

The context, dynamics and planning of urban development: a collection of papers

Edited by

Yannis Psycharis

Pantoleon Skayannis



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**THE CONTEXT, DYNAMICS AND
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A COLLECTION OF PAPERS**

Edited by
YANNIS PSYCHARIS
PANTOLEON SKAYANNIS

University of Thessaly
Department of Planning and Regional Development

Volos 2008

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**Dedicated to the memory
of Dimitris Skouras**

Dimitris Skouras

As this book was in its final stages, Dimitris died tragically in an accident with his Army Apache helicopter. The helicopter crashed on Wednesday 5 November, 2008, while flying on a military exercise. Dimitris was 36 years old, married to Katerina, and father of Vasilis aged 6 and Anastasis aged 3 and a half. Born in Athens, he received primary and high school education in Agia Paraskevi village and in Levadeia, where he moved with his family. He, then, moved again to Athens, where he undertook training at the Hellenic Military Academy. He studied Economics and received his Bachelor's degree in Financial Management from the University of Piraeus. He then went on to complete a Master's Degree with the Department of Planning and Regional Development of the University of Thessaly. A year later, he concluded his studies with the Economics Department of the same institution, receiving a Bachelor's degree in Economics, before he enrolled in a Ph.D. programme with the Department of Planning and Regional Development. Dimitris was an exceptional character and an outstanding student; a very talented personality, highly professional, and always generous in offering a helping hand to colleagues and friends, he was a man who was full of energy, ambitions and kindness. His colleagues and friends, the staff of the Department, and indeed everyone who ever met him, will never forget his charismatic and wonderful personality. In every respect he was a promising member of the academic society. A representative part of his research, authored by Dimitris and his Ph.D. supervisors Yannis Psycharis and Paschalis Arvanitidis, is included in this book. As a small expression of gratitude we dedicate this volume to his memory.

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Introduction

Yannis Psycharis

Pantoleon Skayannis

This volume is an outcome of the ERSA 2006 Conference that took place in Greece, hosted by the Department of Planning and Regional Development (DPRD), University of Thessaly, Volos. It presents a significant part of the contribution of the staff of this Department. The papers presented in this volume, as will become evident to the reader, comprise a contribution from the DPRD to the discussion of planning and development in Greece and further afield.

We live in a changing world. Greece, in the post-Olympic era, is undergoing further transformations regarding the economy (both as a whole and locally) and the country itself.

These transformations relate to the country's priorities that have switched from being concentrated in Athens area (a conscientious selection for the hosting of the 2004 Olympics) to a more balanced distribution which includes the periphery of the country, hence reviving the discussion regarding regional development and spatial planning. They also concern an intensification of policies surrounding market liberalisation and the recent privatisation of various public entities and infrastructures. Such developments are certainly falling in line with the more general EU policies, such as the Lisbon guidelines for European competitiveness, and undoubtedly have different impacts on the different European countries, notably on the South-east of Europe. Economic transformations tend to reshuffle space and produce new spaces. In this sense, space has to be more consciously planned and/or re-planned, and planning requires tools. Our societies have already entered their 'knowledge economy' stage in the information society and, thanks to modern technology, planning can now be facilitated by new tools and support systems.

In the new era of globalization cities and regions make efforts to become more competitive. City marketing is hailed as a tool for investment and the attraction of mega events that are supported by mega projects. City competition simultaneously causes and requires urban restructuring. However, urban restructuring triggers a sequence of social consequences, even at the

micro level, that affect social relations and social capital. It thus presupposes policies and decision making related to property markets, housing policy and urban planning that should confront the needs of society as a whole and take them into consideration, providing permanent solutions to all societal segments, primarily those most deprived, namely the immigrants. It is also definite that, despite the economic development, the socio-economic situation in our societies is becoming more difficult, not least because of the environmental and economic crisis.

These issues are relevant to Greece as well as to the most developed countries (Richardson and Bae, 2005; Faludi, 2002; Newman and Thornley, 1996). Theory is the basis, yet it is not a sufficient tool to help us face the problems if it is not combined with praxis. A more comprehensive understanding of the problems and their solutions may be established through the case studies included in several chapters of this volume. These delineate the broad experience of the writers in dealing with such problems and with planning practice, and as such will be prove useful to our readers.

The book is divided into five parts. Part I deals with contemporary aspects of economic development and integration in the OECD, EU and South-east European and Balkan countries. Part II discusses how information technology and decision support systems are incorporated into modern urban planning techniques. Part III presents aspects of urban infrastructures and urban competitiveness in the globalisation era. Part IV discusses conceptual aspects and applied research in property market. Part V deals with the social aspects in the cities.

Part I includes three papers. The first paper written by Skayannis and Markatou, and it examines the trends in the field of telecommunications in the OECD countries. Its main aim is to detect the relationship between telecommunications and economic development. The authors conclude that Information and Communication Technologies (ICTs), and specifically telecommunications, contribute to economic performance, but this contribution has differentiated impacts on different group of countries. Greece, which has been given more thorough attention by the authors, has improved its Patent & Trademark Office (PTO) investment performance in telecommunications, moving, by the end of the study period, to a position above the average of the countries included in the analysis.

The second paper, co-authored by Petrakos, Kallioras and Anagnostou, questions the impact of open markets on the level of economic performance in the EU countries. In order to do so, the paper sets out to detect the determinants of industrial performance in the old EU countries (EU-15), covering the period 1980-2003, during the ongoing process of EU economic integration. They conclude that the EU economic integration process had positive results overall, but with a differentiated impact on different groups of countries.

The third paper, written by Kotios and Saratsis, focuses its attention on the dynamics of regional integration in East Europe and the Balkans and examines the impact of EU enlargement on Euro-Mediterranean relations. The authors conclude that there is room for further trade and a stronger economic integration between the Third Mediterranean Countries and the EU, in the context of the new European Neighborhood Policy. They also point out that the Euro-Mediterranean relationship is the most important instrument for the Third Mediterranean Countries in terms of minimising the dangers that may result from EU enlargement.

Part II consists of three papers. The first paper, by Pozoukidou, presents the results of a study on the applicability and effectiveness of a complex land-use modelling tool in planning practice and the decision-making processes of relevant agencies. The author concludes that planning support systems are essential elements in planning practice and can effectively help planners do their planning.

The second paper, written by Deffner and Bourdakis, discusses one of the main problems in recent urban planning, namely how to make very broad and commonly used theoretical principles, such as sustainability and governance, become more practical. Most specifically, the main aim of this paper is to demonstrate how public participation in planning can be served by the use of new technologies. The paper focuses on the curriculum developed for the Municipality of Agia Varvara, which lies to the west of the City of Athens. They showed that ICTs can help in participation, mainly because they constitute a relatively simple means of recording the views of both the public and the planners on a variety of subjects.

The third paper in this section, by Foutakis and Thoidou, states that e-Governance has recently emerged as a new field of interest for both researchers and public policy makers. Then, it sets out to examine the implementation of e-Governance in the Thessaloniki metropolitan area,

in the specific context of development programming. The paper concludes that sustainable urban development in the metropolitan regions is an exceptionally complicated process and the lack of political will and leadership constitute the main obstacles for the development of such applications in the Greek cities.

Part III consists of four papers. The first paper, by Deffner and Metaxas, questions the inter-connection between city marketing and urban planning. They examine this question in the context of Nea Ionia, Volos. The data for this paper are provided by the INTERREG IIIc CultMark project. The authors conclude that the City Marketing Pilot Plan of the case study was of a strategic nature and it constituted a significant means of City Marketing Pilot Plan implementation, in order that its image be effectively promoted and supported in the potential target markets.

The second paper, written by Kousidonis, deals with urban planning in Thessaloniki and considers the conflict that arises from the recent plans of the Thessaloniki International Fair (TIF) to redevelop its activities in the new property. This proposal has fuelled strong debate among the major city actors and brought about new and older scenarios, which revolve around two apparent extremes: the adoption of the TIF SA proposal or the comprehensive redevelopment of the wider, ribbon-like, zone with priority given to the public open spaces and pedestrian walkways. The conflict touches on several interesting topics, including corporate social responsibility, urban management, participation and communication, or public relations, in planning. The discussion is inconclusive but throws up some interesting topics for discussion on contemporary urban planning in Greece.

The third paper, by Tsobanoglou and Photis, presents a methodological framework for the analysis and comparative evaluation of service areas of urban centres for the region of Thessaly, Greece. The proposed methodological approach is strengthened by the formation of a comparative indicator of urban concentration (UCI) which, while assisting the analysis of urban clusters, constitutes an alternative estimator of their role. They have found that a major city with significant population size, number of services and an efficient road network attracts settlements within a critical distance, while in the opposite case isolation can be observed.

The fourth paper, written by Athanasopoulou, presents the Rion-Antirion Bridge Mega-project and discusses its advantages and limitations for the development of western Greece. She concludes that the Rion-

Antirrion Bridge is unquestionably a major technical project, a new landmark and the pride of the whole of the western Greece region, but there is no real evidence so far that the bridge link is fulfilling its development role.

Part IV includes two papers. The first paper, written by Arvanitidis, addresses the issue of property market efficiency. The author states that the conventional approaches of allocative and informational efficiency provide problematic and ambiguous judgements, whereas institutionalist conceptualisations remain incomplete or methodologically underdeveloped. Building on the latter approaches, the paper sets out to explore a possible way to evaluate the effectiveness of the property market in delivering a combination of outcomes that will generate and/or sustain urban economic potential. The paper has challenged the available notions of property market efficiency to put forward a new concept, called “property market purpose efficiency”. A purpose efficient property market allocates optimal resources to institutionalised variety, given the level of uncertainty the wider institutional environment carries, and thereby delivers the property products that the economy requires at the prevailing price.

The second paper, written by Triantafyllopoulos, attempts a new approach to the study of social capital in Greece. More specifically, it explores how family and land property can be considered as structural elements of social capital. It explores how cultural and social values inherited from the past, as expressed by non-market transfer practices of the land a family owns, produce a form of social capital that plays an important role in the local development process and the socially-integrated tourism activities, within the geographical context of a Rhodian community.

Part V consists of two papers. The first, written by Lalenis and Beriatis, considers housing policy in Greece for the immigrants who have arrived and resided in Greece since the late 1980s and following the collapse of the socialist states in Europe. The aim of this paper is to relate these policies to the current urban planning and governance framework, to evaluate the outcomes of these policies and their effects on the well-being of immigrants, and to attempt recommendations for a reassessment of the Greek urban planning system. The authors conclude that this housing programme was somewhat of an emergency measure to cover immediate needs rather than a more permanent solution to the problem.

The last paper, written by Arvanitidis, Skouras and Psycharis, discusses the social, economic and spatial implications immigration has for

the country. The current study serves to explore the intra-urban residential preferences of immigrants in a medium-sized Greek city, the city of Volos, to consider whether segregation is evident and to shed light on the residential characteristics of immigrants. The paper assesses immigrant segregation, utilising up-to-date data on school enrolments of both natives and immigrants. The study concludes that although immigrants show a preference for city-centre locations, they are spread in almost all areas of Volos, where older, lower-quality, lower-priced housing stock is available.

This book, combining theoretical and applied issues, addresses a readership of academics and practitioners, as well as students in the areas of urban and regional studies and planning, and hopefully adds another dimension to current knowledge on these matters. In the Greek context, we hope it will contribute to the discussion and current debate in these fields, which has again been stimulated by the publishing of the new National Framework of Spatial Planning and Sustainable Development (2008).

This publication could not have been completed without the hard work of Panagiotis Pantazis in the organisation of the material and desk top publishing, and of Rachel Finnie who once more undertook the difficult task of language editing. We are grateful acknowledge their contribution.

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PART I

Economic Development, European Intergration and Enlargement

Telecommunications and Economic Development in OECD Countries: The position of Greece during 1991-2001¹

Pantoleon D. Skayannis and Maria–Erato Markatou

Abstract

The international trends towards the liberalisation of the telecommunication providers markets in relation to the digitalisation of the networks, the picking up of mobile telephony and the swift introduction of fast Internet speeds, have changed the telecommunications picture

During the last fifteen years, telecommunications in Greece have improved considerably. Greece, in various indices, such as mobile telephony, scores quite high, while in other, such as Internet penetration, it remains at very low levels compared with the rest of the EU. The liberalisation of the sector with all its advantages and disadvantages, has contributed to these developments.

This paper examines the trends in the field of telecommunications in the OECD countries and relates basic telecommunication magnitudes and variables with economic variables, aiming to detect the relationship between telecommunications and economic development. A categorisation of the OECD countries is attempted, on the basis of the position of the countries in 1991 and 2001, and of the decade's average, in relation to their GDP/c and selected telecommunications-related variables. In this context, there is special reference to the position of Greece in the international hierarchy of telecommunications development during that period.

Keywords: *Digitalisation of the networks, economic development, telecommunications development, OECD countries.*

¹ The authors wish to gratefully thank Prof. Kleonthis Syrakoulis, for his useful advice on the statistical methodology part of the paper, as well as D. Maragozis, Economist and Planner MSc, for his assistance in the statistical elaboration of the data.

1. The Development of Critical (tele)Communication Magnitudes in OECD, EU-15 and Greece

The international trends towards the liberalisation of the telecommunication providers markets in relation to the digitalisation of the networks, the picking up of mobile telephony and the swift introduction of fast Internet speeds, based on broadband, have changed the telecommunications picture over the last years, and are indeed changing it every day at an unprecedented pace.

These trends are very evident in the EU, and in the OECD countries, whereby fixed voice telephony, in 2001 amounted to 46% (standard access lines per 100 inhabitants) in the OECD, digitalisation (fixed network - % of digital access lines) in 2001 amounted to 97% in the OECD, mobile telephony penetration (subscribers per 100 inhabitants) in 2001 amounted to 53.9% (in the EU as a whole, it was 74.3%) and broadband access in 2004 amounted to 8.6%.

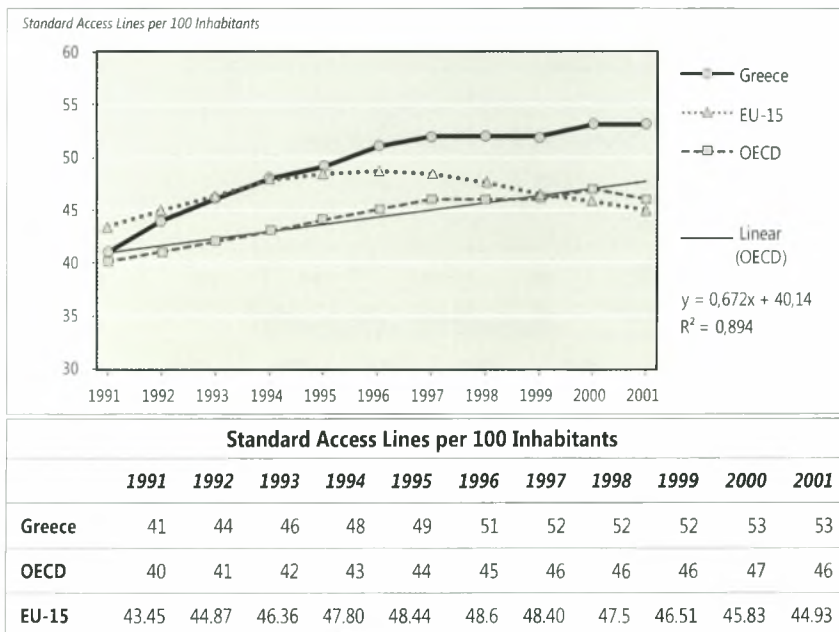
We consider these three factors to be important, or at least highly characteristic of the developments in modern telecommunications, for the following reasons:

Fixed (voice) telephony is and will continue to be the basis for a long period of time, as for most of the population it comprises the basis of their communication facilities. **Digitalisation of the network** has offered the technical possibility for the introduction of all kinds of value added services, including broadband applications and fast Internet speeds. **Mobile telephony** is rapidly offering a substitute for voice telephony and, being digital, for many other services including Internet access (especially 3G technology). For many countries that lagged behind in standard voice, mobile telephony offered an opportunity to catch up and increased communication accessibility for larger parts of the population, and for remote areas. **Broadband** in various forms gradually becomes the basis for modern communications, particularly those using the Internet, enabling the integration of services in a more effective way compared to ISDN, which seems today quite outdated. In this sense, from the technical point of view and keeping in mind that the issue remains at this level generalised and simplified, the above variables comprise the crucial factors in order to understand current developments in the field of communications.

In particular, **fixed (voice) telephony** penetration (standard access lines per 100 inhabitants) has not significantly progressed in the OECD countries over the period 1991-2001 (when it increased from 40% to 46%), and in the EU-15 it has practically remained stable. In contrast to this the magnitude, in Greece it has increased from 41 to 53%. These magnitudes, that reach half the population on average, roughly correspond to one telephone line per family. Without suggesting that this is a virtual limit, one could argue that it is now more difficult to make any further spectacular steps, taking into consideration:

- the introduction of mobile telephony (that personalises telecommunications and comes as an addition to fixed lines),
- the possibilities offered by broadband (simultaneous use of telephony and the Internet), and
- the voice-over IP facilities that are widely offered.

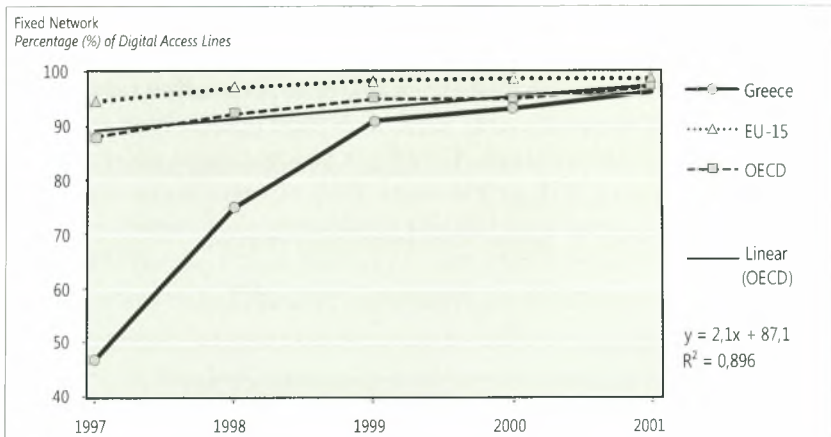
Figure 1. Fixed (voice) Telephony Penetration, 1991-2001



The increase of the magnitudes of fixed voice telephony in all countries was by and large based on digital networks, leaving behind the old days of limited capacity and long waiting lists.

Digitalisation in the EU and OECD countries is almost generalised and provides the platform for all other applications and network-based services (value-added services), as well as broadband. By 2001, in the OECD it had almost reached 97%, and in the EU-15, 98.5%. If more recent data were available, the magnitude could well be near 100%.

Figure 2. Digitalisation



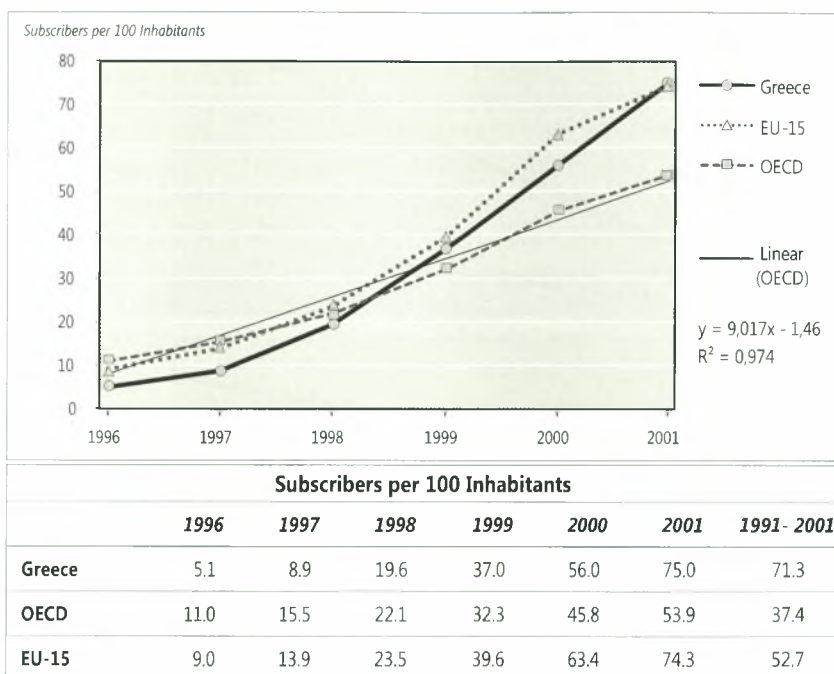
Fixed Network - Percentage (%) of Digital Access Lines					
	1997	1998	1999	2000	2001
Greece	47	75	91	93	96
OECD	88	92	95	95	97
EU-15	94.5	97	98.2	98.5	98.5

All OECD countries have by now got, in practical terms, digital fixed telephony lines. This has decisively helped the spread of Internet access via PSTN and ISDN lines, and has provided the basis for the introduction of broadband. It is worth noting that Greece, since about 1999-2000, has started to closely follow the OECD trend line after a period of lagging behind significantly in fixed network digitalisation.

Mobile telephony penetration in the EU-15 and OECD countries between 1996-2001 has also picked up. It is worth noting, however, that in 2001, the OECD lagged behind the EU-15 (53.9% versus 74.3%). It is interesting to note that Greece, having kept a trend line with a rate of 71.3%, is already above the EU-15 average.

Mobile telephony has proliferated and in many cases has become a substitute for lagging fixed voice telephony penetration. Its increasing penetration, however, can be attributed to its very nature as a personalised communication facility that conforms to the modern lifestyle, to the extra facilities it offers, to its usefulness for remote areas, and to the easy availability of capacity it provides. Its proliferation can also be attributed to the early liberalisation of the service. As a result, many providers appeared in all countries and competition was created, with all the usual consequences, such as advertisement, marketing techniques, etc. This also led to price competition, which in most cases has kept prices at affordable levels.

Figure 3. Cellular Mobile Penetration

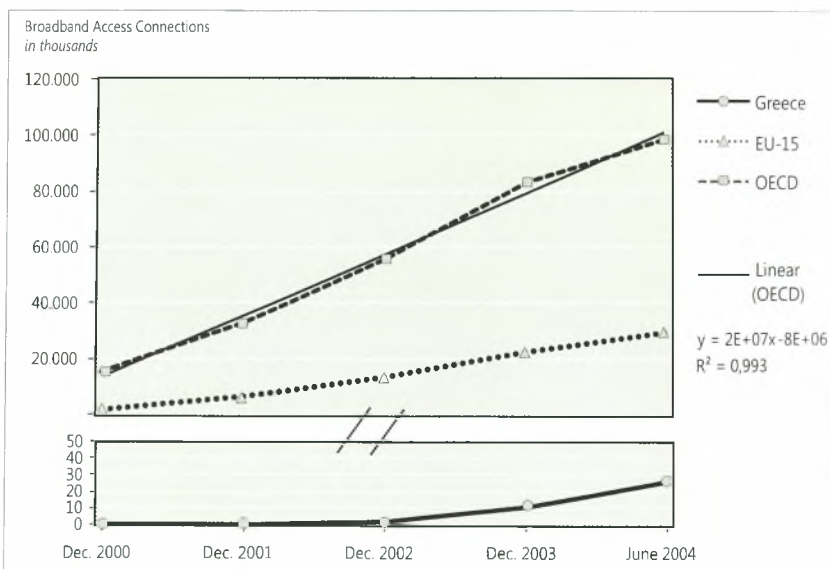


Broadband access compared to the other communications magnitudes is still at low levels (8.6% in the OECD and 7.7% in the EU-15, in June, 2004). Yet, all indications point to the fact that this is the most important factor for the future development of the sector.

Broadband is picking up, assisted by technical methods of connection, such as cable, satellite, digital subscriber lines (xDSL), Fibre To The Home

(FTTH), and fixed wireless networks (Papacharissi and Zaks, 2006) in the context of a worldwide total rearrangement of the regulatory regime (towards liberalisation and privatisation). A significant step in liberalisation has been the opening up of the local loop to other than the incumbent entrants, to act as providers. This is the Local Loop Unbundling (LLU), which in its various forms has been established in most OECD countries (Umino, 2003)².

Figure 4. Broadband Access



Broadband Access Connections							
	Dec. 2000	Dec. 2001	Dec. 2002	Dec. 2003	June 2004	2003	Up to June 2004
	Total	Total	Total	Total	Total	per 100 inh.	per 100 inh.
Greece	72	72	1,953	10,476	25,926	0.1	0.2
OECD	15,132,022	33,021,123	56,242,424	83,651,768	99,088,048	7.2	8.6
EU-15	1,470,350	6,037,644	13,121,620	22,540,007	29,261,730	5.9	7.7

Note: "Other broadband technologies include satellite, broadband Internet, fibre to the home Internet access, ethernet LANS, and fixed wireless subscribers (downstream speeds greater than 256 kbps).

Source: OECD Telecommunications Outlook 2005, <http://dx.doi.org/IC>

² In Greece, LLU was officially introduced on January 1, 2001.

2. A Brief Account of the New Regulatory Framework in the EU and Greece and the Current Structure of the Greek Market

During the last fifteen years, as seen in the previous section, telecommunications in Greece have improved considerably. Greece, in various indices, such as mobile telephony, scores quite high, while in others, such as Internet penetration, remains at very low levels compared with the rest of the EU. The new regulatory framework of liberalisation of the sector, with all its advantages and disadvantages, has contributed to these developments. A key role in the application of the new regulatory regime was played by the Hellenic Telecommunications and Post Commission - EETT³, which was instrumental in setting up the new environment and applying the European regulations for the sector.

