The high prosperity levels of certain social groups coupled with an insensitive attitude towards the environment (the chasm in human – nature relation) generate illegal housing patterns in the form of secondary or holiday housing. These forms of unlicensed buildings are usually of high quality as opposed to slums in less developed countries and they are frequently materialised into environmentally sensitive areas (coastal zones, forest edges etc).

Urban land use theory

In 1960, coherent urban patterns led William Alonso to the formation of «urban land use theory». In his intra-area land use distribution approach, the leading mechanisms behind arising urban spatial patterns around a city's Central Business District are households' attempts - subject to a certain budget - to maintain a given satisfaction level . Thus, the spatial distribution of land uses depends on households' financial budget and preferences, land parcels distances from the city centre and the location of employment areas. In this respect, land use allocation is close related to the individuals' utility maximization. However, as cities develop, a possible increase in rents may affect the working class. As a result, dwellers who cannot afford to pay for a formal dwelling turn to illegal building construction in the struggle to serve some of their basic needs.

Zelinsky's rural - urban migration theory

Zelinsky suggested the existence of certain stages in migration according to the state that a society is. One of these stages involves the emergence of considerable rural-urban migration flows. This stage mainly corresponds to the societies experiencing developing processes. During this stage, the migration flows increase considerably the demand for urban space, resulting sometimes to the rapid creation of illegal settlements. This may had been the case in Greece in the period shortly after the World War II. This period was characterised by massive rural-urban migration movements. Following the theory suggests that as the countries get into the developed stage, rural - urban migration may continue but at a reduced rate. In advanced societies people's mobility continuous but in the form of inter- or intra- urban migration. Technological breakthroughs are expected to reduce this kind of migration. In the developed stage the mass consumption theory seems to fit better in explaining illegal housing construction in the case of Greece.

Effective Land Management Perspective

This theoretical perspective stresses the importance of designing land management policies that result in supplying adequate and affordable buildable space. The planning policies do not start or end with the production of land use allocation maps and drawings. Instead, the theoretical approach suggests that amongst the crucial issues to be considered are: the administrative mechanism in charge of the proposed planning policy, the issue of political stability, corruption matters and quality planning . Lack of taking into account these issues may lead to illegal housing construction.

The underlying causes of illegal housing phenomenon in Greece have change several times over the year. To fully explain the emergence and the expansion of illegal housing during the last 50 years one must take into account the different historical, political, social and economic contexts. A plethora of explanations and theoretical schemata may be appropriate in different spatiotemporal frames. However, past rural-urban migration patterns, poor urban land planning schemes and regulations, bureaucracy and corruption as well as the ethics of mass consumption era, the social division and the division of labour all seem to have contributed to the illegal housing phenomenon.

3. Urban land use planning in Greece

Urban sprawl is usually assumed to refer to the unplanned growth of cities, particularly around their edges or peripheries. This ceaseless conversion of rural to urban and suburban land in light of insufficient land use planning often results in significant negative externalities . Thus, the emerging land use patterns are frequently characterised by the lack of public facilities, poor accessibility to existing facilities in the inner city and low build and environmental quality.

In Greece, the central body for state administration regarding urban policy and planning is the Ministry for the Environment, Physical Planning and Public Works, (YPEHODE). It deals with strategy and policy design, policy implementation issues as well as the necessary amendments to the existing urban planning legal framework. Strategies designed within YPEHODE are been foreword to the Greek Parliament for approval. Sequentially, the strategies are pursued through implementation mechanisms at the prefectural and municipal levels in about 156 Urban Planning Offices which cover the whole country.

Within YPEHODE, the Directorates of Regional Planning and Environmental Planning are responsible for issues such as planning and management of land resources, spatial structure planning and sustainable spatial development of the country. Special Organisations for Planning and Environmental Protection have been established for the major Metropolitan Areas of the country namely Athens and Thessaloniki. The Ministry, as the main body for handling urban planning policy issues, has launched a broad range of projects over the years to deal with the problem of illegal housing.

In Greece, the turning point for urban planning legislation and illegal settlement construction can be traced back to 1983. In 1983, a significant piece of legislation was introduced for dealing with wider urban land planning and management issues as well as the phenomenon of illegal housing. The law made provision for integrating illegal settlements into the existing urban system and for lowering the pace of urban sprawl through the introduction of urban land use zones. As a result, a great effort was made to survey and organise unregistered urban spatial patterns that had emerged since the post-war period (especially after 1955, a point that the Greek state introduced a certain procedure for constructing a buildings through the requirement for building license). By 1995, most of the «first generation of illegal settlements» had been legalised. However, it had already started the process of creating the «second illegal settlement generation».

In 1997 and 1999 two important legislative initiatives were introduced with the purpose of improving, rationalising and broadening the scope of urban planning system. These were (a) the Sustainable Urban Development Law 2508/97 which provided the necessary guidelines for urban renewal and smart development programmes, housing development as well as secondary and holiday housing planning and (b) the «Spatial Planning and Sustainable Development» Law 2742/1999 which set the framework of land use planning on a national and regional scale. Through the Law 2742, planning is dealt with on (a) a spatial basis (National and Regional Frameworks for Spatial Planning and Sustainable Development) (b) on a sectoral basis (Frameworks for Spatial Planning and Sustainable Development of the Aquaculture Sector, or the Renewable Energy Sector) and (c) on a land category basis (Framework for Spatial Planning and Sustainable Development of the coastal zone and the mountainous areas).

However, in spite of the aforementioned legislative reforms the informal housing phenomenon continuous to grow. Combining factors and forces such as low political commitment and will, corruption, inadequate administrative structures and failures in the functioning of real estate market seem to have played a decisive role. Blanas (2003) discusses the institutional processes related to loss in equilibrium or asymmetries of information across the politically controlled information domains that pose major obstacles in the improvement of quality processes in the public sector.

4. Proximate and underlying causes of informal housing

To describe accurately land use changes and understand well enough the underlying causes of the processes as well as to predict land patterns' composition into the future assisting policy makers in the design of potential interventions, is a complex task. Sustainable land allocation policies seem to require the integration into decision making of all critical aspect involved in the land use change issue . A wide variety of approaches and techniques have emerged for this reason, namely to rationalise decision-making about land use matters. How and to what extent existing LUCC techniques have reached satisfactorily this target is also a matter of research. Amongst the various techniques employed in the field of land use change research, statistical methodologies have been widely used for uncovering the dynamics of land patterns formation.

As it was argued earlier in detail, the process of illegal housing is close related to the benefits acquired by individuals and stakeholders involved as well as to the socio-economic characteristics of these individuals. The nature of benefits can be an indicator of the proximate and underlying causes which underpin the phenomenon. For a proper analysis of this complex issue, data requirements are high. Amongst others, there is a need for data concerning the demographic and socio-economic characteristics of the stakeholders involved, the characteristics of the constructed dwellings (use, volume, size) as well as the special characteristics of the areas that receive this kind of development. However, data on informal settlements are scare, discontinuous and of questionable validity . In Greece, the process of illegal housing has not been monitored in a systematic way. This is a critical issue which may affect the analysis of the phenomenon, the conclusions drawn upon the analysis and, therefore, the policy

proposals and the subsequent technical and institutional solutions put in place for dealing with the problem.

An overview of the current research on illegal housing in Greece and elsewhere, allows for identifying the most commonly employed explanatory variable to deal with the problem . Even though there is an extensive literature on illegal housing, one should always bear in mind that the evolution of the phenomenon in Greece has its own particularities. Table 1 gives a selective representation of some proximate and underlying causes found in the literature which we expect to be relevant with the course of the phenomenon in Greece.

5. Spatial analysis of illegal housing and legalized areas

To some respects, the course of illegal housing reflects the way in which the regional problem in Greece has developed. The rapid economic growth of the major urban centres and the parallel economic and demographic shrinkage of the rural, less developed areas, forced an important part of the population to move to the main urban areas. Shortly after the Second World War till the early '80s, the economic and organisational conditions which had been created encouraged the rapid growth of a few large urban centres. .

The policy that the Greek state adopted with the purpose of managing the urban land uses can not be characterized as particularly successful. The urgent and pressuring needs for residential development in the urban areas combined with large population movements from the distant areas and the rural or semi-urban areas to the main urban centres increased dramatically the demand for urban land. However, in that period it was absent the relevant state concern for a well-planned, proportional offer of urban land, so as to compensate the increased demand. Land speculation phenomena emerged as a consequence of the frontier movement (rural-urban migration), and a large share of land passed from government into private ownership. As a result, there was a great instability in land prices, making urban land inaccessible for the low-income social classes. Virtually the great majority of settlers who moved to the urban areas of Athens and Thessaloniki were to greater or lesser degree speculators. But in a neighbourhood where most of the people live in illegal house, the concept of illegality is meaningless.

Spatially speaking, the urban –rural interface and a number of newly formed, informal industrial areas were the first to experience illegal settlements construction processes (the *first generation of illegal houses*). «The poor, and other minorities, who did not have access to housing financing could not afford to buy apartments in the city; moreover they could not afford to buy and develop land within the urban centres in accordance with formal urban regulations; and they could not afford to rent apartments since rental rates exceeded their earning ability» .