The new liberalisation regulatory regime that has enabled these developments has been based on the adoption of the Directives, decisions, recommendations and regulations of the European Parliament, the Commission and the Council. The most important documents of the European legal framework in force on December 31, 2004, totalled twenty-three (EETT, 2005: 206-7, Appendix II). These have been applied in Greece by means of 12 Laws, 10 Presidential Decrees, 14 Ministerial Decisions and 88 EETT Regulatory Decisions pursuant to Law 2867/2000,⁴ which was already in force on the same date (EETT, 2005: 199-205, Appendix I). This legal regulatory framework is not as complicated as it seems if one takes into consideration the multitude of facets that telecommunication liberalisation entails (legal, technical, organisational, etc) and the fact that the transition stage is very delicate in a country used to incumbent structures in all infrastructure fields.

Within this frame, the EETT has provided, up until 31st December, 2004, the following licences and authorisations:

- i. 12 (twelve) individual licences for the installation and operation of exploitation of fixed network and provision of voice telephony,
- ii. 2 for the installation and operation of exploitation of fixed network,

³ EETT is the equivalent of the British OFTEL and the US FCC.

⁴ "Organization and operation of telecommunications and other provisions" (Repeal of Law 2246), Law 2867, GG Issue 273/A/19-12-2000.

- iii. 13 for the provision of voice telephony services,
- iv. 4 for the installation, operation and exploitation of 2G mobile networks and provision of 2G services,
- v. 3 for the installation, operation and exploitation of 3G mobile networks and provision of 3G services,
- vi. 11 for the installation, operation and exploitation of satellite networks and provision of satellite communications services,
- vii. 6 for the provision of wireless local area network (w-lan) services,
- viii.1 (one) for the installation, operation and exploitation of tetra networks and provision of tetra services (to OTE).

At the same time, the EETT has provided 266 general authorisations for various telecommunications services.⁵

From the data above, one can deduce that in Greece there has been significant progress in the liberalisation of the telecommunications market. The question is whether and to what extent this has opened up competition and how this has worked in real terms.

What one can observe is that, in terms of numbers, mobile telephony has literally conquered the country, Internet has advanced very slowly, and fixed telephony has steadily followed an upward trend.

Table 1. The Structure of the Telecommunication Market in Greece

Index	Fixed voice telephony	Mobile telephony	Internet
Number of Providers/operators	Small, mainly monopolistic	Small-oligopolistic	large
Number of Subscribers	large	large	small

⁵ The classes of fixed telecommunication services are:

Provision of Fixed Network Transmission (excluding Satellite Transmission Lines) b) Capacity Leasing c) Data Transmission Services, d) Value-Added Data Services, e) Integrated Value-Added Services, f) Network Management Services, g) Internet Services, h) Technical Provision of Broadcasting, i) Technical Provision of Multimedia Services, k) Voice Services, l) Value-Added Voice Services, m) Public Telecommunications Stations, n) Other Telecommunications Services.

The classes of mobile radio communication services are:

a) Mobile Voice Services, b) Radio Call Services, c) Radio communications Services for Closed Users Groups, d) Mobile Radio Data Services, e) In-flight Telephony Services, f) Other Telecommunications Services

The classes of satellite services are:

a) Provision of Satellite Transmission Lines, b) General Satellite Services, c) Mobile Satellite Services, d) Satellite Broadcasting Services, e) Other Telecommunications Services (EETT, 2005).

In terms of providers/operators (something that reflects the outcome of the liberalisation policy), the number of subscribers and providers/operators is not proportional. In **fixed voice telephony**, a few providers/operators have emerged with a few subscribers, while the bulk of the population is still under the main operator (ex-incumbent: OTE). In practical terms, the monopolistic structure remains, while penetration is high. In **mobile telephony**, various providers/operators have emerged that somehow have been able to form an oligopoly (oligopolistic structure), and have been able to establish many connections and attract many subscribers. In the field of the **Internet**, many providers/operators have emerged creating the picture of a more or less open market, yet still quite dependent on the physical network of the main telecommunications operator (OTE). Connections and subscribers are still at low levels. **Internet penetration** in Greece has developed according to the pattern that is presented in Table 2.

Table 2. Internet Development in Greece

Index	1998	1999	2000	2001	2002	2003	2004*
Thousand households of Greece (OECD 2004)	3,570	3,580	3,590	3,600**	3,610	3,620	3,625
Thousand inhabitants of Greece (OECD 2004)	10,516	10,538	10,601	10,623	10,666	10,704	10,743
Thousand connections (EETT 2004)	45	109	174	298	394	561	638
Connections per 100 households (own calculations)	1.26	3.04	4.85	8.28	10.91	15.50	17.6
Connections per 100 inhabitants (own calculations)	0.43	1.03	1.64	2.81	3.69	5.24	5.94

Notes:

*mid year (June) data

** Grey is our guess

From the table above, it is evident that the number and proportion of connections, having started from a low level, has grown rapidly over recent years. Unofficial (and unpublished) estimations show that the number has grown even more over the last two years. This also applies to broadband, which also started late in Greece and has grown very rapidly, while its prices have substantially decreased over the last year (2006).

3. A Brief Literature Review of the Relation between Communications and Economic Performance

Worldwide developments, as presented in the previous sections, show that countries and companies invest in ICT and telecommunications. The question is, why they do this? Is it just to facilitate everyday life, or does it contribute towards development? And if this is the case, is the contribution towards development evident in terms of growth of various magnitudes?

There is a variety of literature relating telecommunications to economic growth and other economic variables, such as productivity, real growth rates, total factor productivity, etc. This literature either deals with telecommunications as a subset of ICT or infrastructure in general (albeit pointing out the differences with other infrastructures), or directly seeks to trace the impact of telecommunications on one or more economic variables. In most cases, the discussion evolves around econometric models. The part of literature focussing on telecommunications is not as large as the one dealing with ICT. The literature has two basic characteristics: a) part of it is dealing with the US, which is exceptional in ICT and to a large extent in telecommunications. There are a number of papers either exclusively referring to the US or identifying differences between the US and Europe or other developed countries; b) another significant part of the literature is mainly methodological and focuses on the questions arising from the need to measure the impact of ICT and telecommunications on various economic magnitudes, such as GDP, GDP/c, GDP growth, labour productivity, TFP, etc. In this section, we will briefly present part of this literature, but we will not enter into the methodological discussion on the statistical and econometric model suitability.

Communications, and recently ICT functions, are at the same time a tertiary function as well as infrastructure for the rest of the production sectors, especially some of the tertiary sector. They comprise one of the most important general conditions of production. Earlier studies had estimated that, in Europe, half of the employment and 80% of new jobs originate from services that have information as their base (Johnston, 1993). At that time, it was foreseen that by 2000 telecommunications would account for 7% of European GDP and that it would indirectly support 60% of employment (Graham and Marvin, 1996: 126; Mulgan, 1991: 14). Already in the US, by 1985 13.9% of jobs and 13% of GDP was originating from information intensive sectors, while the concentration and density of such functions

was multiple and very large in the 24 most important metropolitan areas (Castells, 1989: 144). According to research from the early nineties⁶, the level of economic activity at a given time comprises a credible forecast for the level of investment at a later stage. This also happens in reverse, in the sense that the relation is causal and not simply parallel. It was noted that it was not only the level of economic activity that increased, but also productivity (Cronin *et al.*, 1993 Aug.: 415-30; Cronin *et al.*, 1993 Dec.: 677-90). This obviously raised a problem: increases in productivity were coupled by decreases in labour positions, an increase in unemployment; a problem is finally generated that leads at a reduction of productivity in society at the macro level.

In this climate, Gensollen and Laubie, drawing from the experience in France between the mid-70s and the mid-90s, suggest that: “*expenditure on telecommunications, though creating fewer jobs (mid-1980s - mid-1990s), has a significant effect on economic growth without being inflationary or affecting the balance of trade*”. They also argue that telecommunications are central to the current economic changes (Gensollen and Laubie, 1994).

With the proliferation of ICTs, the questions, at a later stage, were unavoidably put more generally. Daveri suggests that: “*in the 1990s, capital accumulation in information technologies did make a contribution to growth in Europe too, although not equally everywhere. . .but also grew bigger over time*”. Daveri further splits up the European countries into three groups according to the contribution of new technologies to their growth. He concludes that: “*at least a fraction of the growth gaps between the US and the EU and within the EU can be associated to existing differences in the use and adoption of new technologies*”, but he finally does not conclude on the causality issue, i.e. whether new technologies foster growth or whether ICT capital accumulation is a result of this (Daveri, 2000). David argues that the **commercial applications of computers** will bring about: “*major organisational reconfigurations of this kind, will have a potential to yield capital-savings that do not come at the expense of labour productivity gains*”, and that finally “*the older branches of an increasingly digitalised economy will enjoy a pervasive quickening in the pace of conventionally measured multi-factor productivity improvements*” (P. David, 2000). Using a similar rationale, Jalava and Pohjola argue that, unlike outside the US where the evidence is much weaker, “*both the production and use of ICT have been the factors behind the improved economic performance* (output growth, labour,

⁶ For a good overview of relevant research up to 2000, see G. Madden, and S. Savage (2000).

and multi-factor productivity) of the United States in the 1990s". Referring to the experience from Finland, they suggest that: "in Finland the contribution to output growth from ICT use has increased from 0.3 percentage points in the early 1990s to 0.7 points in the late 1990s, and that, the fast growth of multi-factor productivity in the ICT-producing industries has had an even larger impact although, unlike in the US, there has been no acceleration in the trend rate of labour productivity. They conclude that the productivity gains [in the US] not only reflect increased investment in ICT, but also complementary innovations in business organisation and strategy. This is what the New Economy is all about" (Jalava and Pohjola, 2002). Yoo explores the impacts of **information technology investment** on economic growth using a cross-country analysis based on data from 56 developing countries for the years 1970–1998. The results show that IT investment has a **significant impact on the level of GDP per capita** in developing countries" (Yoo, 2003).

In contrast, to the above, Vijselaar and Albers exploring "the importance of ICT for developments in average labour productivity growth in the euro area, find that **the contribution of ICT to ALP growth has increased** both in terms of production and investment over the 1990s". Further examining the spill-over effects (from ICT to ALP growth), and because of "the simultaneous slowdown in TFP growth, they conclude that there is no reason to believe that potential output growth in the euro area has increased significantly in recent years on account of new technologies, and argue that the structure of the economy is more important for explaining the difference in performance". They also argue: "more firm evidence is needed to assess such a possible impact on potential real GDP growth." (Vijselaar and Albers, 2004).

From the literature above, it can be deduced that ICT has a positive impact on many economic magnitudes though there are reservations about the extent of this positive influence. It has to be stressed that ICT alone is much less influential than when it is coupled with organisational change.

If this is the case with ICT, what would be the impact of the telecommunication sector?

Opposing enthusiasm, already from the turn of the mid-90s, Röller and Waverman in their important work, employing simultaneous macro- and micro-modelling, and introducing new elements in the research of the relation between telecommunication infrastructure and aggregate output, find that: "the impact between **telecommunications infrastructure** and aggregate output is much reduced and statistically insignificant". However, they also point out that, taking into account network externalities and the non-linearity of

the impact of telecommunications on growth, there is “evidence of a positive and significant link, provided that a *critical mass* in a country’s telecommunications infrastructure has been achieved. This suggests that increases in telecommunications infrastructure could create **higher growth effects** in OECD countries than in the less-developed non-OECD countries” (Röller and Waverman, 1996). In another important work, Madden and Savage develop “a supply-side growth model which employs teledensity and the share of telecommunications investment in national income as telecommunications capital proxies”. They find evidence of “a significant positive cross-country relationship between **telecommunications capital and economic growth**, when using alternative measures of telecommunications capital.” (Madden and Savage, 2000). Being more optimistic, from a policy perspective, Eisenach, and Lenard, refer to the “increasing importance of the Information Technology (IT) sector to the U.S” and to the fact that “investment in **telecommunications infrastructure** and other forms of information technology is the primary cause of the acceleration in **productivity growth**”. Particularly referring to the need for reform of the Unbundled Network Element platform, they argue that telecommunications regulation should be seen positively, as it can have beneficial effects on GDP and employment (Eisenach and Lenard, 2003).

As most literature deals with the impact of telecommunications investment, i.e. from the supply side, much of the research deals with the impact of the investment of operators.

Datta employs a “simultaneous-equations model to examine the relationship between **research intensity, market share, firm size, and total factor productivity (TFP)** before and after divestiture” in the US (1984), particularly focusing on AT&T. The researcher finds that: “the effect of divestiture on productivity is negative but that competition has a significantly positive effect” (on TFP), as well as “a strong and positive relationship between R&D and productivity in the post-divestiture period, marked by its absence in the pre-divestiture years,” also pointing out the importance of scale economies (Datta, 2003). Beil, Ford and Jackson, “using a time series of 50 years, the relationships between **investment by telecommunications firms and Gross Domestic Product** in the United States”, and applying Granger-Sims causality tests, suggest that: “investment by telecommunications firms is caused by, but does not cause, economic activity, that the findings are robust across lag lengths, and that higher levels of investment in the telecommunications sector require a return to economic expansion or, at least, stability” (Beil et al., 2005). The reservation on the effects of telecommunications operators investments is partly shared by Björkroth, who examines the effect of **investments by telecommunications operators on the**

growth rate of real GDP, by using time-series data for Finland, Sweden and Norway between the years 1970 and 2001. The results of his research “do not, thus far, provide any evidence that the investment expenditures of telecommunications operators have significantly altered the pace of economic growth, and contrast to previous studies using data from Central and Eastern Europe and from the OECD countries”. This result, based on telecommunications infrastructure which is provided by the supply side, does not indicate “that investments in telecommunications as a whole are characterised by low productivity”. His findings support the “importance of public capital formation for economic growth”. The author concludes that: “in relatively developed economies, the effect of telecommunications on growth may arise from investments in user segments, rather than from investment expenditure on the supply side.” The author concludes that: “the effects of investment in telecommunications infrastructure on growth are relatively small in high-income economies in comparison with lower-income economies” (Björkroth, 2004).

It becomes obvious from the above that, contrary to the more optimistic views related to the effects of ICTs in general, the effects of telecommunications in particular are not according to most research that encouraging in showing that telecommunications bring about much economic growth, or productivity growth.

One of the more optimistic views is that of Datta, and Agarwal. They investigate “the long run relationship between **telecommunications infrastructure and economic growth**, using data from 22 OECD countries” with a dynamic panel data. They argue for “a significant and positive correlation between telecommunications infrastructure and real GDP per capita growth, after controlling for a number of other factors. They also suggest that because telecommunications investment is subject to diminishing returns ... countries at an earlier stage of development are likely to gain the most from investing in telecom infrastructure. In this sense, from the perspective of government policy ... providing an efficient telecommunications infrastructure is significant for fostering economic growth!”. In addition, their results also suggest that: “countries at an earlier stage of development are likely to gain the most from investing in telecom infrastructure” (Datta and Agarwal, 2004). Cieslik and Kaniewska, sharing this optimism, but from the regional perspective, developed a “theoretical model that establishes a link between telecommunications infrastructure and the regional level of income”. Testing this model for Polish regional panel data for the 1990s, they found “a positive and statistically significant causal relationship between **telecommunications infrastructure and**

income at the regional level ... with causality running from telecommunications to income" (Cieslik and Kaniewska, 2004).

As a result, one could argue that there is a positive impact of telecommunications on growth and economic performance, but there are many reservations about the extent of this impact. These reservations range from the impact being insignificant to important and are largely dependent on how the impact is measured and how models are formulated.

In particular, relating to sets of countries Yoo (2003), Björkroth (2004), and Datta and Agarwal (2004) argue that the effect of telecommunications investments is more significant in less-developed countries, while Röllner and Waverman (1996) argue for virtually the opposite.

4. Identifying the Relation between GDP/c and Various Economic and Telecommunication Variables

Keeping the above arguments in mind, we further examine the trends in the field of telecommunications in the OECD countries and relate basic telecommunication magnitudes and variables with economic variables in an effort to detect relations between telecommunications and economic development. A categorisation of the OECD countries will be attempted. In this context, there is a special reference to the position of Greece in the international hierarchy of telecommunications development.

A first attempt to detect the relation between various telecommunication and economic variables of the telecommunication sector was made by a construction of a correlation matrix relating variables for the 30 OECD countries (average magnitudes of the period 1991-2001 for all countries). Our special concern was the relation of the various telecommunication variables with GDP/c. The variables were tested for the period 1991-2001, were presented in Table 4.

According to the result and the matrix created, the variables that had the highest correlation with GDC/c, were presented in Table 5. Total PTO investment as a percentage of gross fixed capital formation (GFCF) has a negative correlation to GDP/c, while all other magnitudes are positive. This actually means that the richer a country is (high GDP/c and higher GFCF) the smaller in terms of percentage is the proportion of PTO investment as a percentage of GFCF (despite its possible high absolute value). The rest of the variables indicate that high values of GDP/c are closely related with high

penetration rates, degree of digitalisation and communication equipment imports. It is interesting to note that exports are not present in this table, suggesting that the use (imports) is more crucially related to GDP/c, meaning that the use of telecommunication is more important for GDP creation than its production.

Table 4. List of Selected Telecommunication and Economic Variables

Variables			
1	Gross Domestic Product per capita 1991-2001	19	Total PTO revenue in USD
2	Total national employment	20	Total staff in telecommunications services
3	Population	21	Total staff in telecommunications services per National Employment
4	Households	22	DSL Lines
5	Gross Domestic Product in USD	23	DSL Lines per household
6	Gross Fixed Capital Formation	24	DSL Lines /100 households
7	Gross Fixed Capital Formation per capita	25	Internet Subscribers
8	Total Import of communications equipment, SITC Rev 3, USD	26	Internet Subscribers/ capita
9	Total Import of communications equipment, SITC Rev 3, USD per capita	27	Internet Subscribers per 100 inh.
10	Total export of communications equipment, SITC Rev 3, USD	28	Internet Subscribers per household
11	Total export of communications equipment, SITC Rev 3, USD per capita	29	Mobile Subscribers
12	Trade balance	30	Mobile Subscribers per capita
13	Internet Hosts	31	Mobile Subscribers per 100
14	Internet Hosts per 100 households	32	Percent of Digital Access Lines
15	Total PTO investment as a percentage of gross fixed capital formation	33	Standard Access Lines
16	Total PTO investment per inhabitant in USD	34	Standard Access Lines per capita
17	Total PTO Investment in USD	35	Standard Access Lines per 100
18	Total PTO revenue/c in USD	36	Standard Access Lines per household

Table 5. List of Telecommunication and Economic Variables with the Higher Correlation with Gdp/C

	Variable	Correlation
9	Total Import of communications equipment, SITC Rev 3, USD per capita	0.658
14	Internet Hosts per 100	0.524
15	Total PTO investment as a percentage of gross fixed capital formation	-0.540
16	Total PTO investment per inhabitant in USD	0.763
18	Total PTO revenue in USD	0.927
27	Internet Subscribers per 100 inh.	0.512
31	Mobile Subscribers per 100 inh	0.691
32	Percent of Digital Access Lines	0.585
35	Standard Access Lines per 100 inh	0.773

Table 6. Correlation between the List of Telecommunication and Economic Variables with the Higher Correlation with Gdp/C (Pearson Correlation - Sig. [2-tailed])

	9	14	15	16	18	27	31	32	35
9	1,000	0.668 0.000	-0.365 0.051	0.385 0.039	0.605 0.001	0.537 0.003	0.633 0.000	0.468 0.010	0.610 0.000
14		1,000	-0.295 0.113	0.363 0.048	0.564 0.001	0.622 0.000	0.724 0.000	0.441 0.015	0.607 0.000
15			1,000	-0.054 0.777	-0.425 0.019	-0.327 0.077	-0.373 0.042	-0.590 0.001	-0.396 0.030
16				1,000	0.808 0.000	0.488 0.006	0.518 0.003	0.328 0.077	0.648 0.000
18					1,000	0.571 0.001	0.697 0.000	0.575 0.001	0.818 0.000
27						1,000	0.615 0.000	0.385 0.036	0.657 0.000
31							1,000	0.429 0.018	0.741 0.000
32								1,000	0.524 0.003
35									1,000

It is worth noting that, as seen in Table 6, the 9 variables are in several ways correlated with each-other.

From Table 6 can be derived that:

- **Total Import of communications equipment**, SITC Rev 3, USD per capita, is significantly correlated with: Internet Hosts per 100 inh., Internet Subscribers per 100 inh, Mobile Subscribers per 100 inh, Standard Access Lines per 100 inh, and to a lesser extent with Percent of Digital Access Lines.
- **Internet Hosts per 100 inh.** with Total Import of communications equipment, Total PTO revenue/c, Internet Subscribers per 100 inh, Mobile Subscribers per 100 inh, Standard Access Lines per 100 inh, and to a lesser extent with Percent of Digital Access Lines.
- **Total PTO investment as a percentage of gross fixed capital formation**, with none, or negatively correlated
- **Total PTO investment per inhabitant in USD**, with Total PTO revenue/c, Mobile Subscribers per 100 inh, Standard Access Lines per 100 inh, and to a lesser extent with Internet Subscribers per 100 inh
- **Total PTO revenue/c in USD** with all except PTO investment as a % of GFCF.
- **Internet Subscribers per 100 inh.** With Total Import of communications equipment, Total PTO revenue/c, Internet Hosts per 100 inh., Mobile Subscribers per 100 inh, Standard Access Lines per 100 inh, and to a lesser extent with Total PTO investment per inhabitant in USD
- **Mobile Subscribers per 100 inh**, with Total Import of communications equipment, Internet Hosts per 100 inh., Total PTO revenue/c, Total PTO investment per inhabitant in USD, Internet Subscribers per 100 inh, Standard Access Lines per 100 inh, and to a lesser extent with Percent of Digital Access Lines
- **Percent of Digital Access Lines** with Standard Access Lines per 100 inh, Total PTO revenue/c, and to a lesser extent with most of the rest.
- **Standard Access Lines per 100 inh** with all except PTO investment as a % of GFCF.

The strong correlation between all the variables (except 32), is indicative of the fact that the modern communications sector involving the Internet and

mobile telephony is closely interrelated and points to the already appearing shift of the telecommunications paradigm. It is noticeable that the import of equipment is a relevant participant, which provides an additional argument that the use is the crucial factor, rather than production. Digital access lines (%) appear in most cases as correlated, but not to the extent the others are correlated with each other, though standard lines are. This is a question to be researched, as the backbone of modern telecommunications is digital transmission (although in many forms, one of which is the digital access lines as a percentage of the standard access lines).

It is also very interesting to note that Mobile Subscribers, Standard Access Lines per 100 inhabitants, and total staff in telecommunications services have strongly positive relations with each other and with 1) total national employment, 2) total export of communications equipment, SITC Rev 3, 1988-01, USD, 3) total import of communications equipment, SITC Rev 3, 1988-01, USD, 4) Total PTO Investment in USD, 5) Total PTO revenue in USD, 6) Gross Domestic Product in USD.

Following the correlation matrix, four variables were chosen:

- i. total PTO investment as a percentage of gross fixed capital formation,
- ii. total PTO investment per capita in USD,
- iii. total PTO revenue in USD per capita,
- iv. percent of Digital Access Lines.

Despite our interest, which focuses on latest developments, data for mobile subscribers and Internet-related data in the OECD series were only available for a few years, not making, for the present, a very valuable data series. On the other hand, Standard Access Lines per 100 inh (voice telephony penetration) is not very indicative of modern restructuring (theoretically, there can be a large penetration of analogue networks not yet digitalised) therefore it has been omitted. Total import of communications equipment, SITC Rev 3, USD per capita has been omitted as telecommunication development in relation to growth can happen either with or without imported equipment.

For each variable, the corresponding scatter diagrams were created (see appendix). According to these diagrams and the quadrants emerging, the combined Table 7 was created.

Table 7. Combined Table Based on Scatter Diagrams

I				II			
A	B	C	D	A	B	C	D
Belgium Switzerland Germany Austria Denmark Australia	Belgium Italy France Austria Denmark Norway Canada Sweden Ireland Japan Finland Luxembourg Netherlands Iceland Switzerland	Belgium Italy France Ireland Finland Norway Canada	Belgium Italy France	US UK Japan France Sweden Iceland Netherlands Finland Italy Canada Norway Ireland Luxembourg	US UK Australia Germany	US UK Japan Germany Sweden Iceland Netherlands Denmark Luxembourg Switzerland Australia Austria	US UK Japan Germany Sweden Iceland Netherlands Denmark Luxembourg Canada Norway Austria Finland Australia Ireland Switzerland
III				IV			
A	B	C	D	A	B	C	D
Spain Greece Korea Czech Rep. Slovakia Poland Hungary	Spain Korea Mexico Turkey New Zealand	Spain Greece Korea Mexico Czech Rep. Slovakia Poland Hungary Turkey Portugal New Zealand	Spain Greece Korea Mexico Czech Rep. Slovakia Poland Hungary Turkey Portugal	N. Zealand Portugal Mexico Turkey	Greece Portugal Poland Czech Rep. Hungary Slovakia		N. Zealand

- A: Percentage of digital access lines
- B: Investment as % of GFCF
- C: PTO investment/c in \$
- D: PTO revenue/c

Note: with **bold** are countries appearing 3 or 4 times in the same quadrant.

Quadrants I and II in the above table show the countries with the highest GDP/c and III and IV the ones with the lowest. It has to be stressed that 19 out of the 30 countries show a high consistency presenting all four or three of their variables in the same quadrant. It highlights that the greatest presence of the more-developed countries is in II (45 countries as opposed to I: 24 countries) and the greatest presence of the less-developed countries is in quadrant III (31 countries as opposed to IV: 11 countries), indicating that more-developed countries are performing better in most aspects (US and UK in all aspects) while less-developed ones are performing worse also in most aspects (interestingly Korea which in many other aspects e.g. broadband penetration, is very advanced). Interesting exceptions are Belgium, Italy and France, which though enjoying a higher GDP/c, perform worse

in the variables considered. It could therefore be argued that, per variable, countries in quadrant I are the most developed, those in quadrant III less, while countries in quadrants II and IV are at an intermediate stage (per variable). It has to be stressed, however, that the correlation made, and the table constructed, being cross-sectional, represents a static picture of what happened between 1991 and 2001. Taking this into consideration, we note that most of the less-developed countries have been lagging behind in most of the examined aspects, while the developed countries have been more diverse. In practical terms, this means that the wave of modernisation and development started earlier for the more-developed countries and yielded its first results during the period concerned, but was not completed during this period. In the case of the less-developed countries, it simply started later and was not able to produce any significant results nor considerably influence the picture of the decade.