Another important illegal housing category that mainly emerged in the mid '80s was that of secondary housing and vacation residences. These housing units were usually constructed on the coastal zone or close to other kinds of recreational destinations (e.g mountainous areas, wetlands, forests e.t.c). This kind of illegal housing is still growing across the country although formal data are difficult to obtain as they are dispersed amongst some 156 municipal planning

offices. In this particular case of high-quality illegal housing, the social classes that choose a legally prohibited attitude are in the middle or higher income levels. On the one hand, the lack of a proper policy for providing suitable land to serve this kind of high quality housing demand and on the other hand, the environmentally - insensitive social ethics of the mass consumption era, are driving a «new generation of illegal settlements».

According to Potsiou and Ioannidis the most common forms of informal settlements are:

- «Squatting on state-owned land construction. This type of housing is extralegal from the beginning and is constructed in violation of a variety of laws. It creates slums and frequently the state authorities are in conflict with the occupiers whenever they attempt to establish controls.
- Purchase of agricultural land, subdivision of it into smaller parcels, and illegal conversion of the land use from agricultural into housing or industrial settlements or conversion from industrial into housing.
- Construction without permission on legally owned land parcels; making "semi-legal" or illegal transactions mostly without a formal registration (especially those related to inheritance) at the cadastre or the land registry.
- Constructing illegal building extensions, such as to add more stories on a legal one-storey building».

Potsiou and Ioannidis suggest that during the period 1945-1966 about 380,000 informal settlements were created in Greece. According to Costa et. al. the total number of illegal constructions in Athens, as of 1984, was 150,000 units. The Ministry for the Environment, Physical Planning and Public Works, (YPEHODE) which deals with the urban planning legal framework has attempted to legalize illegal houses by expanding the urban plans. Since 1983, the confrontation of the illegal housing problem and the organisation of these areas in order to become functional urban units with networks, technical as well as social infrastructure, has resulted in the integration of some 60,000 ha into the urban land use system .

Following, we attempt a spatial, quantitative analysis of the illegal housing phenomenon in Greece, using the existing statistical data acquired by official sources and relevant studies. The methodology adopted is correlation analysis concerning illegal housing and a number of relevant explanatory variables. The scale of analysis is that of the prefectural administrative level. By performing correlation analysis in the sub-national or even sub-regional scale we can investigate possible relationships between the illegal housing patterns and the explanatory variables and at the same time to maintain a certain level of spatial explicitness. In addition to estimating the correlation coefficients, there are also constructed certain diagrams for improved supervision of phenomenon and better understanding.

Diagram 1 depicts the number of illegal houses per 1000 people which were legalised during the period 2000-2005 in a prefectural level (i.e. the new generation of illegal houses). It also presents the legalized areas per 100 people during the period 1985-2003 in the prefectural level as well. This diagram was constructed by using statistical data acquired by the Ministry for the Environment,

Physical Planning and Public Works, and the National Statistical Service of Greece . By analysing diagram 1, it can be drawn that there are important differences amongst the Greek prefectures concerning both intensity of illegal housing phenomenon and courses of legalized areas.

Diagram 2 is an alternative presentation of the relationship between the number of illegal houses per capita and the legalized areas per capita in each prefecture. This diagram implies an analogous relationship between the number of illegal houses and the quantity of legalized areas. In some respects, this means the state policy regarding the integration of new space into the urban plans virtually follows the illegal housing process instead of going before. Thus, as it was mentioned before, the increase in urban space does not precede but follows the demand already met by the process of illegal housing.

Another interesting observation drawn from diagram 2 is the fact that the informal housing phenomenon continuous with an increasing pace in the prefectures that have already had extensive areas legalised. It is worth mentioning that the great majority areas were legalized during the period 1985-1995. However, in the prefectures with high figures of legalized areas per capita, illegal housing continuous uninterrupted. This leads to two suggestions: (a) The legalized areas integrated into the urban system were not sufficient in meeting the existing demand for urban land and (b) The state control and monitoring were ineffectual.

Following, they are also estimated in a pair-wise manner the correlations between on the one hand the «Legalized areas per 1000 inhabitants» for the period 1985-2003 as well as the «Illegal houses per 1000 inhabitants» constructed during the period 1995-2005 and, on the other hand, some selective indicators which capture the economic and social characteristics of each Greek prefecture. High correlation values in a statistically significant level show the influence of different regional characteristics to the intensity of illegal housing and to the amount of legalized areas.

The indicators used for the estimation of the aforementioned correlations are:

1. **Level of prosperity in each prefecture**. By using this variable we investigate whether the level of human prosperity in each prefecture is connected with illegal housing or the illegal housing phenomenon does not depend on the level of economic development of each prefecture. We investigate the correlation values, bearing in mind that high values of growth and prosperity ensure corresponding levels of housing activity. The data concerning this variable were acquired from a study by Petrakos and Polyzos.
2. **Indirect and total population potential**. The «indirect population potential» shows the accessibility of each prefecture to large urban centres. Inhabitants of large urban concentrations may sometime build illegal houses in adjacent prefectures. This tendency is known as secondary and/or vacation housing and happens across the country in many instance (e.g. dwellers from Thessaloniki build houses in Pieria or Chalkidiki, dwellers from Athens in Evia, or Korinthia). The total population potential incorporates the indirect and the direct population potential and shows the total accessibility of each

prefecture. The total (TPP) and the indirect population potential (IPP) are indicators of population agglomerations in each prefecture and of the total accessibility of each prefecture in relation to the other prefectures. These two figures are estimated by using the following formulas $TPP_i = P_j / d_{ii}$ $+IPP_i$ or $TPP_i = P_j / d_{ii} + \sum_j^n (P_j / d_{ij})$, where P_i is the population of prefecture i and d_{ij} represents the distances between the prefectures i and j .

3. **Population quality.** The term «quality of population» refers to the general characteristics of human capital in each prefecture and it is related to aspects such as the level of education and the professional skills and specialization of the labour force. In this study, we investigate whether or not this variable influences the illegal housing phenomenon. Additionally, the social characteristics of the population are also looked upon in order to find possible connections with the illegal housing phenomenon. As regards population quality, the data used in the estimations are taken from a study by Polyzos and Arambatzis .
4. **Rate of urban population.** As it was mentioned before, illegal housing could be considered as the results of the pressure coming from urban growth processes and the concurrent shortage in urban land for city expansion. By investigating the relationship between on the one hand, the number of illegal houses as well as the amount of legalised areas and on the other hand the level of urban population in each prefecture, it is possible to identify whether the illegal housing phenomenon characterizes the prefectures with high levels of urban population or is independent on this variable. The data for this variable are taken by the National Statistical Service of Greece .
5. **Specialization in the primary, secondary and tertiary economic sectors.** The estimation of the potential relationship between illegal housing and sectoral economic specialization in each prefecture, allows investigating whether or not the economic character of each prefecture influences the illegal housing phenomenon. The data for this variable are taken by NSSG .
6. **Legal housing per capita 1980-2000.** Legal housing per capita is a measure of the housing activity in each prefecture. If there is a positive and analogous relationship between legal and illegal housing activity, then illegal housing can be interpreted as to whether or not there is the required amount of land to put in urban use. The data for this variable are taken by the National Statistical Service of Greece .
7. **Population changes during the periods 1981-91 and 1991-2001.** Changes in population can be use as a measure of new housing needs in each prefecture. Hence, we investigate if there is any relationship between on the one hand, an increase in the size of population in each prefecture during the periods 1981-1991 and 1991-2001 and on the other hand, the magnitude of illegal housing and legalized areas. The data for this variable are taken by the National Statistical Service of Greece .
8. **Change in urban population in the period 1991-2001.** Finally, the study investigates if there is a relationship between on the one hand the illegal housing variable and on the other hand, the changes in urban population in each prefecture. In this case we assume that illegal housing concerns mainly the urban population

and is close related to the enlargement of cities. Data for this variable are taken by the National Statistical Service of Greece .

The results of the estimations are presented in the table 1 and depicted in the diagrams 3-20. Most of the results do not verify our initial expectations. Firstly, we can observe that the statistical significance of the results is low in most of the cases. Secondly, the correlations between, on the one hand the illegal houses and the legalised areas and on the other hand the variables «specialization in the tertiary sector», «level of prosperity», «population changes in years 1991 to 2001» and «urban population changes in years 1991 to 2001» are negative. The remaining variables present positive correlations. The variables «indirect population potential» and «changes in population during the period 1981 to 1991» are statistically significant.

A general appraisal of these results leads us to the conclusion that the illegal housing phenomenon in Greece is inconsistent and odd. For instance, the increase in the size of population during the period 1991-2001, the increase of urban population and the level of prosperity have a negative relationship with the number of illegal houses. This may shows that certain increases in the size of total population and the size of urban population do not necessarily lead to illegal housing. The existence of a positive and statistically significant relationship between illegal housing and «indirect population potential» leads to the conclusion that the residents of great urban centres may construct illegal buildings in neighbouring prefectures. We observe relatively low values of illegal housing in Attiki and Thessaloniki and highest values in the prefectures of Evia, Magnisia, Imathia, Pieria and Chalkidiki.