Greece has been, during this period, in the set of the less-developed countries, both in terms of GDP/c and the variables examined in relation to it.

If this was the case of the average situation in the OECD countries during the 1991-2001 period, in order to complete a picture it would be useful to see what the progress of the countries within the period actually was. For this purpose, the corresponding variables were examined for the beginning and the end of the period, and the resulting scatter diagrams produced the following results (see Table 8).

Table 8. Percentage (%) of Digital Lines Change, 1991-2001

From II to I	From I to IV	From IV to I	From III to IV	From IV to III	Stable
Belgium Canada France Japan Luxemburg Netherlands Norway Sweden US	Italy	Ireland UK	Australia Mexico	Turkey	Austria (I) Denmark (I) Finland (I) Germany (I) Greece (III) Hungary (III) Iceland (II) Korea (IV) N. Zealand (IV) Poland (III) Portugal (IV) Spain (III) Switzerland (I)

From II to I means that countries with a high GDP, which in 1991 had a relatively high value in both variables (GDP/c and % of digital lines) kept their high GDP/c but moved to a lower value regarding the percentage

of digital lines. It is worth noting that these countries are in the group of more-developed countries. Italy deteriorated in terms of the percentage of digital lines variable. Turkey has deteriorated in the percentage of digital lines variable, while Australia and Mexico have moved to higher percentages of their digital lines value compared to their GDP/c, which remained in the lower part. It is quite interesting that Ireland and the UK, despite improving their GDP/c variable, moved a quadrant back in their percentage of digital lines variable. In fact, most developed countries, either remained in the same quadrant or moved back in terms of the telecommunication variable examined.

In the case of PTO Investments per capita (*see* Table 9), a set of developed countries (some of which are the same as in the previous case) also moved to the first quadrant, meaning that their telecommunication variable deteriorated. Another smaller set (Denmark, Iceland, UK, US) improved their telecommunication variable. Italy deteriorated in both variables, while New Zealand and Spain only in their telecommunication variable. Ireland improved its GDP/c and Greece moved a quadrant to the right, meaning that its telecommunication variable improved. From the facts above, it can be deduced that the shifts actually happened between the developed countries.

Table 9. PTO Investments per capita Change, 1991-2001

From II to I	From I to II	From II to III	From III to I	From III to IV	From IV to III	Stable
Finland France Germany Ireland Luxemburg Norway Sweden	Denmark Iceland UK US	Italy	Ireland	Greece	N. Zealand Spain	Austria (II) Belgium (I) Canada (II) Czech Rep. (III) Hungary (III) Japan (II) Korea (III) Mexico (III) Netherlands (II) Poland (III) Portugal (III) Switzerland (II) Turkey (III)

Note: Slovak Republic, Czech Republic (No data for 1991)

In the case of PTO Investments as a percentage of GFCF (*see* Table 10), Austria Canada and Germany which are developed countries moved to quadrant I of lower telecommunication values, while, some other developed countries moved forward to II. The Czech Republic and Poland improved

their telecommunication variable contrary to Korea, and Italy, which deteriorated in both variables.

Table 10. PTO Investments as Percentage (%) of GFCF Change, 1991-2001

From II to I	From I to II	From II to III	From II to IV	From IV to II	From III to IV	From IV to III	Stable
Austria Canada Germany	Iceland Sweden Switzerland UK	Italy	Australia	Ireland	Czech Rep. Poland	Korea N. Zealand Spain	Belgium (I) Denmark (I) Finland (I) France (I) Greece (IV) Hungary (IV) Japan (I) Luxemburg (I) Mexico (IV) Netherlands (I) Norway (I) Portugal (IV) Turkey (III) US (II)

Note: Slovak Republic, Czech Republic (No data for 1991)

In the case of PTO Revenue per capita (*see* Table 11), Austria and France moved to lower values of their PTO revenue/c, while Belgium, Denmark, Iceland, UK and US, moved forward as far as their telecommunication value is concerned; Ireland improved in both variables, in contrast to Italy. Australia had a lowed GDP/c value and New Zealand and Spain deteriorated in their telecommunication variable.

Table 11. PTO Revenue per capita Change, 1991-2001

From II to I	From I to II	From II to III	From III to II	From II to IV	From IV to III	Stable
Austria France	Belgium Denmark Iceland UK US	Italy	Ireland	Australia	N. Zealand Spain	Canada (II) Czech (III) Finland (II) Germany (II) Greece (III) Hungary (III) Japan (II) Korea (III) Luxemburg (II) Mexico (III) Netherlands (II) Norway (II) Poland (III) Portugal (III) Sweden (II) Switzerland (II) Turkey (III)

Note: Slovak Republic, Czech Republic (No data for 1991)

From the tables above (Tables 8-11), it can be deduced that the most improved (3 out of 4) telecommunication variables were Iceland and UK; Denmark and US improved two of the four, and Australia improved one. Ireland and Greece also improved in one, as well as the Czech Republic and Poland. Finally, Mexico also improved in one variable. So, in most developed countries one or more of the telecommunication variables deteriorated.

In terms of GDP/c, it was only Ireland that improved its position in three cases. Italy deteriorated in all cases, while Australia deteriorated in two.

Greece in particular, has remained below average in GDP/c in all cases. In terms of the telecommunication variable, it has improved in one (PTO Investments per capita), and kept its above-average position in the other (PTO investment as a % of GFCF). In this sense, it has a position below the average of the OECD countries.

5. Conclusions

ICT and telecommunications have progressed substantially over the last fifteen years, based on the digitalisation of communication networks. Based on the digitalisation of networks, which in the EU-15 is almost 100% and in the OECD countries is heading towards this, mobile telephony and Internet access are growing quite fast, while standard access lines, growing at a considerably slower pace, seem to be reaching their limit. Broadband is also progressing, but having started only relatively recently, is still at low levels. Its future might depend upon its competitive advantages, which will rather come from the persuasion of users for its contents opportunities than from its higher speeds (compared with ISDN). These circumstances have developed via a new regulatory framework based on the liberalisation of the market. In the EU, this framework has been adopted step-by-step, with complex legal regulations and a significant reshuffling of market shares that were previously monopolised by the incumbents. In Greece (which has successfully followed the general trends, though with low starting points and considerable delays in some cases), the legal framework is heading towards its completion, being harmonised with the rest of the EU and OECD.

In the above context, the question of the contribution of ICT and specifically of telecommunications to economic performance has been raised. Most research up to now has shown that the contribution under question exists, but there is scepticism as to its extent. Regarding groups of

countries, most research points to the fact that those who benefit more are the less-developed countries. Within this rationale, an attempt was made to see which variables are mostly correlated with GDP/c. The nine variables that presented the higher correlations were in their most part also closely related to each other. Of them, four were selected (percentage of digital lines, PTO investment as a percentage of GFCF, PTO investment/c and PTO revenue/c) and were grouped according to their scatter diagrams. The combined table produced reveals that, during the period 1991-2001, most-developed countries had, on average, a position of high GDP/c and telecommunication variables, while the less-developed countries had low values. However, when the first (1991) and last year (2001) were examined, it was revealed that in many developed countries telecommunication values had deteriorated.

Greece belonged to the below-average group, and has actually improved its PTO investment performance in telecommunications moving, by the end of the period, above their average values. However, this had by 2001 not yielded a result in percentage digital lines or PTO revenue/c, something that indicates the time lag between investment and practical result. This development can partly be attributed to the structure of the market during this period, to the slow pace of digitalisation, especially at the beginning of the period, and consequently to the slower pace of adoption of relevant applications (which is reflected on the lower levels of revenue). This has placed Greece at the below-average levels of the OECD telecommunications hierarchy during 1991-2001.

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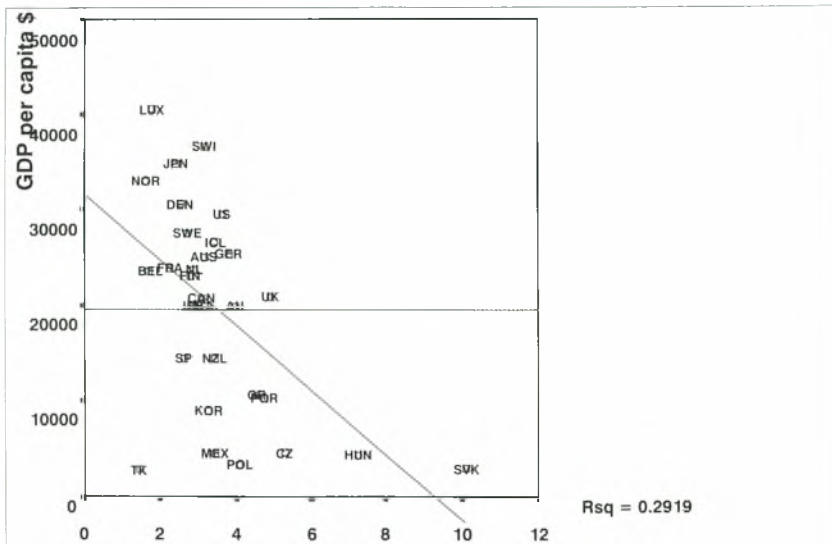
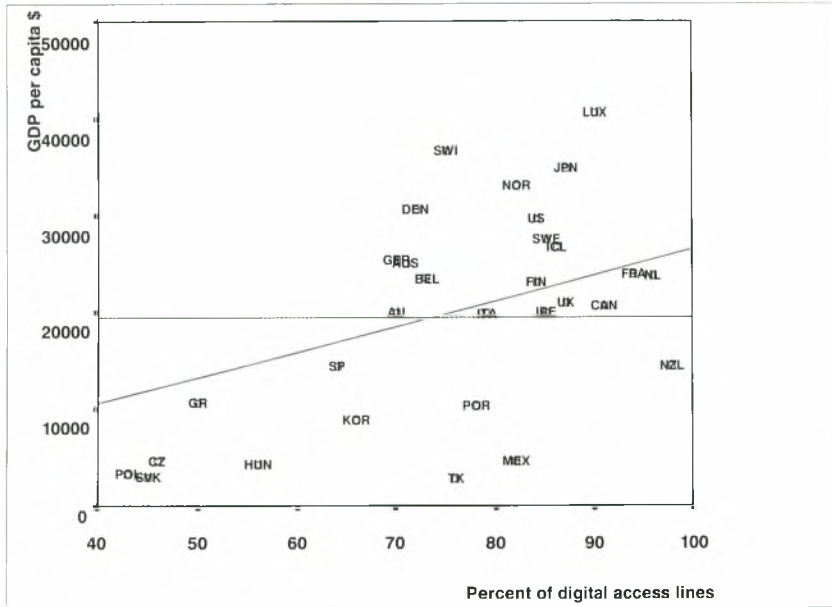
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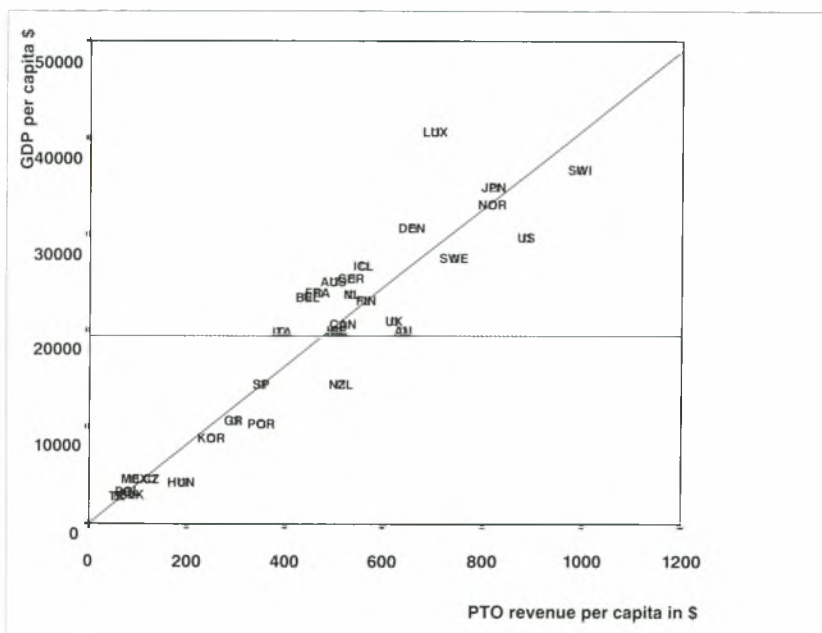
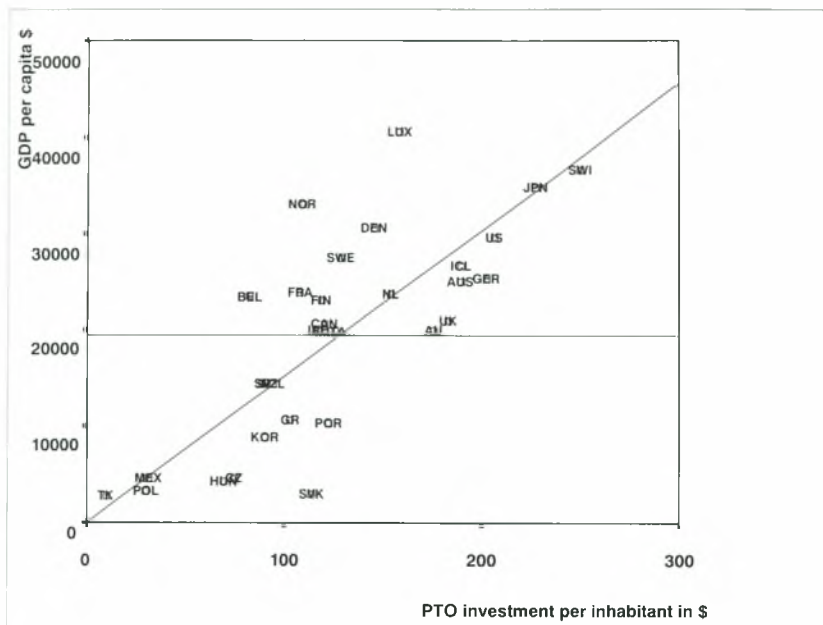
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Appendix

Scatter diagrams based on the correlations





Determinants of Industrial Performance in the EU-15 Countries¹

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Abstract

The process of European Union (EU) economic integration has been associated with a variety of outcomes in both time and space. One critical question has to do with the impact of open markets on the levels of economic performance of the EU countries. Is there a proper mix of economic activities that leads to higher levels of economic performance? Given that industrial activity is more exposed to the forces of economic integration – due to the restrictions imposed on the exchange of agricultural products and the non-tradable character of most services – this discussion holds more interest when it is related to industry. The paper aims to detect the determinants of industrial performance in the old EU countries (EU-15), covering the period 1980-2003 during the ongoing process of EU economic integration. Understanding the factors behind success and failure may have an added value for policy-making at a time when EU structural and cohesion policies are under scrutiny.

Keywords: *Economic integration, industrial performance, EU-15 countries.*

1. Introduction

The process of European Union (EU) economic integration has been associated with a variety of outcomes in time and space. One critical question has to do with the impact of open markets on the levels of economic performance of the EU countries. Is there a proper mix of economic activities

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that leads to higher levels of economic performance? This is an issue that has been analysed by a relatively large section of scientific literature (Aiginger *et al.*, 1999; Midelfart-Knarvik *et al.*, 2000; Brülhart, 2001; Dohse *et al.*, 2002, *inter alia*). Given the restrictions imposed on the trade of agricultural products and the non-tradable character of most services, this issue holds more interest when it is related to the sector of industry. The sector of industry presents strong cut-off tendencies from any natural or political constraints concerning the mobility of its activities (and its products), and strong linkages with the other productive sectors as the producer and consumer of final and intermediate products. Thus, the sector of industry constitutes the main diffusion channel for the impact of the economic integration process on space.

The changes taking place in the spatial patterns of industrial activity are typically perceived through the Neoclassical Trade Theory (NCTT) and the New Economic Geography (NEG) (Brülhart, 1998; Puga, 2002). The NCTT asserts that the spatial allocation of industrial activities is determined exogenously according to inherent comparative advantages. The NEG, in contrast, claims that the spatial allocation of industrial activities is a self-sustained process based on agglomeration economies. The NCTT is in favour of convergence, claiming that the enhancement of specialisation patterns, as a result of an increase in demand for the goods that an economy is able to produce at low cost, is the cause of the equilibrium of factor prices. The NEG, on the other hand, detects centripetal and centrifugal forces that have an uneven impact on economic performance.

The EU experience does not yet seem to concur with the claim of the NCTT. Even though the EU has reached an advanced stage of economic integration – the Economic and Monetary Union (EMU) – its economic space remains heterogeneous (Ciccone, 2002; Aiginger and Davies, 2004). The process of economic integration creates (reveals) winners and losers, in both absolute and relative terms, as an outcome of its heterogeneous spatial and structural impact (Martin and Ottaviano, 2001; Forslid *et al.*, 2002). The more advanced EU economies are concerned that the abolition of trade barriers and the free movement of capital will have negative implications for their industrial activity. The less advanced EU economies question their ability to capitalise on the opening up of markets, as they are thought to be poorly adjusted to the conditions and demands of the integrated economic environment (Melachroinos, 2002).

Indeed, the EU countries experienced significant changes concerning the competitive environment of their industrial activities. The pressure to produce high-quality products at attractive prices forces industrial firms to focus not only on low production cost but also on quality and innovation. The external environment of industrial firms – their proximity to clients and suppliers, level of infrastructure, availability of skilled labor force, *inter alia* – has become the decisive factor that affects their locational decisions (Fujita and Krugman, 1995; Venables, 1996). Under these emerging conditions, significant structural changes were observed in many EU countries with a heterogeneous impact on industrial performance. The elevation of economic and social cohesion as a major EU objective explains and, at the same time, necessitates the increased attention on such an impact.

This paper aims to detect the determinants of industrial performance in the old EU countries (EU-15) covering the period 1980-2003, during the ongoing process of EU economic integration. Understanding the factors behind success and failure may have an added value for policy-making at a time when EU structural and cohesion policies are under scrutiny. The second section of the paper presents and analyses the structural aspects of the EU economic integration process. The third section provides the results of the empirical model, attempting to test the impact of structural factors on industrial performance both at the aggregate national and at the disaggregated branch level. The conclusions of the paper are reported in the last section.

2. The Structural Aspects of the European Union Economic Integration: Evidence from Industrial Data

The EU-15 countries seem to maintain their industrial participation around the level of 20% of their total Gross Domestic Product (GDP) (see Table 1). Exception An exception to this, as far as the above observations are concerned, is the share of Irish industry, which surpasses the level of 40%. The industrial shares of Finland and Sweden are also significantly higher than the EU-15 average, at, just below the level of 30%, whereas the industrial share of Greece is extremely low, being slightly higher than 10%. The aggregate level evidence indicates the exceptional industrial performance of Ireland, which displays trends of intense industrialisation. Analogous, although clearly less strong, are the trends for Sweden and Finland, contrasting with the trends of the majority of the EU core countries that experience a rather

stable industrial performance. The Southern EU countries present significant hysteresis, having rather low shares of industrial activity. Such a hysteresis can be also traced through the examination of industrial productivity levels (*see* Table 2). Greece, Spain and Portugal are found in the lowest places of the ranking, whereas Ireland, Luxemburg, Finland and Sweden hold the top places. The performance of Ireland is impressive in that it managed to quintuple its productivity levels, despite being a peripheral EU country. This economic “miracle” is the outcome of a combination of low wages, a good supply of skilled labor, an economic climate that favors innovation and a policy focus that establishes upstream linkages between domestic and foreign firms (Braunerhjelm *et al.*, 2000). In contrast, the stagnation of the United Kingdom (UK) economy with regard to industrial productivity is remarkable; this can be attributed mainly to its inability to maintain high levels of innovation (Beath, 2002). The decline of German industrial productivity, on the other hand, is considered to be natural after the unification with East Germany (Klodt, 1999).

Table 1. Share of Industry (%) in GDP

Country	1980	1985	1990	1995	2000	2003
Ireland	20.35	19.71	27.12	29.91	37.49	41.65
Finland	19.26	20.58	21.32	25.02	28.31	29.36
Sweden	17.08	20.16	18.95	22.02	26.58	27.51
Austria	15.98	20.28	20.48	19.56	21.34	21.85
Germany	29.00	27.63	27.42	22.28	21.83	21.43
Belgium	17.52	19.51	21.15	19.90	20.73	20.93
Italy	24.34	21.88	22.33	21.96	21.30	20.62
France	16.88	16.09	17.61	18.72	19.67	20.12
Portugal	23.51	21.33	20.96	19.76	20.67	19.85
UK	24.56	22.12	22.99	21.70	19.71	18.35
Spain	21.33	19.41	18.74	18.14	18.07	17.93
Netherlands	15.59	14.63	18.01	17.50	16.86	17.17
Denmark	18.75	18.69	17.29	17.15	15.84	15.34
Luxembourg	23.11	19.64	19.14	14.32	13.59	15.16
Greece	13.88	13.91	13.17	12.32	11.46	10.83

Source: Data from European Regional Database (Cambridge Econometrics, 2006) elaborated by the authors

Table 2. Industrial Productivity Levels in the EU-15 Countries (euro(€)/employee in 1995 Prices)

Country	1980	1985	1990	1995	2000	2003
Ireland	4,042	4,843	7,507	9,313	15,644	20,147
Luxemburg	8,658	9,139	10,858	12,198	13,560	14,123
Finland	5,548	6,484	7,745	8,927	12,355	13,463
Sweden	5,107	6,626	6,901	8,370	12,012	12,642
Austria	5,683	7,490	8,612	8,750	10,882	11,359
Belgium	6,800	7,615	9,734	9,029	10,081	10,549
Germany	12,783	11,875	12,918	9,669	10,471	10,519
France	6,056	6,083	7,553	8,082	9,146	9,448
Denmark	6,960	7,284	6,918	7,572	7,898	8,171
Italy	6,443	5,975	6,817	7,308	7,566	7,301
Netherlands	5,379	5,146	6,972	6,869	7,143	7,063
UK	5,033	4,774	5,562	5,696	5,801	5,683
Spain	4,767	4,471	4,903	4,813	5,269	5,366
Portugal	2,363	2,154	2,870	2,984	3,556	3,388
Greece	2,605	2,508	2,529	2,435	2,487	2,669

Source: Data from European Regional Database (Cambridge Econometrics, 2006) elaborated by the authors

The industrial sectors are disaggregated according to the Nomenclature of Classification for Economic Activities (NACE) 2-digit classification and grouped in three general categories that broadly represent labor-intensive (LINT), resource-intensive (RINT) and capital-intensive (CINT) activities (Jackson and Petrakos, 2001) (*see* Tables 3 and 4). A general trend is recorded, in both GDP and employment terms, towards the decrease of the shares of the LINT sectors and the increase of the shares of the RINT and the CINT sectors. There is, however, a variety of trends among the EU-15 countries indicating that changes in the composition of industrial sectors were not the same everywhere. The majority of the EU-15 countries experienced decreasing trends in the shares of their LINT sectors. The case of Ireland is notable, since this country recorded a fall of about 14% and 21% in GDP and employment terms, respectively. There are, moreover, a large number of countries that have experienced the same trend, with reductions higher than 5%. On the other hand, Luxemburg is a characteristic exception since it recorded an increase of almost 11% in both terms.

Table 3. Sectoral Shares (%) of Industrial GDP

Country	1980			1990			2000		
	LINT	RINT	CINT	LINT	RINT	CINT	LINT	RINT	CINT
Belgium	37.84	38.99	23.17	37.02	38.45	24.53	37.08	38.66	24.26
Denmark	53.20	27.64	19.16	49.71	30.06	20.23	46.07	33.07	20.86
Germany	41.98	26.26	31.76	37.11	27.38	35.51	34.31	29.17	36.52
Greece	70.66	18.02	11.32	66.89	21.64	11.47	63.93	22.51	13.56
Spain	45.12	33.00	21.88	46.36	29.77	23.87	46.54	28.24	25.22
France	41.99	29.21	28.80	38.39	30.22	31.39	37.27	29.01	33.72
Ireland	51.08	25.59	23.33	39.87	26.77	33.36	36.93	27.45	35.62
Italy	46.77	31.25	21.98	44.76	31.41	23.83	44.18	33.02	22.80
Luxembourg	21.24	70.70	8.06	26.37	62.80	10.83	31.88	54.45	13.67
Netherlands	43.13	31.46	25.41	38.21	37.23	24.56	39.22	35.85	24.93
Austria	53.21	25.32	21.47	46.90	26.55	26.55	43.92	29.47	26.61
Portugal	59.07	22.81	18.12	61.52	23.57	14.91	63.66	24.39	11.95
Finland	50.89	29.37	19.74	47.31	31.19	21.50	42.17	29.94	27.89
Sweden	43.18	28.97	27.85	41.50	29.29	29.21	36.26	29.27	34.47
UK	43.50	28.98	27.52	41.44	30.29	28.27	36.43	30.88	32.69

Notes:

DA: Food, Beverages & Tobacco DB: Textiles & Wearing Apparel DC: Leather Products DD: Wood Products DE: Paper, Publishing & Printing DN: Other Manufactured Products	LINT: Labour-intensive industries
DF: Fuel Products DG: Chemical Products DH: Rubber & Plastic Products DI: Non-Metallic Mineral Products DJ: Fabricated Metal Products	RINT: Resource-intensive industries
DK: Machinery (excl. Electrical) DL: Electrical Machinery & Optical Equipment DM: Transport Equipment	CINT: Capital-intensive industries

Source: Data from European Regional Database (Cambridge Econometrics, 2006) elaborated by the authors

Despite these downturn trends, however, LINT sectors remain the dominant sectoral group in the industrial activity of all the EU-15 countries. The evolution of the shares of the RINT sectors is quite the opposite, since the majority of the EU-15 countries recorded increasing trends. These trends, however, are relatively small when compared to the respective trends of the LINT sectors. Both Luxembourg and the Netherlands are exceptions, as high decreases, in both terms, can be observed in both countries. The

most interesting changes can be observed in the CINT sectors of industrial activity. These sectors are frequently associated with research and development (R&D) and knowledge-based activities, according to the experience of the industrially more-advanced EU core countries (Alonso-Villar, 2002). With the exceptions of Portugal and the Netherlands, the EU-15 countries recorded increasing trends concerning their CINT shares in industrial GDP. The highest increase is observed in Ireland, reaching the level of almost 13%. Mixed trends, in contrast, are recorded concerning the CINT shares in industrial employment, since many EU-15 countries experienced decreases. The highest increase was, again, recorded in Ireland, reaching the level of 12%. One observation that has to be made is that not all the EU-15 countries present the same trends concerning the evolution of their industrial GDP and industrial employment CINT shares. The Netherlands are the most notable case in this respect, with a marginal decrease in GDP and an increase of 13% in employment terms.