However, it should be mentioned that the data about illegal housing units concern the period 2000-2005 and hence, they refer to the second generation of illegal housing. It is highly possible that most of this housing activity concerns secondary and vacation residential units.

6. Conclusions

Informal housing in Greece constitutes a phenomenon with economic, social and sometimes political dimensions. It is tightly connected to the kind of management placed upon urban and non-urban land uses by the state and the implemented housing policy. The economic dimension mainly concerns the need for having provided residence of an affordable price to the low income working classes that came to the cities in search of employment during the transformation of the economy in the post-war period.

In a similar way, the social dimension - especially shortly after the Second World War - was connected to the social need for providing for one of the basic requirement namely «shelter». The political dimension concerns the state planning efforts to legalise informal settlements. In most of the times the state policy regarding the integration of new space into the existing urban plans virtually followed the illegal housing process instead of going before. Hence the increase in urban space did not precede but followed the demand already met by the process of illegal housing. The second generation of illegal housing units shows that the process still goes on. Therefore, it can be said

that the state has not managed to formulate a firm national planning land policy to deal with the problem. Instead, the state intervention has been spatially selective and temporally behindhand. The fact that most of the initiatives of legalising informal housing units are still lunched usually just before election announcements shows that there is not real political will and commitment to deal with the problem.

Finally, as far as the management of land uses is concerned, the state have not made provisions for creating the necessary «urban land stock» in each prefecture, so that everyone interested can find land parcels in an affordable price. Instead, the state action follows the illegal building activity by legalising areas sporadically and by introducing new legislative initiatives of limited success in dealing with the problem.

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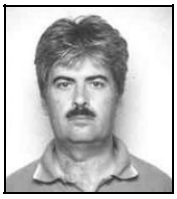

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Appendix

Diagram 1: Illegal houses and legalized areas in Greece

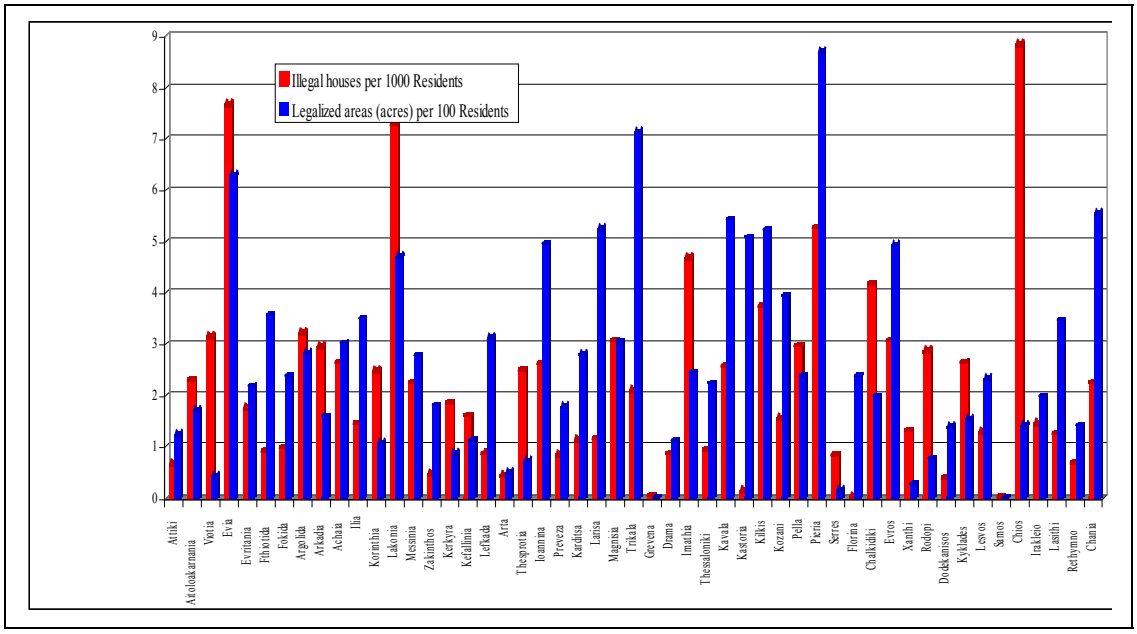


Diagram 2: The relationship between illegal houses and legalized areas

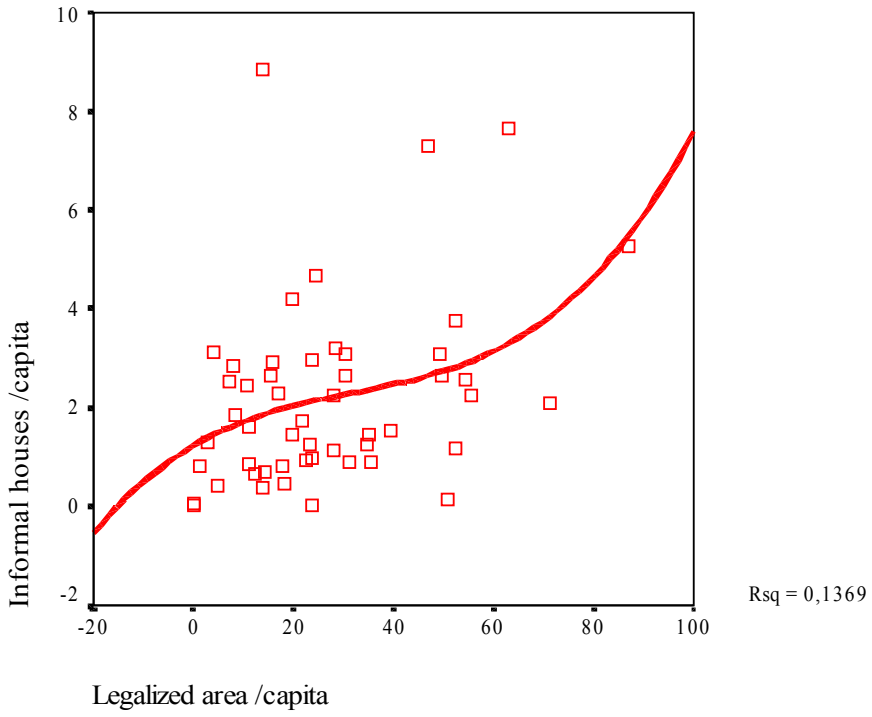


Table 1: Classification of Proximate and Underlying Causes of Informal Housing Units

Economic Factors	Administrative Factors	Demographic Factors	Socio-Political Factors
Real Estate Market – Land prices	Bureaucracy	Population changes	Human behaviour
Labour Market Structure	Complex and insufficient legal framework	Migration fluxes	Consumption Patterns & Lifestyle
Sectoral Composition	Inappropriate planning and land use allocation provisions and procedures	Household composition	Low political will and commitment
Income levels	Poor Governance	Educational levels	Land speculation
Investments	Shortage of available urban land	Age composition of the population	Housing policy
Taxes and subsidies	Low security in land tenure	Ratio of Urban to Rural Population	Historical socioeconomic facts and events
New Infrastructure development	Insufficient control mechanisms		Low quality of the environmental conditions in the CBD
Cost of housing			Corruption
Informal economy			

Table 2: Correlation coefficients between illegal housing, legalized areas and regional economic and social characteristics

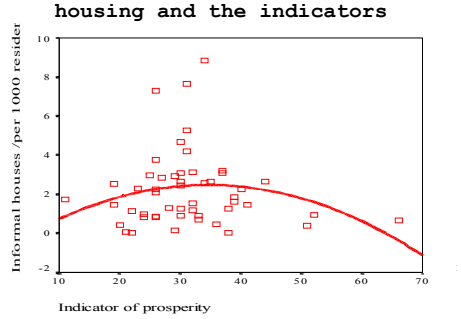
	Level of prosperity	Indirect population potential	Population "quality"	Rate of urban population
Illegal houses/1000 residents	-0,057 *(0,690)*	**0,378**** *(0,006)*	0,061 *(0,669)*	0,106 *(0,461)*
Legalized areas / 1000 residents	-0,040 *(0,778)*	0,169 *(0,135)*	0,107 *(0,454)*	0,146 *(0,308)*

	Specialization in primary sector	Specialization in secondary sector	Specialization in tertiary sector	Legal housing per capita 1980-2000
Illegal houses/1000 residents	0,054 *(0,706)*	0,114 *(0,425)*	-0,163 *(0,253)*	0,073 *(0,612)*
Legalized areas / 1000 residents	0,116 *(0,416)*	0,045 *(0,756)*	-0,194 *(0,172)*	0,070 *(0,625)*

	Total population potential	Change of population 1981-1991	Change of population 1991-2001	Change of urban population 1991-2001
Illegal houses/1000 residents	0,020 *(0,887)*	**0,193*** *(0,094)*	-0,126 *(0,379)*	-0,198 *(0,163)*
Legalized areas / 1000 residents	0,007 *(0,961)*	0,003 *(0,981)*	-0,064 *(0,656)*	-0,047 *(0,754)*

*correlation is significant at the 0.05 level (2-tailed),
**correlation is significant at the 0.01 level (2-tailed).