Table 4. Sectoral Shares (%) of Industrial Employment

Country	1980			1990			2000		
	LINT ^a	RINT ^a	CINT ^a	LINT	RINT	CINT	LINT	RINT	CINT
Belgium	44.20	31.66	24.14	43.62	31.77	24.61	42.12	32.26	25.62
Denmark	51.53	25.08	23.39	49.24	27.35	23.41	47.56	30.76	21.68
Germany	41.52	24.98	33.50	38.51	25.99	35.50	38.66	26.85	34.49
Greece	64.57	21.10	14.33	66.08	21.53	12.39	64.95	22.96	12.09
Spain	50.85	26.81	22.34	50.55	25.29	24.16	50.37	26.17	23.46
France	42.19	27.01	30.80	41.41	27.32	31.27	41.25	27.26	31.49
Ireland	59.53	19.26	21.21	47.80	24.88	27.32	38.72	28.10	33.18
Italy	50.23	26.56	23.21	50.64	27.12	22.24	52.27	26.47	21.26
Luxembourg	43.16	29.61	27.23	41.85	29.69	28.46	40.87	29.50	29.63
Netherlands	23.99	68.63	7.38	29.53	57.90	12.57	34.65	44.97	20.38
Austria	53.02	24.81	22.17	49.74	25.41	24.85	48.81	26.27	24.92
Portugal	64.55	20.42	15.03	64.29	21.09	14.62	64.32	21.09	14.59
Finland	51.92	23.92	24.16	47.22	30.30	22.48	43.55	34.65	21.80
Sweden	33.71	30.58	35.71	36.81	30.60	32.59	40.44	28.62	30.94
UK	44.89	24.80	30.31	44.80	26.66	28.54	42.53	27.77	29.70

^a See notes on Table 3

Source: Data from European Regional Database (Cambridge Econometrics, 2006) elaborated by the authors

The changes that took place in the industry during the period under analysis can be traced in a more quantified way by the application of the Coefficient of Structural Change (CSC) (Havlik, 1995) (see Table 5). The CSC is an index correlating (*Cor*) the distribution of industrial employment (*S*) among the industrial sectors (*i*) of the country under consideration (*r*), in a base and a final year (*0,k*), according to the formula:

$$CSC_r = Cor_{i=1}^n(S_{i0}, S_{ik})$$

and takes values in the interval [0, 1].

Values close to 0 indicate that significant structural changes have taken place, whereas values close to 1 indicate that almost no structural change has taken place during the period under examination.

Table 5. Coefficient of Structural Change

Country	1980-80	1980-85	1980-90	1980-95	1980-00	1980-03
Italy	1.000	0.998	0.998	0.998	0.991	0.990
Portugal	1.000	0.998	0.993	0.993	0.984	0.982
Netherlands	1.000	0.998	0.994	0.994	0.983	0.981
Germany	1.000	0.994	0.989	0.989	0.978	0.976
Austria	1.000	0.996	0.976	0.976	0.956	0.958
Belgium	1.000	0.996	0.993	0.993	0.966	0.955
Spain	1.000	0.995	0.990	0.990	0.965	0.954
Denmark	1.000	0.997	0.980	0.980	0.944	0.934
UK	1.000	0.993	0.982	0.982	0.937	0.922
France	1.000	0.990	0.971	0.971	0.906	0.887
Greece	1.000	0.995	0.992	0.988	0.927	0.878
Luxembourg	1.000	0.996	0.971	0.971	0.734	0.637
Sweden	1.000	0.984	0.920	0.920	0.610	0.534
Finland	1.000	0.925	0.776	0.776	0.561	0.524
Ireland	1.000	0.969	0.846	0.846	0.494	0.440

Source: Data from European Regional Database (Cambridge Econometrics, 2006) elaborated by the authors

One notable finding is the fact that the countries having the highest industrial productivity (i.e. Ireland, Finland and Sweden) presented the highest levels of structural change during the period 1980-2003. Significant structural changes, however, are also presented in countries with modest (i.e. France) or poor (i.e. Greece) levels of industrial productivity. This indicates that the speed of structural change cannot be considered as an *a priori* positive or negative condition for industrial performance. The evaluation of the levels of structural change cannot reveal the way that each country responded to the pressures present in the framework of the integrated economic environment.

The nature of structural changes must be also examined (Pasinetti, 1981) and the Index of Dissimilarity of Industrial Structure (IDIS) (Jackson and Petrakos, 2001) must be evaluated (*see* Table 6). The IDIS is an index which totals the square differences of the allocation of industrial employment among industrial sectors (S_{ir} , $S_{i\omega}$) concerning the economy under examination (r) and a benchmark economy (ω) (i.e. EU-15 average), in a given year, under the formula:

$$IDIS_{r\omega} = \sum_{i=1}^n (S_{ir} - S_{i\omega})^2$$

and takes values higher than (or equal to) 0.

High values of the IDIS signify significant differences in the industrial structures of the economy under consideration and the EU-15 average (structural dissimilarity), whereas low values of the IDIS signify that the respective differences are not significant (structural similarity).

The levels of the IDIS are rather low in the majority of the EU-15 countries. The high levels of structural dissimilarity traced in Ireland and Greece (countries that experienced high levels of structural change) provide an explanation with regard to the nature of structural change. In the case of Ireland, structural dissimilarity can be considered as a strategic choice (a positive reaction after the accession to the EU market), whereas in the case of Greece structural dissimilarity can be considered as a defensive reaction (negative consequence after the accession to the EU market).

Table 6. Index of Dissimilarity

Country	1980	1985	1990	1995	2000	2003
Greece	447.152	433.885	494.684	444.192	442.323	431.250
Portugal	325.502	418.617	389.222	402.998	415.971	399.911
Ireland	359.245	205.262	151.814	152.616	226.586	270.491
Luxembourg	1,310.526	1,034.768	676.097	401.381	234.234	192.685
Italy	63.802	83.268	92.686	126.865	146.274	142.114
Finland	46.019	48.266	85.346	87.059	109.526	114.487
Netherlands	111.248	121.255	115.799	107.653	108.032	110.921
Denmark	120.994	101.598	101.698	91.730	89.927	88.728
Sweden	264.819	183.660	111.983	65.518	57.629	65.515
Austria	71.737	66.144	59.887	62.043	59.499	59.869
France	17.033	26.557	30.577	38.195	49.235	58.692
Belgium	44.256	53.057	50.031	53.219	56.009	58.571
Germany	44.805	54.884	59.967	56.735	49.753	45.294
Spain	46.537	58.819	42.703	48.999	44.660	41.224
UK	8.657	4.129	5.468	6.360	12.390	17.643

Source: Data from European Regional Database (Cambridge Econometrics, 2006) elaborated by the authors

This conclusion is verified through the evaluation of the levels of industrial specialisation (diversification) (see Table 7). The level of industrial diversification (a notion inverse to regional specialisation) is evaluated with the use of the Theil entropy Index (THEIL) (Theil, 1967). The TI estimates the inequality concerning the shares of each industrial sector (S_{ir}) related to the total industrial employment (S_r), in a given year, under the formula:

$$TI_r = \sum_{i=1}^n [(S_{ir}/S_r) \log(S_r/S_{ir})]$$

and takes values in the interval $[0, 1]$, after its division with the theoretical maximum $\log(n)$.

Values close to 0 indicate low levels of industrial diversification (or alternatively high levels of industrial specialisation), whereas values close to 1 indicate high levels of industrial diversification (or alternatively low levels of industrial specialisation). High levels of industrial specialisation (or alternatively, low levels of industrial diversification) are observed in countries

with both high and low industrial productivity. The nature of industrial specialisation thus explains the differences in their performance. Some countries (i.e. Ireland, Finland) are specialised in RINT or CINT industrial sectors, whereas some other countries (i.e. Greece, Portugal) are specialised in LINT industrial sectors.

It is evident that the same phenomena (i.e. high levels of structural change, structural dissimilarity to the EU-15 average, industrial specialisation) can be associated with different levels of industrial performance. The econometric investigation of this complete set of information seems to be necessary in order to shed more light on the determinants of industrial performance of the EU-15 countries. Before the construction of the econometric model, however, the level of economic integration of each EU-15 country to the EU-15 area as a whole must be estimated, since these countries have developed their industrial activities under the framework of the ongoing EU economic integration process.

Table 7. Theil Index

Country	1980	1985	1990	1995	2000	2003
Italy	0.949	0.948	0.949	0.946	0.945	0.947
Belgium	0.955	0.951	0.952	0.950	0.948	0.946
Spain	0.946	0.941	0.943	0.942	0.940	0.938
UK	0.943	0.945	0.947	0.946	0.938	0.936
Germany	0.931	0.928	0.923	0.918	0.920	0.921
France	0.947	0.941	0.939	0.933	0.926	0.921
Austria	0.929	0.928	0.925	0.920	0.920	0.919
Denmark	0.918	0.920	0.918	0.920	0.919	0.917
Finland	0.938	0.943	0.935	0.928	0.917	0.912
Luxembourg	0.795	0.824	0.867	0.896	0.908	0.908
Sweden	0.897	0.910	0.918	0.917	0.909	0.902
Portugal	0.894	0.883	0.896	0.897	0.897	0.900
Netherlands	0.927	0.919	0.914	0.907	0.901	0.897
Ireland	0.875	0.897	0.903	0.900	0.886	0.879
Greece	0.864	0.867	0.860	0.866	0.863	0.861

Source: Data from European Regional Database (Cambridge Econometrics, 2006) elaborated by the authors

The level of economic integration is evaluated with the use of the Index of Economic Integration (IEI) (Petrakos *et al.*, 2005) (*see* Table 8). The IEI estimates the share of trade transactions (imports and exports) of the economy under consideration with a reference economy (TR_{iw}) to its total trade activity (TR_{iw}), in a given year, under the formula:

$$IEI_{iw} = \frac{TR_{iw}}{TR_{iw}}$$

and takes values higher than (or equal to) 0.

Values close to 0 indicate low levels of economic integration with the EU-15, whereas values close to 1 indicate correspondingly high levels. The different levels of economic integration within the EU-15 area provide strong evidence that the impact of the EU economic integration process on the EU-15 countries is heterogeneous, despite the similar phenomena observed in many of them.

Table 8. Index of Economic Integration

Country	1980	1985	1990	1995	2000	2003
Portugal	0.527	0.570	0.754	0.771	0.771	0.778
Belgium	0.990	0.729	0.776	0.735	0.718	0.723
Luxembourg	0.690	0.729	0.776	0.735	0.718	0.723
Spain	0.376	0.456	0.662	0.683	0.660	0.671
Denmark	0.672	0.625	0.659	0.618	0.656	0.645
Austria	0.629	0.620	0.696	0.679	0.662	0.639
Sweden	0.590	0.595	0.634	0.634	0.633	0.628
France	0.524	0.576	0.640	0.635	0.631	0.626
Netherlands	0.663	0.697	0.712	0.667	0.610	0.608
Ireland	0.765	0.705	0.739	0.654	0.597	0.604
Greece	0.505	0.503	0.677	0.661	0.560	0.566
Italy	0.471	0.513	0.623	0.586	0.557	0.544
Germany	0.578	0.580	0.621	0.575	0.526	0.534
Finland	0.527	0.509	0.602	0.576	0.530	0.526
UK	0.495	0.541	0.574	0.562	0.509	0.511

Source: Data from European Regional Database (Cambridge Econometrics, 2006) elaborated by the authors

3. Industrial Performance in an Economic Integration Context: An Econometric Investigation of the Impact of Structural Factors

The relationship between the industrial structure and industrial performance can be supported in a more formal way by the construction of an econometric model. The model uses panel data, at the aggregate national and the disaggregated branch level, covering the period 1980-2003 in the ongoing process of EU economic integration. The dependent variable of the model is the level of industrial productivity (INDPRO). This variable is used as a better proxy for industrial performance (comparing it to the variables of industrial GDP and industrial employment) since it includes both GDP and employment. The independent variables of the model include the indices estimated for the analysis of the structural aspects of the EU economic integration process i.e. Coefficient of Structural Change (CSC), the Index of Dissimilarity (IDIS), the Theil Index (THEIL), the shares of CINT sectors in industrial employment (CINTSH) and the Index of Economic Integration (IEI). The model uses national fixed effects and is heteroskedasticity-corrected with the use of the White test (no cross terms) (White, 1980).

According to the levels of their industrial performance, in the period under consideration, the EU-15 countries are split into two groups i.e. the industrially more and the industrially less productive countries. The group of industrially more-productive countries includes the EU-15 countries that experienced industrial productivity growth levels higher than the EU-15 average (these are Belgium, France, Ireland, Luxemburg, Austria, Finland and Sweden). The group of industrially less-productive countries includes the EU-15 countries that experienced industrial productivity growth levels lower than the EU-15 average (these are Denmark, Germany, Greece, Spain, Italy, the Netherlands, Portugal and the UK). The separation of the EU-15 countries into groups according to their industrial productivity levels reveals the similarities and dissimilarities between the industrially more- and the industrially less-productive countries, despite the same structural phenomena observed in many of them. The econometric models reveal, in fact, some very interesting and enlightening results (*see* Table 9).

The process of EU economic integration (IEI) had overall positive effects for both the more- and the less-productive EU-15 countries. These effects, however, proved to be statistically insignificant for both groups of countries. The recorded structural changes (CSC), in contrast, had a

negative and statistically significant impact on the level of industrial productivity. This means that restructuring had negative effects not only on industrial employment but also on industrial GDP. The high shares of CINT sectors in industrial employment (CINTSH) did, however, alleviate these negative effects, as their positive and statistically significant details indicate. The differential factors for the two groups of countries are their levels of industrial specialisation and their structural dissimilarity to the EU-15 average. The more-productive EU-15 countries have a negative and statistically significant result for both variables. These results reveal that the high levels of specialisation allowed them to exploit economies of scale in sectors that are associated with knowledge-based activities. The respective results for the less-productive EU-15 countries are positive and statistically significant. These results indicate that the high levels of diversification make these countries less vulnerable to asymmetric shocks, but also leave them unable to specialise in sectors associated with high levels of industrial performance.

Table 9: An Econometric Model of Industrial Performance for the More- and the Less-productive EU-15 Countries

More-productive EU-15 countries		Less-productive EU-15 countries	
Dependent: INDPRO		Dependent: INDPRO	
Independent		Independent	
(Constant)	108,149.800 (0.000)	(Constant)	-16,846.610 (0.000)
IEI	301.594 (0.882)	IOI	432.669 (0.119)
CSC	-12,982.880 (0.000)	CSC	-11,400,940 (0.000)
IDIS	-9.367 (0.000)	IDIS	9.091 (0.000)
THEIL	-104,429.700 (0.000)	THEIL	28,436.870 (0.000)
CINTSH	318.900 (0.000)	CINTSH	236.521 (0.000)
Belgium	4,136.343	Denmark	1,677.406
France	-1,269.416	Germany	2,994.107
Ireland	-3,790.737	Greece	-705.792
Luxemburg	5,620.048	Spain	-787.497
Austria	873.436	Italy	856.401
Finland	-654.950	Netherlands	-132.305
Sweden	-4,914.724	Portugal	-2,346.166
		UK	-1,556.156
ADJ. R ²	0.975	ADJ. R ²	0.937
F	598.569 (0.000)	F	235.812 (0.000)
N	168	N	192

Source: Data from European Regional Database (Cambridge Econometrics, 2006) elaborated by the authors

4. Conclusions

The descriptive and econometric analyses reveal the different outcomes that the dynamics of the EU economic integration process have generated. Countries such as Ireland, Sweden and Finland managed to benefit, whereas countries such as Greece, Portugal and Spain didn't experience the same results. The EU economic integration process had overall positive results, indicating that it is better to be inside than outside (the EU). These results, however, were not statistically significant since many factors had a negative impact on industrial productivity (which is considered to be the most appropriate proxy for industrial performance). The impact of restructuring was negative in both the more- and the less-productive EU-15 countries. This impact, however, is counterbalanced by the EU-15 countries that managed to maintain high shares of CINT sectors in their industrial employment. The existence of such sectors is of extreme importance, since they are connected with knowledge-based activities. High levels of industrial specialisation allow the more productive EU-15 countries to maintain relatively high employment shares in CINT industrial sectors, thus benefiting from economies of scale. On the other hand, it is seen that the less-productive EU-15 countries cannot specialise in such sectors due to increased competition. Given this fact, it is better for them to be diversified in order for them to be less vulnerable to asymmetric shocks. The results of this paper enable a better understanding of the factors behind success and failure concerning the industrial performance of the EU-15 countries. Such an understanding may have an added benefit for policy-making at a time when EU structural and cohesion policies are under scrutiny.

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The Enlargement of the EU Towards Central, Eastern and South-Eastern Europe and Its Impact on the Third Mediterranean Countries

Angelos Kotios and Yiannis Saratsis

Abstract

The main purpose of this paper is to examine the impact of the latest and forthcoming EU enlargement on Euro-Mediterranean relations. Given the fact that the economies of the Mediterranean countries depend strongly on their relations with the EU, it is possible that these relations are going to be modified following the recent EU enlargement towards CEE countries, with consequences that may not prove easy to identify. In this article, we try to analyse some global effects that the new EU enlargement had upon the Euro-Mediterranean partnership. The findings of this analysis lead to some policy proposals for upgrading Euro-Mediterranean relations, in the context of the new European Neighbourhood Policy.

Keywords: Enlargement, European Union, Central and Eastern Europe, Third Mediterranean Countries, European integration, Euro-Mediterranean relations.

1. Introduction

The latest enlargement of the EU, through the inclusion of the Central and Eastern European Countries, and also the evolution of the European Economic Community to European Community and European Union, clearly demonstrate that the EU reflects an open integration model. With particular regard to European economic space, the EU, through the establishment of the European Economic Space with the Rest-EFTA countries, the various association agreements with European and non-European countries, the free trade area agreements and the preferential agreements with many developing countries, promotes, under the scheme of “circles

and rays”, the creation of a big space of economic integration and political cooperation (Papastamkos, 2000). The European circle of integration and cooperation completes and concludes development Southwards, mainly with the special cooperation relations that have been established with the Third Mediterranean Countries (TMC). So the two neighbouring areas of the EU, namely the CEE Countries and the TMC, are the two basic regions of European integration, and from this perspective, the stability and development of these two areas is going to decide the future evolution of the unification procedure.

The external relations of the EU are not limited to neighbouring countries. Nevertheless, the special relations that the EU has developed to its adjacent areas are substantially different from its relations with other countries of the world. And, of course, the relations between the EU and the CEEC are different from those between the EU and the TMC. Thus, the relations with the CEEC that were based mainly on the “European Agreements”, were developed after the beginning of the transition period and were in fact preparing for the accession of the CEEC into the EU. On the other hand, Euro-Mediterranean relations focus on the making of a Free Trade Area (up to 2010) and enhancing stability and prosperity in the Mediterranean Area through political dialogue and financial and technical cooperation. The different position of the two regions in the European integration process has important implications for their future development (Hoeckman and Eby-Konan, 1999).

The fact that on the one hand, the CEE Countries are already Members of the EU, and on the other hand, the only evident integration prospect for the TMC is the Free Trade Area, creates scepticism about the future of relations between EU/CEEC/TMC. First estimates come to the conclusion that the CEEC, as members of the EU, are in a more advanced position than the TMC. So the concern of the TMC about the recent EU enlargement is logical in respect to keeping their own interests regarding the Euro-Mediterranean partnership established in the 1970s, and further consolidated in 1995 (Barcelona Process).

The following analysis concentrates on a discussion of some selected areas of the Euro-Mediterranean cooperation that may be affected following the latest EU enlargement. These areas are: immigration, trade and European foreign direct investments flows. The conclusions of this discussion leads to the formulation of policy proposals towards an upgrading of the Euro-Mediterranean partnership.

2. Enlargement and Migration Flows

The historical changes that occurred in Europe after the 1990s have, amongst other things, brought an increase in migration flows. This, along with the intense demographic changes that are evident in many areas of the world, are two major characteristics of the 21st century. This phenomenon has a great impact on EU and its Mediterranean partners, where the ongoing changes tend to become one of the most important factors of economic growth and stability in the region. These ongoing changes serve as a forecast for a major decrease in the European population (EU-15) of about 40 million people around 2050. This equates to an 11% decrease. This estimation becomes more serious keeping in mind that, for the same period, the economically active population (15-65 years of age) will decline from 250 million at present to about 188 million. These facts indicate the necessity to enrich the manpower of the EU by about 1 million foreign workers each year for the next 50 years to come, in order to keep existing levels of development (Kazakos and Liargovas, 1996). In addition, as happens to all developed countries, it has become practice to reduce the total length of working life by increasing the entrance age and reducing the retirement age respectively.

In the TMC, the situation is completely different. Through a birth control programme, they are going to increase their economically active population in the next 20 years. This is proven by the fact that the proportion of children in the 0-14 age bracket is 40% of the total population, instead of 17% as is the case for the EU. Of course, the growth of the active population in the TMC, combined with the anticipated entrance of women into the workforce, indicate that the TMC must create about 45 million work positions over the next decade, something that requires a yearly growth rate of about 6-7%.

Today, part of this work force surplus is absorbed by the EU. Thus, a change could be expected following the enlargement of the EU, which could negatively affect the TMC, because of the favourable position of the CEEC. However, two facts minimise this danger:

- a. the population growth in the CEEC is extremely small, due to the low rates of births per family (1.5 children per family), which implies that the future needs of these countries will be significantly high;

- b. the rates of migration from the CEEC to the EU is not as high as expected, and in some cases is particularly low.

3. Enlargement and Trade in Goods and Services

With the “European agreements” that have been signed by the EU and the CEEC in the 1990s, the EU became the most important trade and economic partner of the CEEC, given that they received a preferential trade regime. In parallel, the utilisation of EU financial support by the CEEC contributed to the making of a favourable economic environment in those countries.

As well as the above characteristics, it must be noted that in the years before the CEEC accession into the EU, some special aspects were established in the economic and trade relations between the CEEC and the EU, none of which was applicable in the Euro-Mediterranean partnership (Tovias and Dafni, 2000):

- a. the right of accumulation of origin, which has been applied since 1998;
- b. the fact that the anti-dumping rules could be set after relative negotiations; and
- c. all the reforms that took place in the CEEC in sectors like services, capital flows, market liberalisation, competition policy and property rights actually were set and supported by the EU in order to prepare for accession.

These differences contributed in such a way that the trade potential of the CEEC in the EU markets was much stronger than that of the TMC for a long period before their accession. After their membership, the economies of the CEEC became part of the common market. That means that these countries were able to enjoy the advantages of the “four freedoms” and of the funds transfer in the context of agricultural and cohesion policies. Also, compared to third countries, the new member states apply the instruments of the common foreign trade policy. The membership of the CEEC has changed the framework and the conditions for trade between the enlarged Europe and the TMC. The outcomes that can be expected are as follows (Tovias and Dafni, 2000):

i. Trade Diversion in Favour of the CEEC

By the enlargement, the TMC have to some extent lost their privileges in the EU markets in favor of the CEEC. The full accession of the CEEC has

caused important losses of the privileges that existed for the Mediterranean agricultural products and services, resulting in a trade diversion from the TMC to the CEEC. Such a trade diversion has already been taking place since 1998, with similar patterns found in some industrial sectors (like textiles, clothing, leather, steel products), in which the TMC have comparative advantages. Trade diversion could also be supported by the fact that the TMC exports to the EU face more technical barriers to trade than those of the CEEC (Michalek *et al.*, 2005).

ii. Trade Diversion in the CEEC in Favour of the Eu Countries

The trade diversion in the CEEC markets in favour of EU producers is possible, to the extent that Mediterranean exports cannot compete with EU exports in the CEEC markets. Nevertheless, the trade relations between the TMC and the CEEC are very small. Also, the structure of the TMC exports (labour- and material-intensive products, Mediterranean agricultural products) is very different from that of the EU-15 export structure (capital- and technology-intensive goods, high quality services, processed agricultural products). That means that this outcome is expected to be of less importance.

iii. Expansion Affects in the Trade of Manufacturing Products After the Adoption of the Common Tariff System

The CEEC have to adopt the common tariff system and all the corresponding regulations of the Euro-Mediterranean agreements. This means that the tariff conditions for Mediterranean exports will be significantly improved (Tovias and Dafni, 2000). Consequently, an expansion in the trade between the CEEC and TMC can be expected.

iv. Affects on Agricultural Products from the Implementation of the CAP in the CEEC

In the case of agricultural products, reduced trade flows are expected from the TMC after the implementation of the CAP regulations in the CEEC.

v. Affects on the regime of Mediterranean imports from the CEEC

The enlargement to the CEEC will make the TMC liberalise their imports from the CEEC, because the CEEC countries are members of the EU. Thus, there will be a greater dependency on the TMC by the EU.

The similarity of the industrial exports from the TMC and the CEEC to the EU markets, in fact hides an advantage for both parties, as long as they

compete from the same starting point. So, the TMC could improve their position, if their exports became more competitive. For some countries and products this is possible. The industrial products of Turkey, Israel and Tunisia are more vulnerable. The trade diversion should be expected in textile, clothing, industrial products from iron and steel, electrical machinery and equipments.

4. Enlargement and FDI Flows

The CEEC and the TMC have several reasons to attract European FDIs in order to promote economic development (Darrat *et al.*, 2005). The FDIs are not the only factor of development, but they are one of the most important means to upgrade the productive base and technology levels of a developing country. Raw material and many products that need manufacturing, a cheap labour force and a large consumer market, are attractive factors in developing countries for investments from foreign enterprises (Michalet, 1999). Because of the importance of FDIs for the economic growth of the CEEC and TMC, the competition between the two areas for European FDIs inflows and for the location of European companies is going to be extremely fierce.

The external environment, and especially the several agreements of the EU with the CEEC and the TMC, help the FDIs flows into these two regions. However, the different economic and reform policies that were implemented in these two regions, as well as the differences in political and investment climate and geography, were the critical factors that influenced the preferences of the foreign investors in favour of the CEEC countries. So the available data show that the FDIs in the CEEC increased significantly after 1990, despite the fact that they are still a small proportion of the total European FDIs outflows. The total amount of FDI in 1999 in the CEEC was over \$18.4 billion, an amount that constitutes about 8.9% of the total that was invested in the developing countries. This had to do with the privatisation and liberalisation policies that were implemented in those countries.

On the other hand, the FDIs in the TMC were about \$7.1 billion, an amount that constitutes about 3.4% of total FDIs in developing countries. This poor result for the TMC has to do with the political and economic instability in the region, because many governments are not willing to take all the necessary measures to attract foreign investors. Nevertheless, a comforting fact is that in the second half of the 1990s, the FDIs flows

were much bigger than in the first half of the decade. This implies that the Euro-Mediterranean partnership that was set in 1995 was a positive factor in attracting FDI to the TMC. So the utilisation of this partnership is probably the only chance for the TMC to increase their share of the total FDI flows to developing countries, which was decreased from 6.2% in 1992 to 3.4% in 1999. In this respect, in order for the TMC to reduce the competition from CEEC, they must implement all the attachment agreements with the EU, complete the Free Trade Area up to 2010 and make all the necessary reforms in their economic and political systems.

5. Possibilities for a Balanced Relation between EU-15, CEEC and TMC

Given the interest of the EU in the economic, political and social development of its neighbouring regions, the question that arises is whether there can be a beneficial relationship for the three regions (EU-15, new members, TMC). Several studies have proven that there are a number of possible ways of cooperation among them that may minimise the negative effects on the TMC from the latest enlargement (Sideri, 1999; FEMISE, 2003).

The first factor that supports the cooperation between the TMC and the CEEC is the estimated need of the CEEC for a larger labour force in the near future. The CEEC will realise this need sooner or later, as the other EU countries already have.

Secondly, the changes in the division of labour that took place in the European markets during the deepening of the Community integration were actually in favour of the TMC. In the same way, the accession of the CEEC into the EU, has resulted in the adoption of all the rules and regulations of the common market and common policies, a fact that will gradually change some of the advantages and the specialisations they have today.

Thirdly, even in the case of agricultural products, which is the weak point of the TMC, there could be some complementary elements in trade between the two areas because of the complementarity in their production and export structures. Countries like the Palestinian Authority and Jordan, which have managed to increase their share of agricultural trade with the CEEC, are a successful paradigm (The Euro-Mediterranean Partnership in the Year 2000; Jabarin and Muaz, 2000).

TMC trade is actually “one way” (inter-industry) and their trade share in the global division of production is smaller than that of the CEEC. However, some TMC with stable and liberal internal regimes, like Morocco or Tunisia, are capable of improving their competitiveness in European markets, especially in some sectors like textile, clothing, etc. (Fabbris and Malanchini, 1999).

According to the findings of many studies, there is room for further trade and a stronger economic integration between the TMC and the EU, especially in the fields of services and agricultural products (Ferragina *et al.* 2005). The agreed establishment of a free trade area till 2010 and its extension to the uncovered sectors will be beneficial for both regions (Chouchani-Cherfane *et al.*, 2005).

The expected increase in the wages in the CEEC and the changes in the infrastructure and the production methods that are going to take place after their accession into the EU, will change the future competition conditions between the CEEC and the TMC. The final result of this will depend not only on the ability of the TMC to adjust their economies to the demands and standards of the European and global markets, but also on the ability and the willingness of the Euro-Mediterranean partners to effectively implement the Barcelona Process.

The example of externalising the trade in textiles or electrical goods, machinery and equipment is of crucial importance for the entrance of the TMC into the global subcontracting chain of the European enterprises. In this case, the best example are the CEEC. Their total trade of subcontracting is estimated (2000) at €6 billion, against just €1 billion for the TMC (Alessandrini, 2000). In fact, in the Euro-Mediterranean relationship there are several supporting mechanisms in this direction.

As a conclusion, the full utilisation of the Euro-Mediterranean relationship is the most important instrument of the TMC in minimising the dangers that may result from EU enlargement. In parallel, the enhancement of trade and economic relations between the TMC and the CEEC through common trade liberalisation regulations, free trade agreements and the implementation by the TMC of the advantage of the accumulation of origin, are the basic priorities.

Finally, the new European Neighbourhood Policy includes some new instruments in order to enhance the partnership between the EU and the TMC (Jones and Emerson, 2005).

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PART II

Urban Planning, Information Technology and Decision Support Tools

Utilisation of Urban Modeling Tools in Decision Making Process: The TELUM Case Study

Georgia Pozoukidou

Abstract

Information technology, urban models and decision support tools have been and will continue to be an integral part of the decision-making process in planning. Despite their unambiguous significance, they are underutilised in professional practice. This paper presents the results of a study on the applicability and effectiveness of a complex land-use modelling tool in planning practice and agencies' decision-making processes. The study intended to capture the users' perspective and record their experiences when using the modelling tool. The basic research assumption was that there are certain functional and structural factors that could operate as obstacles, or bottlenecks, and block or delay the implementation of such systems. Twenty U.S. Metropolitan Planning Organisations participated in the research and were asked to evaluate the tool in the context of their planning and decision-making practices. Based on the research results, there are suggestions regarding the development, application and dissemination of Planning Support Systems in planning practice.

Keywords: Planning Support Systems, urban planning and computer tools, urban models, land-use modelling, usability of planning tools.

1. Introduction

Both history and current circumstances suggests that regional planning organisations will be major actors in the U.S. planning arena over the coming decades. With the enactment of ISTEA and TEA-21, new requirements and responsibilities were brought to elected officials regarding transportation decision-making. Metropolitan Planning Organisations (MPOs) and State Departments of Transportation (SDOTs) are responsible for transportation

and land-use planning decisions and are required to assess the impact of their transportation policies on land-use development. Hence, these agencies are now mandated to use sophisticated information management tools and complex land-use modelling methods.

A literature review on computer use in planning suggests that there is a continuous failure to use complex planning methods, like urban models, and decision-support tools in planning practice. As a result, there is an inability of planning agencies to systematically assess the implications of their planning decisions and thus fulfill their role mandated by the new legislative requirements.

At the same time, there is no substantial research regarding the factors that prevent agencies to effectively utilise such tools in everyday planning practices. This created an interest for exploring the use of Planning Support Systems in planning agencies, such as to identify the functional and structural factors that could operate as obstacles and block or delay the implementation of such systems in practice.

2. Decision-Making in Regional Governance: The New Status Quo

On June 9, 1998, President Clinton signed into law, the Transportation Equity Act for the 21st Century (TEA-21), authorising highway, highway safety, transit, and other surface transportation programmes for six years. TEA-21 was built upon initiatives established previously with ISTEA and the Clean Air Act (CAA). The new act combined the continuation and improvement of current programmes with new initiatives to meet challenges such as: *improving safety* as traffic continued to increase at estimated record levels; *protecting and enhancing communities* and the natural environment where transportation is provided and; *advancing America's economic growth and competitiveness* domestically and internationally with efficient and flexible transportation.

With the enactment of the ISTEA and TEA-21, new requirements and responsibilities were bestowed upon elected officials regarding transportation decision-making. Metropolitan Planning Organisations (MPOs) and State Departments of Transportation (SDOTs) are responsible for transportation and land-use planning decisions. In fact, the ISTEA gave MPOs more equality with the state transportation departments. After 10 years of minimal funding and responsibilities, MPOs were asked to be the key players in

transportation planning for their regions. Designated by the Governor of each state, MPOs were responsible for creating and maintaining the transportation planning, programming, and funding systems at the metropolitan level. Typically, the boards of the MPOs included local officials and representatives of transportation providers, such as public and private transit operators. An MPO staff consisted of transportation planning professionals and administrators.

Large MPOs were leading the process of selecting projects to be undertaken with certain categories of federal funds. They were required to consider a wide range of economic, environmental, and social goals in deciding amongst their projects. Transportation Improvement Programmes (TIPs) were no longer wish lists of projects from which state officials could pick and choose as funding became available. MPOs had to create realistic lists and multi-year agendas of projects, to match available funds. Furthermore, ISTEA doubled the funding of the MPOs operations and required the agencies to evaluate a variety of multi-modal solutions to roadway congestion and other transportation problems. Also, MPOs were required to broaden public participation in the planning process and to examine whether the investment decisions contributed were meeting air quality standards of the CAA.

TEA-21 provided the U.S. Department of Transportation (USDOT) with \$120 million in funds for a six year period to encourage state, local, and regional agencies to partner with non-profits, private sector interests and each other in order to bring together transportation and land-use decisions. The goal of the initiative was to create funding sources for states, MPOs, and/or local governments that would better coordinate land use and transportation planning.¹

More specifically the Act required that each MPO engaged annually in a process of updating its Transportation Improvement Program (TIP). TIP is basically a “list” of every highway, transit system, bridge, and any surface transportation project selected by the MPO to receive funds over the six year period. Each year, MPOs must decide what projects to include in their six year TIP. These decisions are based on a variety of factors, including travel demand, need for facility maintenance and repair, impacts of projects on local and regional economies, land-use, environment, and other areas. In addition, MPOs tracked projects, through various stages, toward

¹ Hank Dittmar, TEA-21-More than a Free Refill.

implementation. These stages include federal and state reviews, improvement design and cost, construction scheduling, and actual construction over several years.

From a management perspective, all of the requirements, duties, and responsibilities called for increased sophistication of MPOs in the areas of information-management, decision-support and land use modeling techniques.

2.1. The Need for an Information Management System

As mentioned earlier, TEA-21 created a new federal, state, and local partnership for transportation planning and programming, and shifted several duties and responsibilities to regional and local level transportation agencies. Nevertheless, some of its new requirements strained the capacities of many MPOs. For instance, TEA-21 required that a transportation planning and programming process should consider the impacts of projects on the economy, land use, environment, and historical and cultural resources, result in a “financially constrained” TIP (Transportation Improvement Programme), weigh alternatives to highway solutions, and identify projects that were in “conformity” with applicable standards of the CAA.

As a result, it became imperative for MPOs to have, in hand, sophisticated decision-making techniques that could adequately account for the impacts of TIP projects in terms of economic vitality, environmental protection and energy conservation in their region. However, the reality was that MPOs were not sufficiently equipped to fulfill their new role.

Preliminary research on tools and methodologies used by MPOs in decision-making revealed that they used oversimplified methods and techniques to make their transportation and programming decisions. In most cases, they were using “scoring criteria” to rank projects against objectives or goals identified in the planning process.² Each project was then prioritised according to the assigned score. Spreadsheets, such as MS Excel and MS Access were used for applying such methods. It is worth mentioning that these techniques were mostly qualitative, and usually there were no quantitative measures to account for the implications of the projects.

In the absence of sophisticated planning tools, TELUS the Transportation Economic and Land Use System was developed to respond to the provisions

² This research was conducted by the author in the form of informal interviews with MPOs representatives and web-based search.

of TEA-21. TELUS is an information-management and decision-support system that was designed specifically to help MPOs fulfill their legislative responsibilities.

The North Jersey Transportation Planning Authority (NJTPA), the fourth largest metropolitan planning organisation, initiated the development of TELUS as a tool to help meet the TEA-21 legislative mandates. Between 1996 and 1998, the New Jersey Institute of Technology, the lead institution in the development of TELUS partnered with the Center for Urban Policy Research at Rutgers University and the North Jersey Transportation Planning Authority to design, develop, and implement the system. The NJTPA staff and the Authority's project steering committee largely guided the system's design, thus ensuring that the product would meet the needs of the MPO and fulfill the ISTEA mandates.

The design criteria required that the system would be easily able to use graphical interface, strong querying and sorting capabilities, a GIS integrated into the system and finally, computer models to identify economic and land use impacts of each project and investment.

According to NJIT, TELUS as a system is designed to allow for quick and efficient evaluation of alternative project scenarios and the financial implications of each, thus enhancing an MPO's ability to produce financially-constrained TIPs that would conform to air quality standards. All the components of TELUS were designed as informational and decision-support features; in an effort to avoid mysterious black boxes out of which answers would flow. In this sense, TELUS components were designed, to augment the MPO's decision-making process, but not to supplant it. TELUS was intended to strengthen the decision-making capability of MPOs and ensure that local elected officials, appointed officials, citizens, special interest groups, and others could participate knowledgeably and effectively in the transportation planning process.³

The system consists of three main components:

- The *Automated TIP Component*, which builds a large database that contain key information (e.g. project description, location, cost, type of improvement, etc.) about every project in the TIP. Apart from simple housekeeping routines, using this information the system can

³ Pignatero Luis and Epling John. The TELUS story. Information Tool for Transportation Planning Makes its Debut, TR News 210

perform more complex routines, such as identifying potential conflicts in the accessibility among projects being constructed at the same time.

- The *Economic Component*, which uses an “Input-Output” model to analyse the investment made in a single project or group of projects as related to the number of jobs that will be created, the impact on income, and the effects on local and state tax revenues (model outputs reflect impacts in the “home” county, adjacent counties, the region and the state).
- The *Land-Use Component*, which uses a land-use model to project the location of new residential and non-residential development, the location and amount of future population, household, and employment growth, and calculates the dollar value of travel-time saved as a result of transportation improvements.

When TEA-21 was passed by the Congress in 1998, the Act included the amount of \$1 million per year over six (6) years toward the development and deployment of TELUS. The system was copyrighted and was free to any MPO wishing to use it.

In conclusion, TELUS is certainly an ambitious effort to modernise and computerise local governance. As a planning support system itself, it is an improvement and a great addition to the decision-making process of an MPO. Its three components will enable MPOs to enhance their analytical skills and involve quantitative methods, in addition to using their local knowledge in the planning processes.

3. The Use of Planning Support Systems in Practice

Over the last four decades, expensive, fragile, remote and hard to use mainframe computers have been replaced by small, inexpensive, easy to use microcomputers, that get faster, cheaper, more powerful, and easier to use every day. Dramatic improvements in display capabilities, screen resolution, processing speed, and data storage capacities have also been made. An entirely new kind of software has been developed, enabling the outgrowth of more flexible and user-friendly tools; however, the reality in planning practice remains the same. Available evidence suggests that computers on planners’ desks are continuing to be used largely to word process documents, maintain budgets, and store data in order to improve management

and increase office efficiency, and not to perform genuine planning tasks (Klosterman, 1994).⁴

A survey conducted by the Journal of Urban Transportation Monitor (March 1996) supports this observation by revealing that only 20 percent, of the 71 MPOs that responded to the survey, were using some form of urban models. One would think that, given the technology and planning tools (i.e. urban models) available, this is an extremely low percentage. The editor of the Urban Transportation Monitor journal commented on the responses of MPOs to the different questions of the survey as follows:

- a. “This week’s survey results show that only 20% of the Metropolitan Planning Organisations responding to the survey indicated that they use a regional land-use forecasting model to establish future land use in the region for the purposes of transportation planning. The majority of MPOs use techniques that usually requires control totals to be established and then the allocation to zones are done by taking a variety of factors into consideration, such as zoning and subdivision regulations, permit tracking, and tracking of re-zoning and subdivision development, community input, etc.
- b. The techniques used by the majority of MPOs are time consuming. Because of this, it is difficult to evaluate alternative land-use arrangements in combination with alternative transportation plans. This is one of the most important benefits of land use and transportation planning – the optimisation of land use by taking transportation into consideration.
- c. If for various reasons the use of land-use forecasting models is not acceptable, then it would be extremely beneficial to develop techniques that will automate the more “manual” techniques in use by most MPOs today.
- d. This will make the evaluation of alternatives less burdensome and the full benefits of transportation planning can be realised”. *Daniel B. Rathbone, Editorial Urban Transportation Monitor (March 1996).*

Until now, we emphasised the need for computer tools that can help MPOs respond to their current and upcoming responsibilities, as formed by

⁴ It should be noted that, within the context of this paper we consider that traditional concerns of planning and genuine planning tasks incorporate notions and processes like this of plan analysis, plan prediction, plan prescription, and plan evaluation, or in other words “the sketch planning process”, a concept that was first introduced and explored by Britton Harris, and which later became the conceptual base for PSS development (Harris 1960, 1984, 1989, 2001).

recent legislative evolutions. We also acknowledged the fact that we might have great modeling tools in our hands but not a lot of planning organisations are using them. The question that comes in mind is *why when there is such an obvious “need for” and “benefits from” using planning support tools, is there only a small percentage of agencies that would actually utilise them in their everyday decision-making processes?*

The purpose of the study, the results of which are presented in this paper, was to provide answers to these questions based on the usability and applicability evaluation of such tools in agencies’ planning processes. For that, TELUM-Transportation Economic and Land-Use Model was utilised as a case study of a PSS that is used by a number of regional planning organisations.

3.1. TELUM: Structural and Functional Description

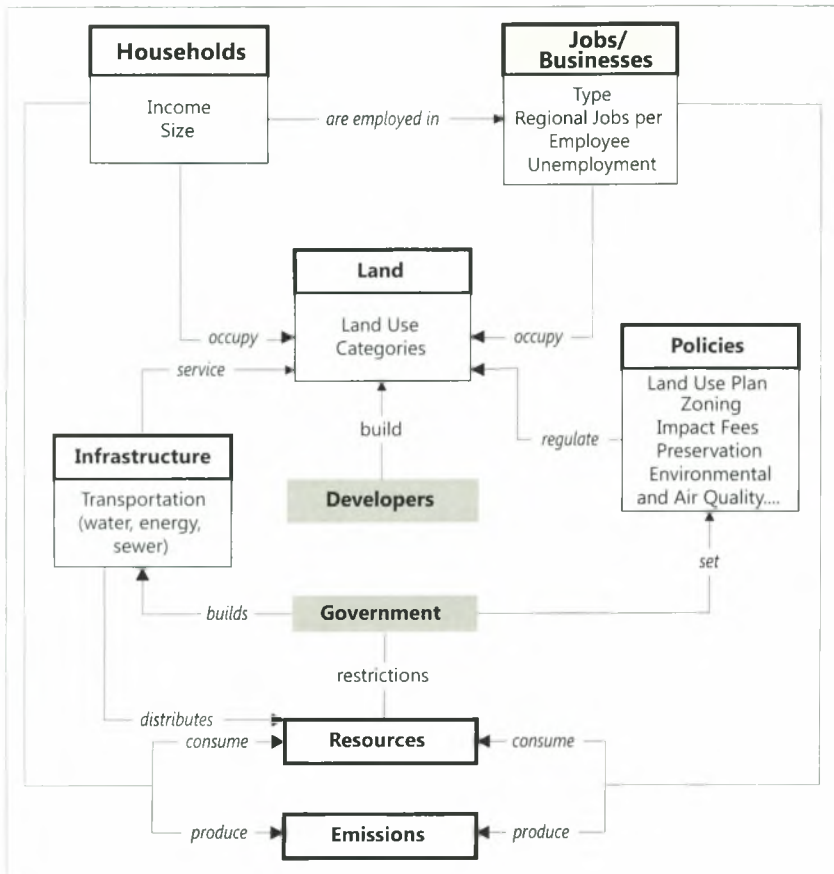
As mentioned earlier in this paper, TELUM is TELUS’s land-use modeling component. In order for the user to understand the complexity that the process of land-use modelling entails, Figure 1 portrays in a very general way the interactions and interrelations amongst four basic agents: households, employers, developers, and government. Its purpose is to provide a structured way for the reader to think about land-use modelling and to realise the implications, consequences, and reactions of any agent’s actions. It also shows how land-use modelling can be used to evaluate alternative governmental policies and investments.

For instance, starting with the developers, they use land to construct residential and non-residential space. Land consumption for residential and non-residential space depends on the demand for such space by households and businesses. Businesses, in turn, produce emissions and increase the demand for resources. Governments provide the infrastructure, services and set the policies. Policies have great implications in the land market by altering land prices and, consequently, the type of land use.

Having this process in mind, TELUM attempts to replicate agent interactions and record their consequences in a systematic way that will be easy for the user to comprehend. TELUM does not explicitly model every interaction amongst those agents, but it views them from an aggregative perspective. It focuses on how employment and their location choices affect the future location of the households, and in turn, the implications to the land-use development patterns in the region. Actually, developers and

government are more exogenous factors to TELUM; nevertheless, they are important and should not be ignored, since the main objective of modelling is to eventually do policy analysis.

Figure 1. Interactions Represented in TELUM



The general configuration and overall structure of TELUM is shown in Figure 2. The current and fully operational system consists of four main components. The first, and probably most complex component, is the Model Module which is associated with the computational utilities of the modelling process. The second is the Database Management System component, which is associated with preparing the data for analysis and display in various stages of the modeling process within the system. The third is the

Geographical Information Systems (GIS) component, which is comprised of a GIS package that provides the user with visualisation aids in various analysis phases. Finally, there is the Knowledge Based Systems (KBS), which is not a component of TELUM, per se, but is there to support the function of the three distinct modules and to communicate with the user.

Figure 2. TELUM Structural Overview

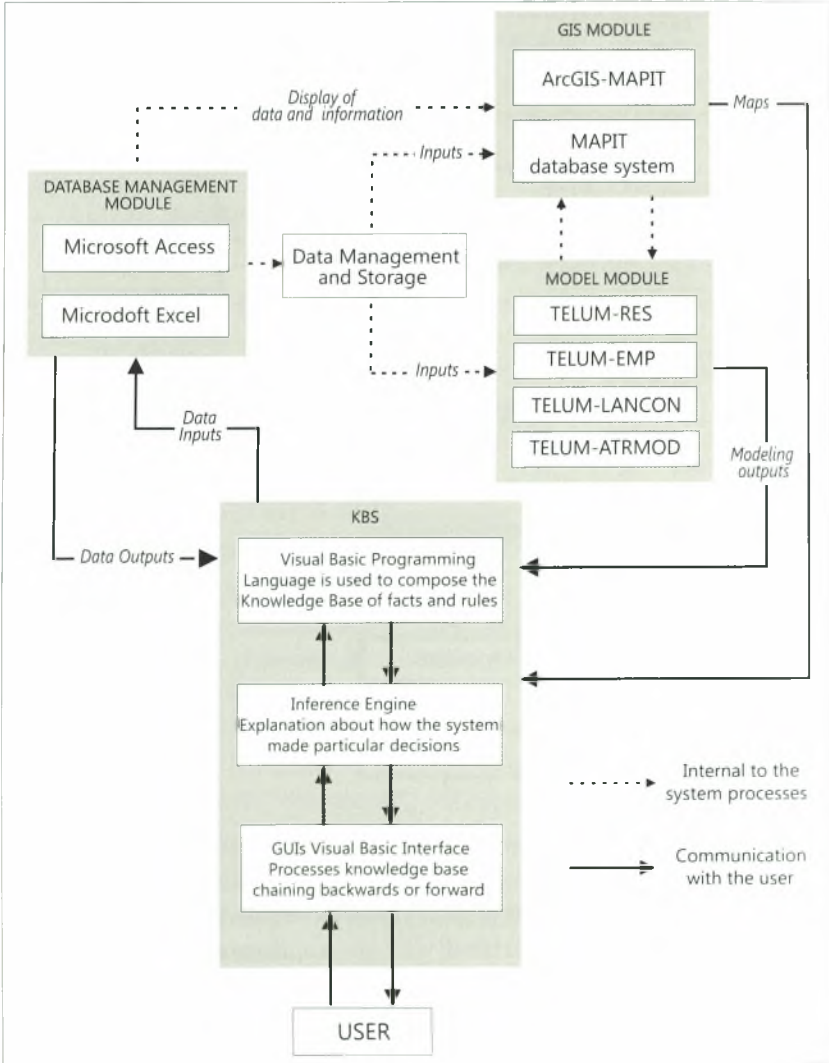
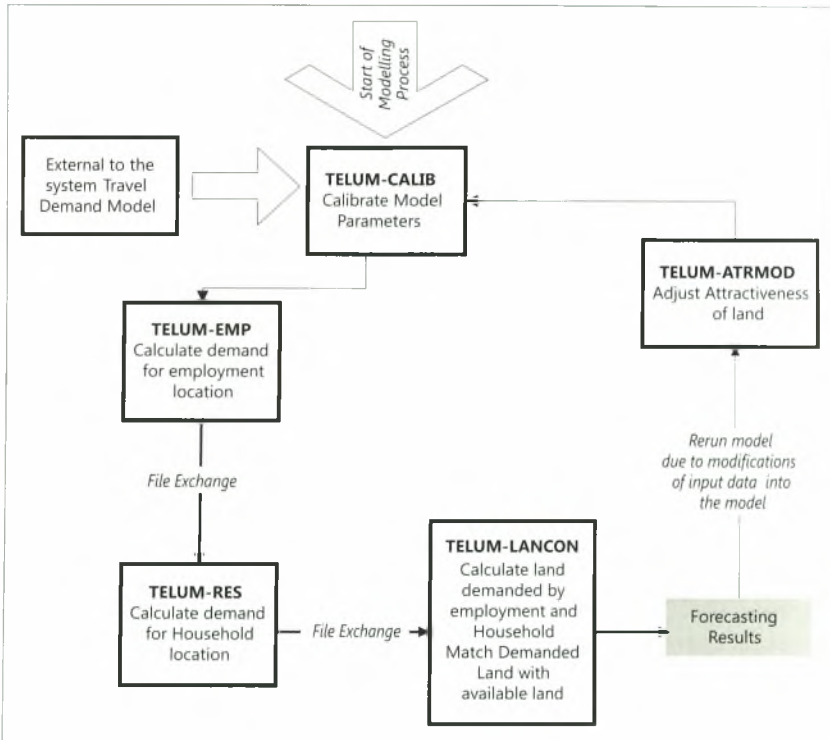


Figure 3 shows the internal structure and function of the Model Module of TELUM. It also portrays the inter-relationships between the models, sub-models and their computational utilities. The chart itself is quite self-explanatory. The modelling process starts with calibrating the model parameters for both TELUM-EMP (the employment allocation model) and TELUM-RES (the residential allocation model). It continues with forecasting employment and household growth and calculation of the associated land demand. Based on this land demand, TELUM-LANCON estimates the change in the amount of land (per zone and locator type). If the user desires to make any changes in the forecasts produced by the model, i.e. to incorporate local knowledge into the system, s/he can do that by adjusting the attractiveness of land through TELUM-ATRMOD.⁵

The structural analysis made it obvious that each module is essential to the modeling process and that functionally they (the models) and the process can be quite complicated. This exact fact, the complexity of the modelling task that is reflected in the structure and function of such systems, discourages the use of models especially when it comes to novice users. This is the part where Knowledge Based Systems (KBS) are found to be extremely useful, since they could be used as a way to hide the complexity of the land-use modeling task and virtually perform the task for the user. More specifically, in the case of TELUM, KBS have been used *to transform and reduce the complexity of the land-use modelling task, to interpret statistical results or inferring situation descriptions from available data, diagnose malfunctions over the modelling process and prescribe remedies, support the mathematical parts of modelling, like calibration, monitor and control expected outcomes, and to instruct specific tasks to the user.*

It is important for the reader to understand that what probably makes TELUM different from any other land-use modelling tool is the way KBS have been used to increase the functionality and usability of the system such as to make it more user-friendly and applicable in planning practice.