Diagrams 3-11 Correlation between informal housing and the indicators



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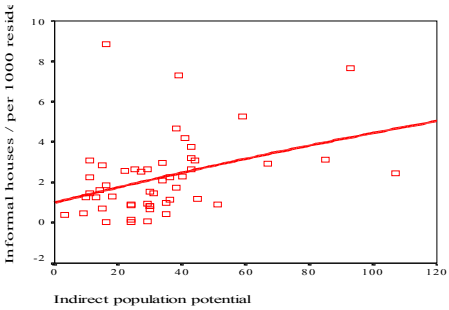

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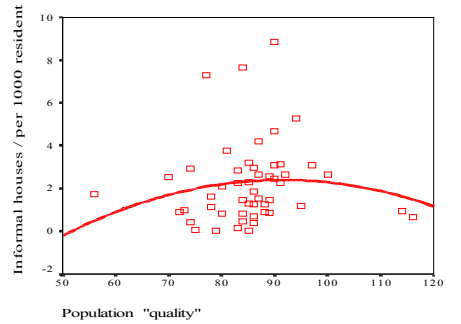

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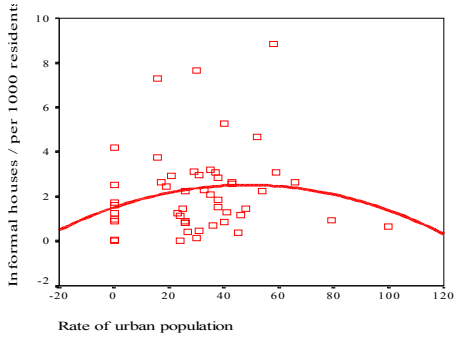

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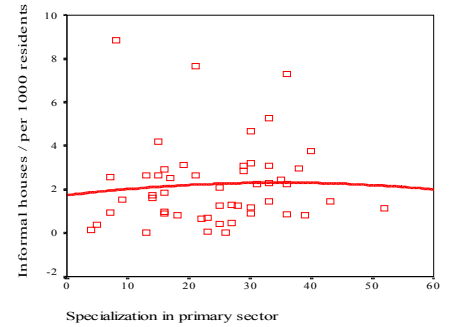

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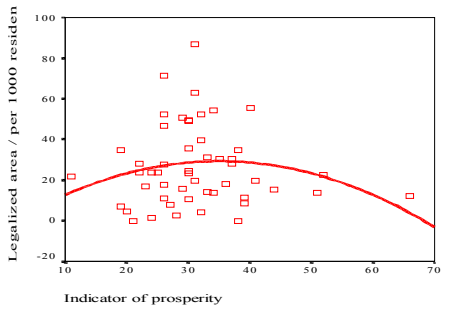
Diagrams 12-20 Correlation between legalised areas and the indicators



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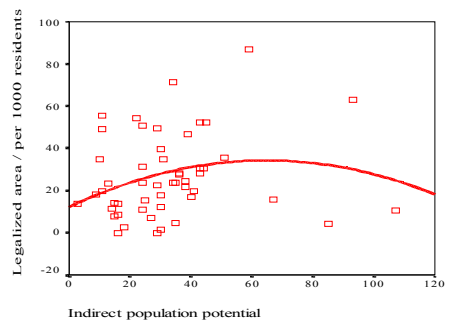

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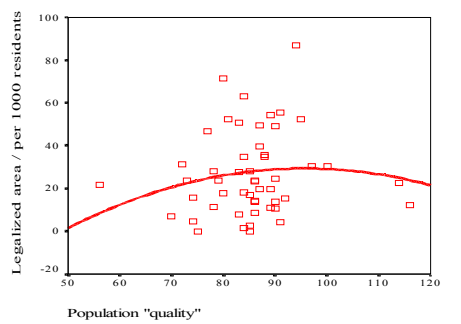

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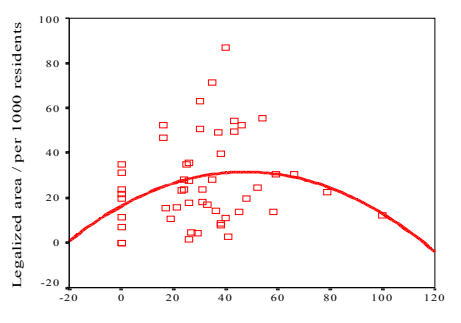