⁵ In more detail, TELUM's model module consists of two major models: TELUM-EMP and TELUM-RES. TELUM-EMP, the Employment Allocation Model, locates employers/employees. TELUM-RES, the Residential Allocation Model locates households to place of residence. There is also an internal sub-model, the Land Consumption model, LANCON, which calculates the land consumption consequences of the previously calculated employment and household location demand. In order for these models to perform their task, they have to employ two major computational utilities. The first is TELUM-CALIB, a calibration process, which uses a modified gradient search technique to calculate TELUM-RES and TELUM-EMP parameters, or coefficients, that produce the best fit for the model equations of the regional data. The second computational utility is TELUM-ATRMOD, the attractiveness modification program, which is used to prepare the residual variation from the calibration results for use in the subsequent forecasting procedures and to provide a systematic procedure for incorporating exogenous information from local planners.

Figure 3. Modelling Process in TELUM's Model Module

Finally, it should be noted that there are very few studies regarding usability and applicability issues of such tools in practice and no studies examining their usability from the user's perspective. Until now, research on urban and land-use models was mostly focused on increasing their statistical reliability, discounting the significance and importance of their applicability in practice. The exception is a recent study conducted by Vonk, Greetman and Schot that examined application bottlenecks of planning support systems (Vonk, Greetman, Schot, 2005). Their research provided a good understanding of possible bottlenecks in the application of such tools in practice; however, it was limited by the fact that their results were based only on developer's (of the PSS) perspective, ignoring in fact an equally important component; users' perspective.

4. Research Method

Given TELUM's complexity and scope of design, it was interesting to explore how TELUM really fits planning practice. In order to achieve this, we performed an evaluation on the applicability and effectiveness of *TELUM* in MPOs' land-use planning processes, and its [*TELUM*'s] usability and integration as a planning support system in their decision-making process.

The purpose of TELUM's evaluation is to capture users' perspective and record their experiences when using it (TELUM) in everyday practice and evaluate its applicability in a setting of a small/medium sized planning organisation. The research is based on the assumption that there are certain factors that can operate as obstacles, or bottlenecks, and block or delay the implementation of systems like TELUM in planning practice. A questionnaire identifying these factors was developed and distributed to TELUM users.

The following is a list of the nine major categories or groups of factors that we identified as potential bottlenecks in the implementation and adoption of TELUM. These are: user expertise, data requirements, system requirements, transparency and understandability, staffing and organisation structure, planning practices, provider/consultant, and external barriers. For each one of them there is a detailed analysis, which includes a description of the category, what it represents, how it can be in bottleneck in the implementation of TELUM or a PSS in general.

User expertise: User expertise is a very important issue when utilising TELUM or any PSS. It is well known in planning academia, and it has been mentioned in this paper, that one of the serious bottlenecks in the implementation of urban models in planning practice is their degree of complexity. In the case of TELUM, the use of KBS permitted and helped to create a planning support system that, according to developer's opinion, users with no modelling expertise could utilise. This category, user expertise, and its factors will indicate to us if they were successful in their efforts.

The category "user expertise" consists of four factors: expertise, training, confidence, and assistance.

- *Expertise:* Expertise refers to the perceived level of expertise that the user should have in order to utilise TELUM. It should be noted that the perceived (by the user) level of expertise is relevant to their

educational background, knowledge and experience in regard to modelling.

- *Training:* Training refers to the desire of the user to get familiarised with the features of the software through a formal training session.
- *Confidence:* Confidence has to do with how the user feels when s/he uses TELUM and is related to the confidence with regard to technology, functionality and structure of TELUM and not to the validity of results and system outputs.
- *Assistance:* TELUM was designed to function as a tool that would be easy to use by novice planning practitioners and to a certain degree replace the need of consulting by an outside land-use expert. Under this notion, the user should need little or no assistance to utilise TELUM.

Data Requirements: The success of modelling depends on the availability and quality of data inputs. At the same time data availability has always been a constraint factor in model design and in the implementation of models in planning practice. Needless to say, that TELUM has relatively low data requirements compared to the new generation of micro-simulation models. It will be interesting to see what users thought about TELUM's data requirements and how close to reality the assumption that TELUM's developer made about users being able to easily acquire the few data needed for TELUM to operate actually was.

The “Data Requirements” index consists of 8 factors: data requirements, cost, availability, quality and quantity, accuracy, standardisation, preparation, and manipulation.

System Requirements: A system requirements indicator is related to the software and hardware specifications necessary for TELUM to run. Most of the time, a PSS consists of numerous interconnected software packages. Likewise, TELUM brings together five different software packages that should communicate with each other, while at the same time they should be flexible and easy for the user to operate. The factors that comprises “System Requirements” index are: software, hardware, operation, integration, and additional software.

Transparency and Understandability: The complexity of urban models has always been a major drawback in their application in planning practice. For decades now models have been closed “black boxes” that are understandable only to a few experts. As mentioned earlier the purpose of

TELUM's development team was to simplify models and make them understandable and accessible, not only to the few experts that are currently using them, but also to planning practitioners.

The "transparency and understandability" indicator is a measure to assess if and how much users understand and trust TELUM and its outputs. It is very common in planning practice not to use quantitative methods (simulation models, quantitative evaluation of alternative scenarios, etc) to back up proposed plans and policy scenarios. TELUM could help planners change such planning practices. In order for that to happen, users have to understand and trust the results and outputs of models, which in turns presupposes that users are able to understand the model's underlying methodology and assumptions.

The factors that comprise the *transparency and understandability* index are; assumptions, functionality, understandability and transparency.

Staffing and Organisation structure: Successful application of a PSS depends on the acceptance of the system by its users and the agency staff. Agencies often lack available staff with sufficient modeling knowledge to utilise computer software like TELUM. At the same time, it is imperative that management in planning agencies understand and support the use of such tools. The following extensive set of factors tries to identify potential bottlenecks in the application of TELUM that results from the organisational structure and norms of a planning agency.

The "staffing and organisational structure" index is composed of 19 factors. These factors are classified in two distinct groups: characteristics of staff and planning professionals and characteristics and attitudes of the planning agency management teams.

The factors used to calculate the index were: staff commitment, professional perspective, managerial perspective, staffing, patience, previous experience, job improvement, user friendliness, previous use of PSS, PSS awareness, quantification of benefits, hesitance, design-oriented culture, decision-making process, communication, and internal power struggles.

Planning Practice: TELUM was designed in such a way as to help planning practitioners who have little or no experience in using modelling tools. The following set of factors explores why planning practitioners might conclude that TELUM, as a modelling and decision-making tool, does not fit their planning practice needs. The *planning practice* index comprises of 6 fac-

tors: development goals, communicative goals, political goals, information type inconsistencies, appropriateness, and cost.

Provider/Consultant: The role of the developer/provider can be crucial in the implementation and acceptance of PSS in agencies. The *provider* index was developed as a way to assess the desire or need for developers to provide help and support to agencies that utilise TELUM.

The reader should be aware that TELUM was designed with the scope to reduce (as much as possible) the dependence of the user/agency on an outside/external modeller or land-use expert. This means that when we are analysing user responses we should consider that TELUM was designed to eliminate the need for consulting and operational support.

External Barriers: *external barriers* refer to obstacles that are not directly related to the developer or the user, but are more general issues that affect the applicability of models in planning practice. It has been mentioned, several times now, that there is a continuous failure to use computer tools in planning. This reoccurring failure might be related to the fact that professional planning schools do not provide adequate education that could help planners understand models and their whereabouts. The *external barriers* index basically represents the lack of appropriate professional quantitative oriented education.

The goal was to create an index for each category that would measure and express the friction that this group of factors causes, or the obstacles they set, in the applicability of TELUM in planning practice. The friction indicator will be a derivative of the numerous factors that fall under this specific category, and is nothing other than an average (mean) of all the individual factors. The value of the indicator (and its individual factors) can vary from 1 to 5, with one indicating that this group of factors does not create any bottlenecks and five that they create serious bottlenecks in the implementation of TELUM.⁶

In order for the reader to understand how friction indicators were created, we will demonstrate how we calculated the indicator for the category of “User Expertise”. The category of “User Expertise” consists of four factors: Expertise, Training, Confidence, and Assistance. For each one of the factors, an interval scale was assigned. This scale aims to express the

⁶ The scale used is an Interval and Ratio Scale, meaning that the scale values 1 through 5 are not only mutually exclusive and ordered in a low to high order, but they also have equal intervals between them.

opinion and/or feelings of the interviewee/user with regard to the specific factor. For instance, in the case of the factor “expertise”, the user is asked to rank his/her feelings with regard to how much experience, they think, the user should have in order to utilise TELUM. In the actual questionnaire, this will be as follows:

In order to utilise TELUM software the user needs to have:



In this case, 1 indicates that the user needs little or no expertise to use TELUM and 5 that the user needs to be a real expert in order to work with TELUM. The assumption that we are making is that if a significant level of expertise is needed to utilise TELUM then this can be a serious bottleneck in the implementation of the software in planning agencies. Under this notion, a similar scale was developed for the second factor that comprises the “user expertise” indicator, training;

Do you think that a training session will be helpful for you to better understand how TELUM functions?



In this case, a response of 1 indicates that the user feels confident to operate TELUM without training and 5 means that s/he needs a lot of help to operate TELUM, which in turn could be a serious bottleneck. The average of all four factors that comprise “user expertise” will be the friction indicator for this category.

Using this methodology, nine indicators were calculated for each one of the above mentioned categories. In the end, we were able to quantitatively compare these categories amongst them and the 20 users that responded to the survey. In that way, we were able to make inferences about which one of the categories could cause major bottlenecks and if different agencies find certain factors more of a bottleneck than others. The questionnaire was sent to the 20 MPOs via mail and e-mail.

5. Results Analysis

The following table shows the ranking for the eight indices in an ascending order. The higher the score, the higher the implementation friction this index causes. According to the scores, the factors causing major bottlenecks are the extensive data requirements; lack of operational support from the developer or the provider of the software; and the limited understanding of TELUM's usability, due to lack of appropriate educational background (both for users and managers). With a lower score, but still a lot of chances to create bottlenecks, is the "high expertise" a user must have in order to utilise the TELUM and land-use models, in general.

Table 1. Overall Rank of Indices

Index	Average of Factors
3 System Requirements	1.70
6 Planning Practice	1.93
4 Transparency & Understandability	1.94
5 Staffing & Organisational Structure	2.05
1 User Expertise	2.53
2 Data Requirements	2.81
7 Provider	2.96
8 External Barriers	3.00

More specifically, the extensive data requirements of models could be a bottleneck in their applicability, but not necessarily the one determining their use or not. Availability of data has always been a bottleneck in the implementation of models. Lee in his article "Requiem for Large-scale models" published in 1973, identified models' hungeriness (for data) as one of the "seven sins" of large-scale urban models.⁷ Today, 32 years after, someone would expect that availability of data would not be a problem in the applicability of models. Nevertheless, the increased requirements of models as far as the quantity and quality of data used could be a major bottleneck in their

⁷ The "seven sins of urban models" as referred to in the original article were hyper-comprehensiveness, grossness, hungeriness (for data), wrong-headedness, complicatedness, mechanicalness, and expensiveness. A more detailed analysis can be found in Kolsterman's article "Large Scale Urban Models: Retrospect and Prospect", *Journal of American Planning Association*, v.60,1 (1994).

implementation. For that reason, developers should always consider data-availability issues when designing planning tools, and not take it for granted that users have access to any kind and type of data.

Another issue that came up over the evaluation was the significance of developers' operational support in the acceptance of the tool. Lack of operational support from the provider, or the developer, that would familiarise the user with land-use modelling concepts and processes could act as a bottleneck in the adoption and implementation of such systems in planning practice. Even the MPOs that used TELUM indicated that they would like to have some type of operational support from the provider of the software. Support could be in the form of individual or group seminars that would accustom the user with concepts and processes of modeling.

Lack of adequate and appropriate education of agency staff leads to low rates of absorbance and acceptance of a land-use modelling system by its users and other agency staff. User responses indicated that the lack of appropriate education could create feelings of distrust and devaluation towards TELUM and its potential uses in agency planning practices, which in turn creates serious bottlenecks in their wider adoption and implementation, of the system. This is because users have to put extra effort into persuading the rest of the agency staff about the value and benefits of using such tools in planning practice.

Finally, the determinant factor that advances the use of TELUM in an agency is *the way the managerial team(s) perceives TELUM's usability in the decision-making processes and planning practices of the agency*. Current research reveals that inadequate support and encouragement from the managerial team were the factors that prohibited the implementation of TELUM in some agencies, in contrast with the agencies that used TELUM where the managerial attitude was really positive towards the adoption of the new tool in their practices. The *staffing and organisation Structure* index is related to the characteristics of the staff and planning professionals that utilise TELUM and to the characteristics and attitudes of an organization's managerial team. The index reveals that, in the agencies that used TELUM, managers and management teams appreciated and acknowledged TELUM's ability to improve agency planning practices. Hence, these management teams encouraged their staff to use TELUM and were more appreciative and aware of the value that TELUM could bring to their decision-making process.

Ultimately, it seems that there are some political attributes that come into play and affect the applicability of such tools in planning agencies. TEIUM is a “politically neutral” planning tool that gives MPOs the opportunity to plan, test, compare, and debate scenarios on a case-by-case basis. It can also be used as a mitigation tool among conflicting interests. Nevertheless, one should not forget that planning is a highly political process and when scientific results contradict political perspectives of an agency’s management team, then the benefits of using such tools might be disregarded.

6. Conclusion

It has been 45 years since the issue of the Journal of American Institute of Planners (1960) in which Britton Harris, along with some other enthusiastic scientists, embraced the idea of creating integrated modelling tools (PSS) that would help planners in their decision making processes. Today’s reality is far from what these planners had imagined. In order for us to continue believe that PSSs could have a chance in planning practice, scientists and developers of such systems should start thinking about ways to make these tools more usable and applicable to planning practice. Otherwise, each new PSS will remain in the hands of its developers without fulfilling its main role; to help planners do planning.

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The Interrelationship of Planning, Participation and ICT:

The Case of Developing a Curriculum in Agia Varvara, Athens, Greece

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Abstract

One of the main problems in recent urban planning is how to make very broad and commonly used theoretical, and interrelated, principles such as sustainability and governance more practical. The main aim of this paper is to demonstrate how one of the main issues of urban governance, i.e. public participation in planning, can be helped through the use of new technologies. The data are provided by the PICT (Planning Inclusion of Clients through e-training) project, which was a three-year (2002-5) pilot project co-funded by the Leonardo da Vinci Programme of the European Commission.

The main aim of the project was to encourage and facilitate effective public participation in planning by providing the necessary skills to planners and the public to communicate with each other and by developing the appropriate tools that would make such communication meaningful. The project addresses all participants in the planning process, the key objectives being to introduce key IT (Information Technology) skills, fight technophobia and disbelief, improve communication skills, acquire an understanding of the built environment and spatial representations and, finally, introduce game-like activities to implement VR (virtual reality) support tools. The PICT partners came from the UK, Greece, Belgium and Hungary. The Project Contractor was Knowsley Metropolitan Borough Council (UK) and the Project Coordinator was the PRISMA Centre for Development Studies (Greece).

The paper focuses on the curriculum developed for the Municipality of Agia Varvara, which lies to the west of the City of Athens. The developed curriculum consists of three parts: a common "core" part that is shared by both planners and the public, and two distinct parts: one addressing the public and the other the planners. Each part consists of several modules, to cater for different learning levels, abilities and interests. The struc-

ture is flexible and the whole idea was to have a curriculum with a scientific and not a “journalistic” basis, that could at the same time be simple, but not simplistic.

Keywords: *Sustainability, governance, virtual reality, PICT Leonardo project, Agia Varvara / Athens / Greece, urban planning, public participation, information communication technologies.*

1. Introduction

One of the main problems in recent urban planning is how to make very broad and commonly used theoretical, and interrelated, principles such as *sustainability and governance* more practical. The main aim of this paper is to demonstrate how one of the main issues of urban governance, i.e. public participation in planning, can be helped through the use of new technologies.

The data are provided by the *PICT* (Planning Inclusion of Clients through e-training) project, which was a three-year (2002-5) pilot project co-funded by the Leonardo da Vinci Programme of the European Commission. The paper focuses on the curriculum developed for the Municipality of Agia Varvara, which lies to the west of the City of Athens. It has a population of approximately 30,500 people, with a multicultural identity and high unemployment rates.

2. Sustainability in Urban Planning

Sustainable development in planning has three main dimensions: society, economy and environment. A key question that must be addressed is the following: is urban sustainability a contradiction in terms? (Girardet, 1999: ch. 1). The starting point in answering this question is the provision of a successful definition of a sustainable city, which is, according to Girardet (1999: 13): “organised so as to enable all its citizens to meet their own needs and to enhance their well-being without damaging the natural world or endangering the living conditions of other people now or in the future”. Another useful definition (a “second degree” one) is that by Richard Rogers (1997: 169), who claims that the sustainable city is a just city, a beautiful city, a creative city, an ecological city, a city of easy contact and mobility, a compact and polycentric city, a diverse city. According to Kevin Lynch (1972: 115-6), sustainability is “future preservation” involving actions ethically or aesthetically internalised, so that they become satisfying things to do now:

“as historical preservation requires the disposal of the irrelevant past, so future preservation requires the elimination of the irrelevant future”.

It must be ensured that the use of resources does not diminish the living environment. Reference must also be made to urban best practice initiatives, to principles and policies (people’s needs must be addressed as a starting point, a checklist of key questions must be made), to the culture of sustainability and to the Local Agenda 21.

An example of *best practice initiatives* is a substantial body of material compiled by the International Council for Local Environment Initiatives (ICLEI) and disseminated through their own worldwide communication channels:

- improved production/consumption cycles
- gender and social diversity
- innovative use of technology
- environmental protection and restoration
- improved transport and communication
- participatory governance and planning
- self-help development techniques (Girardet, 2004: 259-60).

In any case, initiatives on sustainable development have to start with *city peoples’ own needs*, which include:

- clean air and water, healthy food, good housing
- quality education, vibrant culture, good health care, satisfying employment or occupation
- safety in public spaces, equal opportunities, supportive relationships, freedom of expression
- meeting the special requirements of the young, the old and the disabled (Girardet, 1999: 62).

To help cities to develop and implement viable sustainability policies, *key questions* have to be asked:

Does my city-

- compile an annual environmental report?
- use life cycle analysis in its own purchasing decisions?
- support public environmental education?
- create jobs for environmental regeneration?
- have polices for transport integration and pedestrianisation?

- encourage ecological businesses?
- support ecological architecture and urban villages? (Girardet, 1999: 67).

In order to bring about the reconciliation between cities, their people and nature there is a need for developing *concepts of real sustainability*. These efforts need to:

- involve the whole person
- place long term stewardship above short-term satisfaction
- ensure justice and fairness informed by civic responsibility
- identify the appropriate scale of viable human activities
- encourage diversity within the unity of a given community
- develop precautionary principles, anticipating the effects of our actions (Girardet, 1999: 71).

A significant tool for sustainability has proven to be *Local Agenda 21* a product of the 1992 Rio Earth Summit (UNCED) that has been endorsed by 150 nations. It is a continuing process of developing local policies for sustainable development and building partnerships between local authorities and other sectors to implement them. Its goal is integrative, seeking to break down barriers between sectors in both public and private life. There has been a range of practised methods: traditional consultation on draft plans, public meetings, bringing together of representatives from different interests, round tables, focus groups. A crucial factor is the sustainability indicator, i.e. asking people to identify specific measurable aspects, parts of their living environment which, to them, indicate their health (Raemaekers, 2000: 40-1). The support mechanism is not set out by Local Agenda 21, but local authorities have been leaders among governments in addressing sustainability issues (even before the adoption of LA 21) [Gilbert *et al.*, 1996: 16]. LA 21 has a much wider remit than the statutory planning system: it is very much bottom-up, community-based process and much more related to an overall improvement in quality of life and offers an opportunity to take radical and innovative action (Macdonald and Heaney, 1999: 41-2).

3. Community Planning

In the process of community planning, the importance of local economic development is reflected in a type of “new localism”: from outward- to inward-looking societies (Williams, 1999). The aim is to develop a sense

of integrated local development (housing AND public space AND social-economic background).

Community planning could include a comprehensive plan (Kelly and Becker, 2000) and should primarily focus on the needs of particular groups. Examples in the case study of Agia Varvara (see Section 6) are the elderly and the Roma: the first, along with housewives, were willing to participate in the PICT project but are IT (Information Technology) illiterate - on the other hand, young people are IT literate, but they did not seem willing to participate in the research.

The *main principles of community planning* are the following:

- agree to the rules and boundaries
- be visionary yet realistic
- build local capacity
- encourage collaboration
- have fun
- learn from others
- have personal motivation and take initiatives
- respect the cultural context of others
- be receptive to training
- visualisation of result (Wates, 2000: 11-21).

4. Urban Governance

The term government is confined to the formal structure of representatives and officials established to coordinate and oversee this function, while the term governance refers to the process of government and, more broadly, to the ways in which a society manages its collective interests. It includes functions that may be helped by government actions: strengthening institutions for collective decision-making, facilitating and forming partnerships designed to secure collective goals, ensuring the fair expression and adequate arbitration of a range of interests (Gilbert *et al.*, 1996: 16). The revitalisation of local government towards the direction of governance is a cornerstone of city recovery but it needs to be done from the bottom up: from the neighbourhood, where people know what is going on, to the city where politicians, businesses and civic bodies link up. Rotterdam and Spanish cities function as characteristic examples (Rogers and Power, 2000: 264-5).

The *importance of governance to sustainability* is located in the following factors: promotion and practice of sustainable resource use; regulation of the demand for and supply of land; provision of appropriate infrastructure; attraction of suitable investment; and the encouragement of partnerships. The slogan “think locally in order to act globally” reflects the importance Agenda 21 attaches to local strategies and actions in the resolution of global environmental problems (Gilbert *et al.*, 1996: 17-8).

Greece continues to rely on formal mechanisms of administration. The actual role of the private sector and civic society has to be invented. As far as the third sector is concerned, the non-governmental organisations are under-represented, and in most cases they constitute a one man/woman show - the public sector is unable to press the state and vice versa (Coccosis *et al.*, 2003).

The role of local governments in the urban environment:

- they are the only bodies with the mandate, responsibility and potential to represent and act for the different and often conflicting interests
- although they are the bodies with the greatest potential to take integrated approaches to the environmental and social challenges of urban areas, they often have neither the legitimacy nor the capacity
- even if this happens, there will be effective action only if it involves leadership of elected officials and participatory and inclusive style of governing
- for most issues of urban sustainability, they should work with partners, other local governments and international networks (Gilbert *et al.*, 1996).

5. Participation in Urban Planning

One of the main issues of urban governance is participation in planning. There are different views of participation depending on the degree of involvement of the experts and the criteria for representing the public. Although there is lack of experience of participation, and consequently of participatory culture in Greece, Agia Varvara has demonstrated participatory experiences in the past.

A useful “*schema of public participation*” is that by Hampton, which aims at the relationship of specific techniques to subsidiary objectives in public

participation. There are two major objectives behind the introduction of greater public participation in planning during the late 1960s: policy-making and decisions can benefit from better information about public preferences and residents' concerns; and public participation can draw people into a stronger and longer-term relationship with government and enhance their current and future ability to play a significant role in policy-making (Hampton, 1977 cited in Darke, 2000: 391-2).

The *involved groups* are distinguished in: major elites (e.g. local business groups, major employers, Chambers of Commerce, trade unions), minor elites (local interest groups, community associations, action groups, and public as a collection of individuals (Hampton, 1977 cited in Darke, 2000: 392).

The existence of *equal opportunities* constitutes one of the important conditions for success within local authorities, and, according to the Equal Opportunities Guide some of the relative factors are:

- race
- women
- disabled
- elderly
- children
- part-time and casual workers (Brennan/LGMB, 1991 cited in Darke, 2000: 409).

The *key principles for good practice in public participation* are the following:

- clear aims of participation at the outset;
- insurances of the central role of local politicians at the programme;
- link of motives, objectives and intentions of the participation programme with the appropriate techniques;
- interpretation of the nature and implications of policies and plans for the users;
- identification of the procedures for information collection from the public in order to evaluate and act (Alty and Darke 1987, cited in Darke, 2000: 410).

6. The Good Functioning of Cities

According to the Charter of Athens, there are four main urban planning functions: housing, work, leisure, and transport (Le Corbusier, 1943/1987). “Making the cities work” is directly related to these functions and depends on *best practice examples* of:

- arriving in the city (transport): most successful gateways and transport interchanges, first (and lasting) impressions really count, cities are not just places where people live, but they are destinations that many people visit for brief period
- getting around the city (transport): a great challenge for most urban leaders: how to move people around in safety, comfort and speed, acute political trade-offs: pedestrian vs car, pollution vs clean air, communities vs roads, a matter not only of huge public investment, but also of ideas and good operating practices
- enjoying the city (leisure): ingenious approaches that are taken to parks, shopping malls and public spaces, large number of (usually) small-scale amenities that make a city fun to be in (Hazel and Parry, 2004: 24-183).
- working in the city (work)
- living in the city (housing).

Venice is a classic case study (even though few other, if any, cities have canals), since its working principles can be applied to modern day cities (Hazel and Parry, 2004: 17-23).

The *main lessons* learned are:

- cities have to find a solution to the car (road space has to be rationed since it is not a free public good)
- even the most spectacular developments have to be on a human scale
- information is the key
- it is people (often one individual) that make things happen.

It is a cumulative effect of visionary ideas, sometimes small, that make cities work (Hazel and Parry, 2004: 187).

7. The Case Study of Agia Varvara, Athens, Greece in the Framework of the Leonardo Project PICT

The data are provided by the *PICT* (Planning Inclusion of Clients through e-training) project which was a three-year (2002-5) pilot project co-funded by the Leonardo da Vinci Programme of the European Commission. The main aim of the project was to encourage and facilitate effective public participation in planning by providing the necessary skills to planners and the public to communicate with each other and by developing the appropriate tools that would make such communication meaningful. The project addresses all participants in the planning process, the key objectives being to introduce key IT skills, fight technophobia and disbelief, improve communication skills, acquire an understanding of the built environment and spatial representations, and finally introduce game-like activities to implement VR (virtual reality) support tools. The PICT partners are:

- Knowsley Metropolitan Borough Council (Project Contractor), Liverpool John Moores University, School of the Built Environment, and the European Council of Town Planners (ECTP) from the UK;
- PRISMA Centre for Development Studies (Project Coordinator), the Municipality of Agia Varvara in the Prefecture of Athens, and the University of Thessaly from Greece;
- Hogeschool voor Wetenschap & Kunst Sint Lucas Architectuur from Belgium, and
- Budapest University of Technology and Economics, and WEBhu Kft. ICT Consultancy from Hungary.

Agia Varvara is a south-west Athens municipality, with 30,500 inhabitants in 22Ha, with 62 urban blocks, 2163 buildings and 31 refugee apartment buildings (from the 1960's) accommodating 580 families. Its main urban problems are lack of free space and problems in accessing communal space.

The population includes 15% Roma, refugees/immigrants from the Black Sea and economic immigrants. The population is aging, with many single parent and elderly households. The area is a low income one, with half of the households below EC poverty line. Illiteracy is approaching 50%, with the current school drop-out rate at 21%. Unemployment is running at 24%, with half of it long term.

The proposed *urban interventions* in Agia Varvara belong to the following four categories:

- I. Urban regeneration
 - Two squares
 - A small park
 - Improve pedestrian movement and lighting
 - Construction of a playground
 - Street elevations of private buildings
- II. Social Services
 - Kindergarten
 - Creative activity centres for children
- III. Cultural infrastructure
- IV. Training, support services

8. The Developed Curriculum

The developed curriculum in Agia Varvara in the framework of the Leonardo project PICT consists of three parts: a “core” part that is shared by both planners and the public, and two distinct parts: one addressing the public and the other the planners. Each part consists of several modules (separated into various units), to cater for different learning levels, abilities and interests guided by the needs survey. A special target group addressed in Agia Varvara was that of pupils.

The structure is flexible, and, although the written text seems “rigid” using an austere language, it functioned only as a basis for the oral presentations which were more “free” and using everyday language. The whole idea was to have a curriculum with a scientific and not a “journalistic” basis, that could at the same time be simple, but not simplistic.

The attribute of flexibility is also expressed in the fact that the themes were developed in such a way as to allow members of the public to follow some sections of the curriculum addressed to the planners, and also planners to “look back” at some sections of the curriculum addressed to the public.

During curriculum development, the project team members consulted with the Local Consultative Committee to ensure relevance and acceptance of the learning approach. The main tools used are power point slides and

practice in PCs. A main aim was to include in the slides many pictures of real international (mostly well-known) examples, especially with regard to addressing the public.

As far as ICT (Information Communication Technologies) is concerned, the structure enables the custom creation of teaching modules for taught courses. The VR tool produced is sufficiently accurate, relatively efficient in the time spent developing and hence cheap to produce and modify, and it provides a high density of visual information to the viewer/visitor. The ability of each user to interact with the model, switch between alternatives (existing and proposed) and, most importantly, add textual comments (direct or mediated) to particular points within the model is enhancing communication, creating a pseudo-multi-user environment without the extra complexity, resources and problems involved. The proposals and comments are summed up and presented to the experts who should act accordingly, decide what can and should be satisfied and feed back to the designers and the public.

The main sections in the curricula modules refer to planning, participation, and ICT. Additionally, the common *core part* has an introductory module which refers to general issues concerning the PICT programme. In total, it has four teaching modules: Introduction to PICT, Planning, Participation, Methods and techniques of ICT. The thematic emphasis is put on sustainability. As far as ICT is concerned, the reason for including a common core part is that addressing older planners may not be at all different, in terms of ICT skills needed, from addressing similarly aged members of the public.

The *public's part* (which is the largest one) has five teaching modules in total: Introductory Themes to Urban Planning, Participation, "Key skills" in ICT, GIS, Virtual Reality. The various "key skills" for the less-educated members are necessary before embarking in any substantive learning on the subject of public involvement in planning. This is in accordance with the project aim of empowering local communities. The thematic emphasis is put on "making cities work", a section which includes many pictures of real international examples. As far as ICT is concerned, the emphasis is on understanding information presented, photomontages, drawings, renderings, video and, most important, the ability to interact with VR models.

The *planners' part* (which is the smallest one) has five teaching modules in total: Advanced Themes in Urban Planning, Participation, GIS, CAD and Virtual Reality. There is no particular thematic emphasis. As far as ICT

is concerned, the focus is on operating the various ICT tools, in terms of building new environments, 3D data formatting, converting, translating information from different platforms, etc.

9. Conclusions

The principle of sustainability in urban planning can be made more practical through the implementation of community planning. The principle of governance in urban planning can be made more practical through the implementation of participation. Thus, sustainability and governance are interrelated through community planning and participation, leading to “making cities work”.

The process of developing a flexible three-part (common core, public planners) curriculum in the case of Agia Varvara (Athens, Greece) in the framework of the Leonardo project PICT showed that ICTs can help in participation, mainly because they constitute a relatively simple means of recording the views of both the public and the planners in a variety of subjects (both “open” and “closed”).

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E-Governance, Metropolitan Governance and Development Programming: The Case of the Thessaloniki Metropolitan Area

Dimitris Foutakis and Elisavet Thoidou

Abstract

E-Governance has recently emerged as a new field of interest for both researchers and public policy makers. This has to do in the first instance with the rise of information and communication technologies and with the strategy for promotion of the information society. It also reflects a growing interest in the capacity of various forms of governance to manage complex development issues and facilitate decision-making in the era of globalisation.

The potential of *e-Governance* extends from improvement of public services at the various levels of administration to empowerment of community engagement within decision-making processes. *E-Governance* is also of manifest relevance to questions such as the digital divide and democratic participation.

Metropolitan areas in particular are considered to be at the centre of the developmental process. They thus become the appropriate spatial level for the implementation of development programmes aimed at the enhancement of competitiveness and employment. New forms of multilevel metropolitan governance emerge, in response to the economic and institutional transformations occurring there. *e-Governance* represents a new challenge for metropolitan governance and in particular for development programming.

In the context of EU regional policy, development programming in Greece identifies the development of metropolitan areas as one of its main policy objectives. *e-Governance* is in any case a basic component of the Information Society strategy. This paper examines the implementation of *e-Governance* in the Thessaloniki metropolitan area, in the specific context of development programming. From this starting point, lessons are drawn for the necessity of *e-Governance* as an element of metropolitan governance.

Keywords: *E-Governance, e-Government, metropolitan governance, development programming, Thessaloniki metropolitan area.*

1. Introduction

Information and Communication Technology (ICT) has progressed in leaps and bounds over the last two decades and that progress has affected developments in all sectors of the economy, society and politics. At the same time, the expansion of its use has served to highlight potential new modes of interaction between both the public and the private sector, as well as between the public sector and the citizens, via modes of electronic governance, in a context of readjustment of their mutual relations.

In present-day conditions, the parameters for sustainable urban development are shaped by the dynamics of spatial development as determined by globalisation on the one hand and the re-emergence of the regional/local level on the other, with the intervening national level apparently receding or claiming a new role. Within this shifting framework there is an upgrading of the significance of the metropolitan areas, which function as centres for the promotion of development and for the provision of services to wide geographical regions (Dunford and Kafkalas, 1992).

Given that in the metropolitan areas changes in the sphere of the economy proceed in tandem with institutional changes, they comprise a terrain for the emergence of problems of a new type, as well as of new forms of governance. In this context, the strategic aim should be to attain economic competitiveness without compromising the other components of sustainability, namely social cohesion and quality of the environment. *e-Governance* offers a variety of tools for sustainable urban development, such as access to information and to participatory processes, along with the possibility for co-ordination of the various public policies into an integrated approach implemented in the metropolitan areas.

The aim of this paper is to examine the implementation of *e-Governance* in the context of development programming, focusing upon the metropolitan governance of Thessaloniki. The paper is divided into three sections. The first introduces the concept of *e-Governance*, linking it to metropolitan governance and sustainable urban development. The second section examines *e-Government* in the context of both the European Union Information Society strategy and the corresponding strategy in Greece, along with a short presentation of the organisational scheme of development programming procedures in Greece. The third section presents the advancement of *e-Government* in the metropolitan area of Thessaloniki, providing in particular evidence from the websites of four key institutions in the area.

2. Electronic Governance and Metropolitan Areas

2.1. Electronic Governance: Potential, Prospects and Limitations

In the context of specific applications of ICTs pertaining to governance, the field of electronic or digital governance has been in expansion internationally since the early nineties in the USA and the late nineties in the European Union, including Greece (particularly after the year 2000). Even though the term electronic or digital governance is frequently used to denote all relevant services and functions provided by the public sector and effectuated through digital means of communication, a corresponding distinction should be made between *e-Government* and *e-Governance*, to that between *Government* (in the sense of administration and more generally executive power) and *Governance*.

e-Government “is the use of technology to enhance the access to and delivery of government services to benefit citizens, business partners and employees. ...The relationship is no longer a one-way “us-versus-them” proposition; rather it is about building a partnership between governments and citizens” (Silcock, 2001: 88).

e-Governance is not to be equated simply with the employment or utilisation of digital technology. It is its utilisation for the facilitation of procedures that have already been initiated in the context of a different approach to the role of government and of the state. A useful outline of the concepts is to be found in the relevant report of the IntelCities project (Thorleifsdottir *et al.*, 2004: 12):¹

“eGovernance as a tool to enable a transformation in the way government operates, designs and delivers services, participation and results, making maximum use of both information and technology.

eGovernance is formed from the merging of eGovernment and eParticipation principles, and in its most basic form consists of the use of ICTs in the relations between citizens, politicians and government administrators in order to increase cooperation, participation and transparency at local and national level. Inclusion and accessibility are key-words for realising eGovernance.”

The development of ICTs and their applications has triggered a dialogue at global level on the consequences, both negative and positive, of their dissemination and use. Above and beyond the generally accepted potential for

¹ The *IntelCities* project is a research and development project in the context of the EU Sixth Framework Programme. The general goal of WP 11: “*e-Governance*” is to promote urban governance within the knowledge society. For details see the project’s website <http://www.intelcitiesproject.com>.

better services to citizens and businesses, one argument in favour of the new technology is the capacity for improved public information, greater transparency and greater participation by citizens in decision-making. On the other hand, there is nothing automatic about the activation of this capacity, given the existence of prerequisites, both material and intangible, that are not always present. These include infrastructure (data networks, computer hardware and the corresponding software) and the ability to utilise them and benefit from them, both from the viewpoint of ability (necessary skills and knowledge, not to mention access to the infrastructure and the technical means) and from that of will and motivation for change in daily habits and adaptation to the new situation by all parties involved (administration, business and citizens).

Of these three prerequisites, the first (technological infrastructure), notwithstanding the fact that it demands significant resources, is perhaps rather easier to secure. The second prerequisite (skills and access) appears more difficult given the existence of the “digital divide”. Progress is contingent on sufficiency of time, availability of adequate funding and ability to re-orient the country’s educational system. It is also inevitably linked to questions of income distribution, poverty and social exclusion. The third prerequisite (will and motivation for change), to conclude, has to do both with changes inside public administration and related behavioural readjustment to it by social actors.

Clearly, electronic governance combines two different processes: on the one hand, technological developments and potentials and on the other, changes in the way the relationship between public and private is shaped in the sphere of economic, social and political life. Thus, before we can speak of electronic governance, governance *qua* governance sets the parameters for the former. For urban centres and metropolitan areas in particular, the forms of urban governance establish the framework for their electronic governance while at the same time developing in accordance with the potential provided by the ICTs.

2.2. Metropolitan Areas, Metropolitan Governance and Development Programming

In the era of globalisation, the new dynamics of metropolitan regions is a source of pressure, the basic reason for which is urban sprawl and the spread of development, with repercussions for infrastructure, energy, environment,

social differentiation, etc. Specific problems include the proliferation of activities on the outskirts of the cities, resulting in a permanently increasing need for new infrastructure and new means of transport, and pressures on the natural and cultural environment of the city, etc. (Getimis and Kafkalas, 2003).

The way of dealing with problems through the institutions and mechanisms that govern the functioning of the public and private sectors in the city is closely interrelated with urban development. It is at the urban level that new forms of multi-levelled intergovernmental bargaining and co-operative procedures between the public and private sectors make their appearance. These forms of governance emerge as a result of differentiation in the role of the state, as part of a procedure of gradual withdrawal of its regulative, interventionist functions that has been underway since the 1980s, and of a parallel tendency towards differentiation in the development process, characterised by deindustrialisation of urban centres, but also by successful attempts at adaptation and restructuring.

Differentiation from the traditional role of the state also leads to employment of the differentiated term “governance” rather than “government”. In the latter, the key role is played by the state, which sets the rules for participation by all other bodies and individuals. In the case of governance, the claim is that relations are not hierarchical and the participants, whether private sector or social bodies, equally participate in production of policies and rules for regulating the economy and society (Wasenhoven and Sapountzaki, 2005).

The importance of metropolitan areas for the promotion of development and employment in broader geographic regions, underlines the significance of development programming in fostering sustainable urban development and above all, in promoting the objectives of competitiveness of the metropolitan centres, of employment, of protection and upgrading of the environment and of social cohesion. These objectives may be supported through individual programmes and interventions whose success is interwoven with the way development programming is organised and implemented.

Development programming as a key field for implementation of policy at the metropolitan level is closely associated with the forms of metropolitan governance. The fragmentation of organisations and their powers along with overlapping of their competences in metropolitan areas lead to fragmentation and conflicts in the processes of development programming and

ultimately in all interventions. The framework of metropolitan governance influences these processes, not only on the side of the administrative agencies but also on that of relationships between the administration and individual citizens on the one hand and the various stakeholders on the other. The procedures that are generally followed in a metropolitan area for dissemination of information, for participation and for public consultation are important both in planning and in implementing development programmes. The goal is to secure the broadest possible dissemination of information, the greatest possible degree of public acceptance, the fullest implementation and the maximum possible effectiveness of development programming.

As in the case of metropolitan governance, new challenges emerge for development programming, both because of the complexity of the problems, organisations and competences in a metropolitan area and because of the new, multi-faceted and urgent requirements for urban competitiveness, without compromising environmental protection and social cohesion.

Electronic governance in particular, in the context of metropolitan governance can, under certain preconditions, with its evolving potentialities (e.g. Internet), serve to facilitate synergies and policy integration, and therefore development programming at the metropolitan level and to further promote sustainable urban development.

3. E-Government Policy Framework²

3.1. E-Europe Strategy

As far as European urban centres are concerned, e-Government practices are usually linked to the eEurope strategy as set out by the European Union. This strategy is considered to be “*part of the Lisbon strategy to make the European Union the most competitive and dynamic knowledge-based economy, with improved employment and social cohesion, by 2010*” (CEC, 2002: 2). More specifically, e-Government is one priority set by the *eEurope 2005* action plan.³ In this context (EC, 2005):

“eGovernment” means the use of information and communication technologies (ICT) in public administration combined with organisational changes and new

² It should be mentioned that the existing policies and practices at the national and the European level are mainly limited to e-Government. Hence, this term is used when we refer to the policy framework as well as to the case of the metropolitan area of Thessaloniki.

³ *eEurope 2005* priority areas are: Broadband, eBusiness, eGovernment, eHealth, eLearning, eInclusion, and Security. For more details see the website http://europa.eu.int/information_society/policy/index_en.htm.

skills. The objective is to improve public services, reinforce democratic processes and support public policies... eGovernment seeks to use information and communication technologies to improve the quality and accessibility of public services. eGovernment can reduce costs for businesses and administration alike, and facilitate transactions between administration and citizens. It also helps to make the public sector more open and transparent and governments more understandable and accountable to citizens."

The action plan *eEurope 2005* provides for two interrelated groups of actions. The first is focused on services, applications and content stimulation, covering both online public services and e-business. The second addresses broadband infrastructure and security matters. As regards the former, it is stated that by 2005, Europe should have "modern online public services (e-Government, e-earning services, e-health services) and a dynamic e-business environment" (CEC, 2002: 3).

The so-called i2010⁴ is the new strategic framework for "A European Information Society for growth and employment", which aims at supporting knowledge and innovation in the context of an endeavour to achieve the new Lisbon Strategy goals. Objective 3 "An Information Society that is inclusive, that provides high quality public services and promotes quality of life" is one of the three objectives of the i2010 strategy that is relevant to e-Government. The "adoption of an Action Plan on e-Government and strategic orientations to ICT-enabled public services (2006)" is one of the five steps by means of which the Commission aims at introducing the "societal agenda of i2010" (CEC, 2005: 11).

Notwithstanding the wide range of potentialities provided in the above-mentioned policy framework, e-Government practices at the urban level in the field of development programming are not identified as a specific potential. In other words, in the context of eEurope strategy, e-Government is not directly associated with development programming at the urban level. This is due to the fact that the European Union does not have a common urban policy. However, there are important links between the Information Society strategy (e-Government included) and the specific EU policies that have spatial dimensions, above all regional policy. These links are enhanced by a number of EU programmes – such as Information Society Technology (IST) programmes – and also by Structural Funds, which co-finance the necessary infrastructure and skills creation.

⁴ All the references to the i2010 strategy are from the website <http://europa.eu.int/scadplus/leg/el/cha/c11328.htm>.

Information Society policies share a number of key aims with regional policy, which has a strong spatial dimension to it. Through regional policy (EC, DG INFSO, 2006):

“The EU supports the provision of telecommunications infrastructure, particularly in those cases where market conditions do not result in sufficient investment in certain areas ... EU regional policy also aims to stimulate new electronic services and innovative ICT applications in areas such as eBusiness and eGovernment. In addition, policy aims to ensure that people have the necessary skills and capabilities to make the most of the opportunities created by the Information Society.”

In addition, under the successive Framework Programmes for research and technological development, many e-Government initiatives related to the various fields of spatial governance are being undertaken at the regional and the urban level, often in partnership with established regional and urban networks (ELANET, EURADA, EISCO, Telecities, etc.) (ibid.).

The fact is that e-Government practices have spread throughout European urban areas. In order to help the creation of comprehensive e-Government services across all levels of the Union, the European Commission/DG Information Society and Media has adopted The “Good Practice Framework” (GPF) amongst a series of measures.⁵ What is also important is the fact that the EU strategy for e-Government stresses the significance of re-establishment of back-office operations along with front-office ones (EC, DG INFSO, 2005b: 26). This gives a boost to e-Government applications in the field of development programming, in the sense that it involves particularly back-office operations.

3.2. E-Government in Greece: The Policy Framework

The strategic framework for e-Government in Greece is pursued under the overall policy for the Information Society. This strategy is expressed above all in the Operational Programme “*Information Society*” (OP IS), which is an innovative horizontal programme in the context of Community Support Framework 2000-2006 (CSF III). All ministries and regional authorities have been asked to prepare operational plans for the Information Society to facilitate the OP IS priorities implementation. In terms of policy planning

⁵ The main objectives of the Good Practice Framework are: “to collect examples of well-defined e-Government cases, to make the examples available for those involved in eGovernment by means of an intelligent knowledge database, to offer expert know-how on general or special eGovernment features and providing easy access to existing communities or expertise centres, to support the sustainable transfer of good practices and learning experiences in an easy and helpful way” (EC, 2006).

and programme management, “*the Greek approach to e-Government might be characterised as centralised ... with distributed implementation*” (iDABC, 2005: 7)

It is said to be the duty of public administration to make high-quality services available to citizens and firms, on time and at the lowest possible cost. It is also said that ICTs provide the necessary instruments for achieving that aim, whilst at the same time facilitating the “*operation of public administration within a framework of transparency and democratic participation*” (Ministry of Economy and Finance, and Ministry of the Interior, Public Administration and Decentralisation, 2001: 21). e-Government priorities, which are included in the second Action Line of the OP IS “Citizens and Quality of Life”, are as follows (iDABC, 2005: 7):

- *Improved quality of services to citizens and enterprises by public administration at central, regional and local level.*
- *Development of online applications, as well as use of Information and Communication Technologies (ICTs).*
- *Support the creation of geographical and environmental mapping and management information systems, linking central to regional and local government.*
- *Use of IT to promote and support a broader strategy for providing higher quality health and welfare services to all citizens.*
- *Introduction of telematics applications in land, sea and air transport (“intelligent transport”)*

Three out of nine Measures of the Operational Programme “**Information Society**” (Action line 2) could promote e-Government in the field of development programming at the urban level (Ministry of Economy and Finance and Ministry of the Interior, Public Administration and Decentralisation, 2001):

- **Measure 2.2: “Government on line”** aims at using ICTs “*in order to improve the quality of the services provided for citizens and firms by Public Administration at central, regional and local levels ...*”. It includes “*the development of applications that promote the real time Internet provision of services, and the use of ICTs in simplifying and redefining procedures and communications within and between public services throughout public administration, the networking of PA (Public Administration) agencies at central, regional, prefectural and local levels, the installations required, ... as well as measures for improved service delivery contacts to citizens and firms ...*” in six main areas. Regional development and administration is one out of

these six areas that can be connected to development programming at the urban level.

- **Measure 2.3: “Administration of the Structural Funds and transition to the Euro”** aims at supporting the management of Structural Funds resources at central, regional and local level that is a precondition for the successful implementation of the CSF III interventions. The basic instrument for this purpose is the Management Information System (MIS)⁶ of the Ministry of Economy and Finance, while all agencies involved in CSF III projects must be supported with management tools too.
- **Measure 2.4: “Regional geographic information systems and innovative actions”** aims at formulating “a strategy and an action plan for the IS in all regions, to encourage innovative pilot activities related to the development of IS applications at regional and local levels, and to establish and support geographical and environmental mapping and administrative systems at a central, regional and local level.” The Measure’s objectives can enhance e-Government applications in the field of development programming at the metropolitan level.

In addition to the OP IS, a programme called “*Politeia 2005-2007*”, for the “*re-establishment of Public Administration*” has been adopted by the Ministry of the Interior, Public Administration and Decentralisation (Ministry of the Interior), which is responsible for promoting e-Government in Greece. It is aimed at provision of better services to all citizens “*by focusing on their real needs: increasing transparency in public administration, implementing e-Government at all administrative levels (central and regional administration, municipalities), restructuring agencies and processes, protecting the citizen’s privacy and consolidating the rule of law*” (iDABC, 2005: 4).⁷

In the above-mentioned context, first- and second-tier local authorities are encouraged to participate in EU programmes and projects aimed at the utilisation of e-Government for varying areas of their competences. This process has considerable, albeit not permanent, influence on the development programming process, in both the planning and the implementation phase. Even though it only gradually affects the decision-making process at the local level, its progress is strongly connected to the overall state of spatial governance in the country.

⁶ The MIS is also known as “Integrated Information System”.

⁷ For details see <http://www.gspa.gr> (in Greek).

3.3. Governance and Development Programming: The Greek Experience

Local authorities, public administration and the scientific community in Greece have recently been engaged in a constructive dialogue on metropolitan governance in the Thessaloniki and Athens metropolitan areas. It is worth noting that the Ministry of the Interior has already commissioned two major studies on this subject, aiming at the analysis of the preconditions and the mechanisms for establishment of metropolitan governance (UEHR/MIPAD, 2003).

Leaving aside the influence of international and European trends, these developments derive from new needs and new challenges emerging for the metropolitan areas. The National Development Plan 2000-2006 for Greece makes provision for a new metropolitan role of international and European dimensions for Athens and Thessaloniki. This role presupposes administrative reforms along with the creation of metropolitan structures for the purpose of achieving a broader legitimisation, higher degree of effectiveness, and better co-ordination and synergy of different policies at the metropolitan level.