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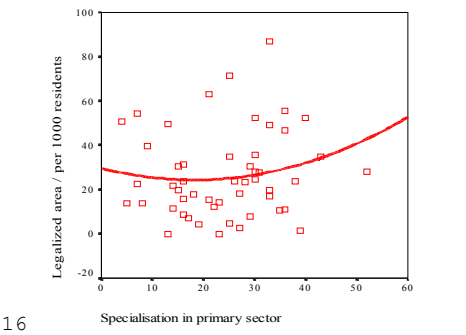

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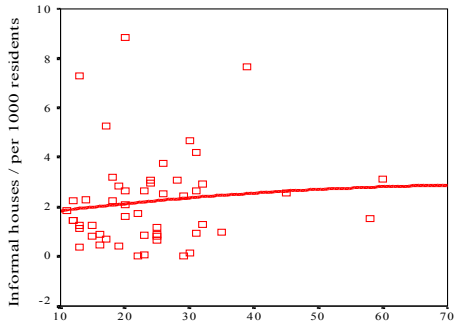

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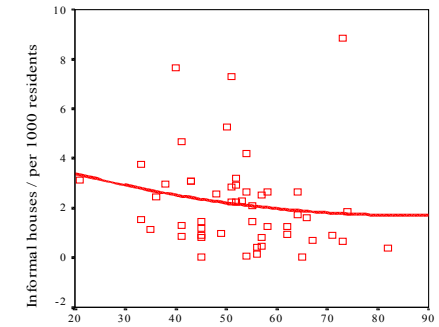

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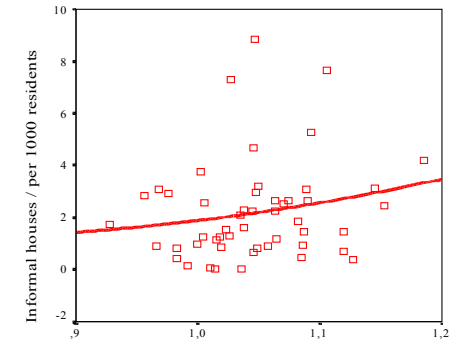

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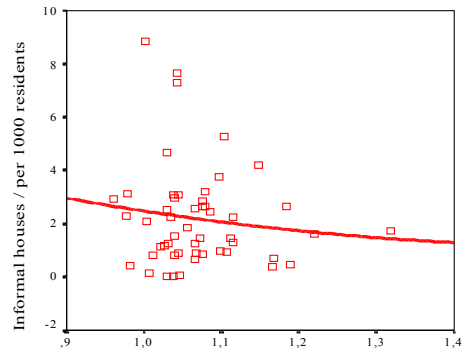

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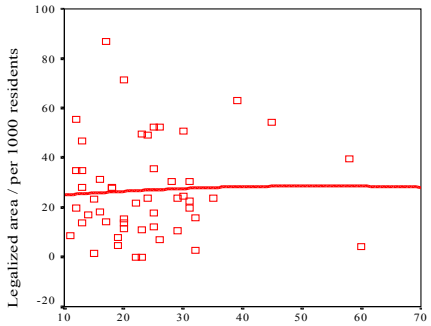

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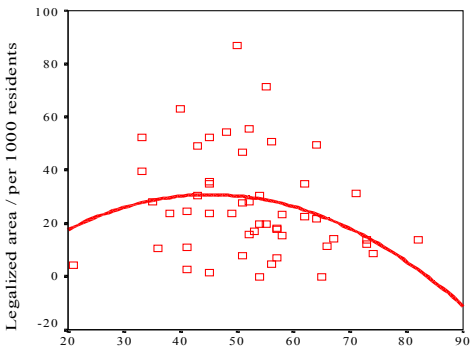

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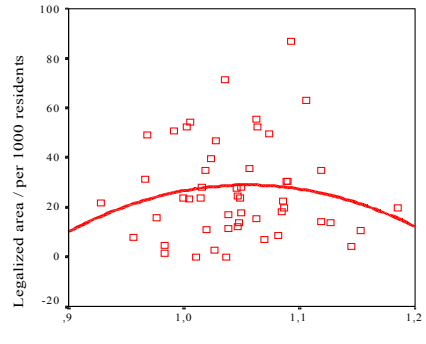

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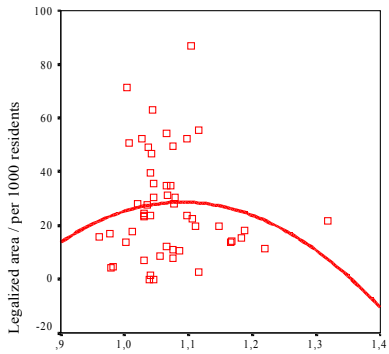

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