The implementation of European Union policy, above all its regional policy, through various co-financed programmes has given rise to new forms of governance as well as to sustainable urban development policies. It has prompted "*the emergence of new forms of co-operation between local authorities and socio-economic city-based forces for the implementation of urban sustainability*". However, this dynamic is not favoured by the existing political and institutional framework (Getimis and Grigoriadou, 2004: 5).

In the particular case of development programming, within the existing institutional framework the spatial levels of the programmes are: national, regional, prefectural and local. The corresponding institutions are: central public-sector bodies (ministries), regional councils, prefectural councils, and municipal councils. A hierarchical system of vertical linkages is provided for planning purposes. Medium-term programmes are compiled by the institutions at the corresponding spatial level on the basis of a framework defined by the institution at the higher spatial level and are ultimately ratified by the latter. This process could properly be characterised as formal hierarchical administrative procedure with many advantages but also with disadvantages (Tat-Kei Ho, 2002). The fact is that even though there are no specific development programmes for metropolitan areas, development programmes of all spatial levels are carried out in them.

The above-mentioned procedure is not implemented in its most comprehensive form in the sense that some of the prescribed stages or some of the programme types are missing. At the same time, development programming in Greece since 1989 has been influenced to a significant extent by the European context through implementation of European Union regional policy. It could be argued that there have been two parallel trajectories, converging at certain points. Specifically, the institutional framework and the organisational structure, which are defined at the national level, have been mainly confined to the institutional framework of the Law for “Democratic Programming” (Ministry of the Interior, 1986), while the changes that have emerged out of the needs for implementation of EU structural policy are not fully incorporated into the established organisational development programming configurations.

Although the effects of implementation of EU structural policy are still not directly visible at the institutional level, their influence may be seen in specific practical issues in the development programming procedures. One crucial issue in relation to which implementation of EU structural policy can have a direct influence on the latter is the promotion of electronic government. This is effected through:

- a. co-financing of the abovementioned **“Information Society”** Operational Programme in the context of the Community Support Framework (CSF) 2000-2006, which includes the provision for promotion of electronic means of data interchange (Management Information Systems (MIS) - Measure 2.3),
- b. the obligation to comply with the publicity and information rules set by the EU Structural Funds Regulations.

According to the Commission Regulation on information and publicity measures, *“Information and publicity concerning assistance from the Structural Funds is intended to increase public awareness and transparency vis à vis the activities of the European Union and create a coherent picture of the assistance in question across all Member States”* (CEC, 2000: 32). The aim of information and publicity measures is to:

- “1. *inform potential and final beneficiaries, as well as:*
 - *regional and local authorities and other competent public authorities,*
 - *trade organisations and business circles,*
 - *the economic and social partners,*

- non-governmental organisations, especially bodies to promote equality between men and women and bodies working to protect and improve the environment,
- project operators and promoters,

about the opportunities offered by joint assistance from the European Union and the Member States in order to ensure the transparency of such assistance;

2. inform the general public about the role played by the European Union in co-operation with the Member States in the assistance concerned and its results.”

Special provision is made for the utilisation of ICTs: “In drawing up the communications action plan, due regard must be had to new technologies which permit the rapid and efficient distribution of information and facilitate a dialogue with the general public” (ibid.: 32, 36).

As a result, information about the Community Support Framework and the Community Initiative Programmes is frequently available from electronic sources (e.g. websites). In order to inform both potential and final beneficiaries, as well as the general public, the managing authorities have developed websites providing a variety of services. Following the enumeration of the various e-Government sectors, these initiatives cover the whole spectrum of such sectors, i.e. G2G, G2C and G2B.⁸ In most cases these websites can be classified on the basis of their stage of development, up to the second stage (Stage 2: “one-way interaction”).⁹

The implementation of EU structural policy in Greece, above all through the CSF 2000-2006, has had a significant influence on e-Government in the field of development programming, both directly and indirectly: directly, through the funding of ICTs infrastructure and skills creation; indirectly, through the adoption and implementation by the managing authorities of the publicity requirements of Structural Funds. This is reflected in all the bodies involved, in both public and private sectors. The majority of these bodies respond by utilising existing e-Government applications.

⁸ It is widely accepted that e-Government applications can be grouped according to the three main categories of stakeholders, i.e. government (G2G), citizens (G2C), and business (G2B).

⁹ It is considered that at the Second Stage (“one way interaction”) “The publicly accessible website provides the opportunity to obtain in a non-electronic manner (by downloading forms) the paper form required to start the procedure for obtaining this service.” (EC, DG INFSO, 2005a: 7).

4. The Case of Thessaloniki

4.1. Development Programming in the Thessaloniki Metropolitan Area

Thessaloniki is the second-largest conurbation in Greece after Athens, with a total population about one million inhabitants (city and suburbs, 2001). It is located in the region of Central Macedonia, approximately 53% of whose population lives within its boundaries. It accounts for around 12% of the total GDP in the country and the GDP per head is 72% of the EU average (2002).¹⁰ Greece comprises four administrative tiers: two tiers of central (national) government i.e. ministries and their supervised organisations along with regional (decentralised) administration (13 administrative regions), and two tiers of (local) self-government.¹¹ Despite the fact that according to the Greek Constitution (Article 101) “the administration of the State shall be organized according to the principle of decentralisation” (Hellenic Parliament, 2004: 111), the Greek administrative system is essentially a centralised one. This is reflected in the competencies of the four tiers of government.

The area of Greater Thessaloniki is also part of the prefecture of Thessaloniki, which is under the jurisdiction of the Prefectural Authority of Thessaloniki (second-tier local government) the seat of which is in the city. In the area, there are about thirty municipalities (first-tier local government) but there is no overall administration for the metropolitan area as a whole. The Region of Central Macedonia, which also has its seat in the city of Thessaloniki, is a decentralised agency of the central government, headed by a government-appointed General Secretary and is responsible for the entire region (comprised of seven prefectures). The Organisation of Planning and Environmental Protection of Thessaloniki also is a decentralised agency of the central government supervised by the Ministry for the Environment, Physical Planning and Public Works and is responsible for spatial planning and environmental protection in Greater Thessaloniki. Finally, the Ministry of Macedonia and Thrace also has its headquarters

¹⁰ The data for the year 2002 are the latest available and refer to the prefecture of Thessaloniki (NUTS III). It should be noted that the corresponding value for Greece is 61% (Eurostat, 2006a).

¹¹ According to the Eurostat NUTS (Nomenclature of Territorial Units for Statistics) and LAU (Local Administrative Units) classification, in Greece there are 13 NUTS II regions (Regional Authority – *Region-Periferia*) and 51 NUTS III departments (prefecture – *nomos*). In addition since 1997 there are 1034 (LAU I) first-tier local self-government authorities (municipalities – *dimoi*) (Eurostat, 2006b).

in Thessaloniki. It has territorial jurisdiction over the three regions of Northern Greece, with very limited competences and budget, however.

This administrative structure is reflected also in development programming. In the metropolitan area of Thessaloniki all the different levels of planning institutions are intertwined, given that every tier of government is present there. Specifically, the Ministry of Macedonia and Thrace, the Region of Central Macedonia and the Organization of Planning and Environmental Protection comprise the agencies of central (national) government at regional level, while the Prefectural Authority of Thessaloniki and the Municipalities of Greater Thessaloniki comprise the agencies of local government.

All the above-mentioned agencies engage in development programming. At the same time, it should not be overlooked that a number of other institutions with national jurisdiction such as ministries, prepare projects carried out in Thessaloniki, usually in the framework of national sectoral development programmes (e.g. the Ministry of Transport and Communication is responsible for the airport, the Ministry of Mercantile Marine for the port of Thessaloniki, the Ministry for the Environment, Physical Planning and Public Works for important transportation projects such as the Metro).

Taken in conjunction with the developmental dynamics of the city in recent decades, this fragmentation of administrative bodies and planning procedures has aggravated the city's problems of administration and government. This is due to the fact that on the one hand the geographical area to be regulated broadens out (e.g. the case of transportation), and on the other hand the agenda of issues to be dealt with has been expanded (e.g. civil protection, economic development, employment/unemployment). As a result, there has been an increase in the number of issues¹² that are semi-neglected or left out of the planning procedure altogether (Getimis and Kafkalas, 2003).

As a result, in Thessaloniki (the prefecture, the metropolitan area, and the municipality) development programmes are being implemented which have either been planned for the corresponding spatial levels or, notwithstanding the fact that they are part of a broader sectoral programme, are finally carried out in this specific area. This distinction could be

¹² According to some recent studies the competences of a metropolitan-level government could be grouped in six broad categories: economic development (growth)/competitiveness, employment/unemployment, spatial planning, land use plans, transportation, environment, social policy, and civil protection (UEHR/MIPAD, 2003 and Getimis and Kafkalas, 2003).

represented schematically as: programmes “for Thessaloniki”, programmes “in Thessaloniki”, respectively. But the reality is that none of the development programmes are for the metropolitan area as such, however designated or defined.

Even though, as is evident, information and communication technologies (ICTs) can in no way fully compensate for the absence of metropolitan-level government, the creation and operation of thematic sites on some of the issues of metropolitan government could – to the extent that it would constitute a conscious political choice – go some way towards solving these problems, even if only at the level of the absolutely indispensable provision of information to citizens, to instil awareness and encourage political mobilisation for creation of the metropolitan institution.

We shall now move on to focus on development programming and electronic government for the main institutions in the metropolitan area with related competences at all relevant tiers of government.

4.2. E-Government and Development Programming Institutions in the Thessaloniki Metropolitan Area

For public agencies with competencies in development programming, the European Union four-Stage framework (Stages 1 to 4, along with Stage 0)¹³ can be used to explore the forms of *e*-Government both in the phase of planning and in the implementation phase. As outlined above, the Regional Authority of Central Macedonia, the Municipalities and the Prefectural Authority of Thessaloniki, all have development planning competencies in the metropolitan area of Thessaloniki. The Ministry of Macedonia and Thrace also has responsibilities for the three regions of Northern Greece. The *e*-Government aspects of these four institutions are presented in this section.¹⁴

Specific urban issues (e.g. zoning system, environmental protection) are under the jurisdiction of the Organisation of Planning and Environmental Protection of Thessaloniki (Organisation of Thessaloniki). Although it has apparently important and crucial competencies concerning sustainable urban development and planning, the Organization does not have a website.

¹³ Stage 1: information, Stage 2: one-way interaction (downloadable forms), Stage 3: two-way interaction and Stage 4: transaction (full electronic case handling). Stage 0 corresponds to absence of publicly accessible website, or a website that does not provide any relevant information, interaction etc. (EC, DG INFSO, 2005a: 7).

¹⁴ These findings are based on research for the period May 2005 – April 2006.

Therefore according to the EU *e-Government Stage Framework* it could be classified as Stage 0.¹⁵

4.2.1. First-tier Local Government: The Municipality of Thessaloniki

Greater Thessaloniki comprises about 30 municipalities, the largest of which, the Municipality of Thessaloniki, with about 364,000 inhabitants, has the widest range of administrative services. While the Municipality of Thessaloniki has rather limited competencies at the stage of the planning of development programmes, it is the implementation authority for many public investment projects that are either nationally financed or co-financed by the EU.

The Municipality of Thessaloniki has a publicly accessible website¹⁶ that offers only a few options for citizens on issues of development programming. The information provided is mainly generic in character. As far as development programming procedure is concerned, the website of the Municipality of Thessaloniki should thus be classified as Stage 0.

4.2.2. Second-tier Local Government: Prefectural Authority of Thessaloniki

In terms of its geographical extent, the Prefecture of Thessaloniki roughly corresponds to the metropolitan area of Thessaloniki (Moutsiakis and Foutakis, 2003).¹⁷ The Prefectural Authority's website is oriented to information provision, along with some limited options for interactive functions including a facility for downloading application forms.¹⁸

As an institution that designs and implements state-financed local development programmes (including both programmes financed from national resources and programmes co-financed by the EU), and as an implementation authority for specific projects in the framework of other regional or national development programmes, the Prefectural Authority

¹⁵ The Organisation of Thessaloniki has a webpage at the Ministry's website providing very limited and brief information in Greek (<http://www.minenv.gr/3/31/314/g314.html>). The English version of the webpage is <http://www.minenv.gr/3/31/314/e314.html>.

¹⁶ Details at <http://www.thessalonikicity.gr> (content mainly in Greek).

¹⁷ In Greece there is no official delimitation of the metropolitan areas. The term is loosely used to describe a wide Functional Urban Area (FUA) of the corresponding conurbations (Athens and Thessaloniki). According to a relevant exercise which used demographic, economic and geographical criteria as well as GIS techniques, the metropolitan area of Thessaloniki is approximately comprised of the major part of the Thessaloniki prefecture along with small parts of the neighbouring prefectures of Chalkidiki, Imathia and Kilkis (Moutsiakis and Foutakis, 2003: 334-336).

¹⁸ For details see <http://www.nath.gr> (content mainly in Greek).

of Thessaloniki has important development programming competences. Development-programming-related *e*-Government applications are limited to information provision, usually following completion of the projects. They cover in the first instance the School Buildings Programme but have been extended also to some Decisions taken by the Prefectural Council.

What is important is that participation in EU projects on *e*-Government has paved the way for the Authority's involvement in *e*-Government applications. In particular, the Prefectural Authority of Thessaloniki participated in the EU-Publi.com¹⁹ project and is lead partner in *eGOVREGIO* project.²⁰ The latter aims "to build on and integrate pan-European, invaluable know-how and experience in the "soft" aspects of *e*Government, i.e. strategic planning and benchmarking, organisational change and acquisition of new skills" (*eGOVREGIO*, 2006).

A "Strategic, Operational and Action Plan for the Region of Thessaloniki" was recently compiled in the framework of the *eGOVREGIO* project, which is identified with the single strategic goal of accomplishing high-quality *e*-services (Prefectural Authority of Thessaloniki, 2005). The present infrastructure, according to the Plan, is adequate. What are lacking, though, are integrated and fully electronically-handled services that can be completed on-line by citizens, businesses or other administrative authorities. The project's coherent and comprehensive terms of reference place the emphasis on "inward" processes that are potentially exploitable in the field of development programming. But the Strategic and Operational Plan of the Prefectural Authority of Thessaloniki is apparently focused mainly on the provision of services, i.e. on "outward" processes.

Despite the fact that not all the relevant information is available, given the Authority's growing involvement in *e*-Government in general, the Prefectural Authority of Thessaloniki should be ranked as Stage 1 in the framework of *e*-Government applications concerning the field of development programming.

¹⁹ The project was completed in October 2005. Details at <http://www.ba.uom.gr>.

²⁰ For detailed information about the INTERREG IIIc *eGOVREGIO* project see <http://www.e-govregio.net/egovregio>.

4.2.3. Decentralised National Government: Region of Central Macedonia

The Region of Central Macedonia has a crucial role in development programming, given that it not only exercises a great deal of administrative responsibility, but is also responsible for the planning and implementation of the Regional Operational Programme, in the context of the Community Support Framework. It is, moreover, the financing authority, through the regional section of the Public Investment Programme, for a number of public investment projects. It also shares competences in local development programmes, in particular in the so-called “*THISEAS*” programme for first-tier local government.

The Region’s overall Information Technology strategy is based on an Operational Plan which refers to the Region’s priorities and actions in the context of the CSF 2000-06 towards information society (BCS *et al.*, 2002). According to the plan, the exploitation of digital applications is restricted to some basic functions for service provision. The Region’s main goal is to ensure the technical prerequisites for digital applications serving front-office operations (in the first instance, service provision to citizens), with the promotion of back-office operations relevant only insofar as they are linked to the front-office ones. On the other hand, processes of digital networking, public information and consultation, and e-voting in support of strategic issues such as development programming, are not at the centre of its e-Government strategy.

The Region has its own website,²¹ providing a great deal of information. Some options for interactive use of the site are related, for the most part, to provision of administrative services mainly through links to other governmental sites. In terms of the EU grading stages, it could be characterised as Stage 1. As far as development programming is concerned, it provides some information on the “*THISEAS*” programme, most of the information being made available through a link to the Ministry of the Interior. Information on the regional section of the Public Investment Programme is confined to announcements on specific projects under implementation in the region (roads, bridges, renewal of urban areas, etc.). The site also provides information on major projects, such as the “Regional Innovation Pole of Central Macedonia”, that are being implemented in the framework of the CSF 2000-06 Operational Programmes.

²¹ For details see <http://www.rcm.gr> (in Greek).

The main *e*-Government development programming application at regional level is carried out via the special website for the Regional Operational Programme (ROP) that is run by the Programme's Managing Authority. In accordance with the publicity and information rules established under the EU Structural Funds Regulations (CEC, 2000), as presented above, this site offers a wide range of information on the structure and implementation of the Regional Operational Programme of Central Macedonia. Given that the ROP is in its implementation stage, most of the information provided has to do with beneficiaries and with implementation authorities, the aim being both to ensure transparency and to facilitate the implementation of the actions selected. The site also offers general information on Programme implementation and on the meetings of the Monitoring Committee. Besides this, some transactional operations are supported, mainly for communication between the various authorised administrative units involved. The planning procedure for the regional development programmes of the next period (2007-2013) is reinforced through links to Ministries as well as to the overall CSF Managing Authority websites.

In conclusion, *e*-Government applications in support of the Regional Operational Programme are quite well-developed, mostly at the implementation stage of the Programme, while the planning procedure (programming period 2007-2013) is for the most part centrally supported. Therefore, the website could be assigned a Stage 2, possibly 3, grading.

However, the high level of this development contrasts with the low level of *e*-Government applications for regional development programmes financed only from national resources. This may be attributed to the fact that the institutional framework for nationally-financed programmes (e.g. the Law for "Democratic Programming") makes no provision for publicity and information measures. On the contrary, it has not been radically updated to cater for new needs and new developments. It could be argued that this is not unrelated to the fact that two virtually independent development programming procedures have been established in Greece over the last 15 years. On the one hand, the national-only financed projects and programmes which are confined to "traditional" programming procedures and on the other, the EU co-financed programmes which are regulated according to the EU Structural Funds procedures and regulations.

4.2.4. Ministry of Macedonia-Thrace

Given that the central government's responsibilities for the three regions of Macedonia–Thrace are exercised by the corresponding decentralised national government at the regional level (“Regions”),²² the Ministry of Macedonia-Thrace has no important development programming competences. It accordingly provides no information of its own but merely links to EU and governmental websites. It should be mentioned that the Ministry has recently commissioned a study on an Integrated Information System, aimed at collecting and automatically processing all the data about the socio-economic situation in the three regions of its competence as well as in South Eastern Europe.²³ It is not yet possible to provide any assessment of this project, given that it is still in its initial stage. The Ministry's overall presence in relation to e-Government applications for development programming should be ranked as Stage 0.

5. Conclusions

Metropolitan areas have recently emerged as an important determinant factor in regional and national competitiveness, and consequently in general socio-economic development in the era of globalisation. The need for co-ordination and control of developmental processes in a globalised economy has led many countries, at least in the European Union, to develop a renewed interest in the establishment of a new metropolitan level of administration (Brenner, 2003). This is combined with a shift towards the concept of governance, which is connected to changes in the traditional hierarchical relation between government, citizens, and enterprises, and their involvement in various negotiation schemes aiming at the resolution of complex socio-political problems. Governance, according to many researchers, raises questions of democracy and democratic legitimacy, even entailing a redefinition of the concept of citizenship (Heinelt *et al.*, 2002). As a result governance, like globalisation, has become a source of controversy.

Sustainable urban development in the metropolitan regions is an exceptionally complicated process. At this geographical level, a variety of policies are interwoven, originating from different tiers of government with

²² In Northern Greece there are three NUTS II regions: the region of Central Macedonia, the region of East Macedonia-Thrace and the region of Western Macedonia.

²³ For details see <http://webservice.hypertech.gr/y/math%5Fops/istoriko.htm> and <http://www.mathra.gr> (both sites in Greek).

diversified developmental priorities, but all applied to this specific geographical area. Spatial integration of policies in the context of sustainable development planning for the metropolitan area could be one of the main aims of a metropolitan level of administration.

Over the last decade, as a result of the above-mentioned policy developments and of rapid change in the field of ICTs (above all the emergence and dissemination of Internet applications) *e-Governance* has become established as a research field and an arena for policy applications. The transfer of certain real-life processes – for example commercial activities – to digital space (*e-commerce*), gave rise to the promotion of the concept of digital government (*e-Government*). The inherent functional capabilities of the Internet form the basis for a shift towards the more demanding and much more complicated concept of *e-Governance*. Nevertheless, it must be mentioned that the debate, at least in the European Union, is mainly about *e-Government*, although it is taking place under the heading of *e-Governance*.

In the case of the metropolitan area of Thessaloniki, the geographical area discussed in this article, the focus is on development planning and the implementation of development programmes at the metropolitan level. Existing *e-Government/e-Governance* applications in the field are also of relevance.

One main conclusion is that the lack of political will and leadership constitutes the main obstacle for the development of such applications. This conclusion is based primarily on the absence of a corresponding administrative level (e.g. metropolitan administration), but also on the lack of commitment by the institutions involved (Municipalities, Prefecture, Region, Ministries) in the regulation of the metropolitan area. The high degree of centralisation of the Greek administrative system, in conjunction with the difficulty in changing the established hierarchy and power relations within and between existing institutional structures, provides a possible explanation for this fact.

It is, moreover, evident that the problem cannot be attributed to any kind of technological disadvantage. The existing digital divide, and the imbalance in the use of Internet between the two main stakeholders, namely enterprises and households (citizens), are of course determinant factors behind the low level of use of existing *e-Government* applications. But, from another point of view, the extended use of a fully developed electronic application of tax revenue collection (above all by enterprises), is an

illustrative example of the ability of central government to implement successful *e*-Government applications (iDABC, 2005).

The success of the most promising example examined – the Management Authority of ROP – though as a decentralised regional agency this authority is directly related to central government, must be attributed to different causes. It has to do in the first instance with the “Europeanisation” process of certain aspects of public administration, and their gradual adaptation to the Regulations of the European Union Structural Funds. The creation of such web applications may be ascribed to the publicity and information requirements of the EU Structural Funds. This has a two-fold aim: transparency in the implementation procedures and positive publicity for the role of the EU. This also happens to be the aim of the Integrated Information System (IIS) of the Ministry of Economy and Finance, which is functionally connected to the ROP’s website. Such developments are undoubtedly positive steps towards more democracy and transparency at both the EU and the national/regional level.

The parallel and essentially identical procedure of non-co-financed programmes and projects is however “handled” in a completely different manner: although it is incorporated into the Integrated Information System, it is “invisible”, meaning that information about a fairly large part of the public financial intervention in the metropolitan area (and in the country) is not publicly accessible. This points to the existence of two parallel procedures complying with different sets of regulations. The first, which employs *e*-Government applications, is linked to European institutions and financing, while the second operates in accordance with “traditional” administrative procedures.

A second finding is that delays are occurring at the regional/local level. The only development-programming-related *e*-Government application in place is that concerned with the “Europeanisation” of decentralised national government (and more generally of central government). There is no active involvement in *e*-Government application by the regional/local, government engaged in development programming. This fact highlights an evident absence of local dynamics and of political initiatives to provide useful digital applications that both inform citizens and help them to participate in the planning process.

The concept of governance employs the model of the network, by definition overturning long-lasting established hierarchies and inter-administrative

and intra-administrative relations. Engagement in a process of restructuring mutual relations among the different levels of administration is a prerequisite for movement in the direction of governance. This could be part of the explanation for the difficulties currently being encountered by the whole institutional system in progressing towards governance models, as well as for the reluctance to establish a metropolitan level of government.

One way of contributing to the overcoming of the above-mentioned problems could be through the establishment of thematic websites on some major issues related to the development prospects of Thessaloniki and to the everyday life of its citizens (sustainable urban development, regional and urban planning, unemployment, traffic, etc.). Evidently ICTs can in no way substitute for the absence of a metropolitan level of administration, but *e-Government* applications of this kind could contribute to the promotion of the concept of metropolitan governance, to more transparency, greater accountability of public authorities and the reinforcement of democratic processes.

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PART III

City Marketing, Urban Dynamics and Infrastructure Projects

Is City Marketing Opposed to Urban Planning?

The Elaboration of a Pilot City Marketing Plan for the Case of Nea Ionia, Magnesia, Greece

Alex Deffner and Theodore Metaxas

Abstract

The role of city marketing has grown increasingly important in Europe. Today it has become a necessity with regard to the processes of global competition of cities, tourist attractions, urban management, city branding and urban governance. Many European cities support their competitiveness through cultural and tourism development. In addition, the majority of implemented city marketing policies relate to culture and tourism. City marketing has faced many criticisms, the main one being that it substitutes for urban planning. However, the work done, especially in cultural planning, indicates that, in order for cities to be successful, marketing must be inter-connected with planning. There are even international examples of cities that have elaborated marketing plans in order to attract the potential target markets (new investments, tourists, new residents, etc). One recent approach argues that marketing can contribute to the sense of place.

The data for this paper are provided by the INTERREG IIIc CultMark project (Cultural Heritage, Local Identity and Place Marketing for Sustainable Development) that has been in operation in five European places since 2004: Nea Ionia/Magnesia/Greece (lead partner), Chester/UK, Kainuu/Finland, Rostock-TLM/Germany and Pafos/Cyprus.

As a case study the elaboration of the marketing plan of Nea Ionia/Magnesia/Greece has been chosen, and the aim of the paper is to show the inter-connection of marketing and planning by trying to answer, among others, the following questions: a) does marketing planning constitute strategic planning?, b) how can marketing contribute to sustainability?, and c) can cultural heritage be marketed?

Keywords: *City marketing, cultural planning, strategic planning, sustainability, cultural heritage, CultMark project, Nea Ionia / Magnesia / Greece.*

1. Introduction

The role of city marketing has grown increasingly important in Europe. Today it has become a necessity with regard to a plurality of processes e.g. global competition between cities, tourist attractions, urban management, city branding and urban governance. City marketing has faced many criticisms, the main one being that it substitutes for urban planning.

The data for this paper are provided by the INTERREG IIIc *CultMark* project (*Cultural* Heritage, Local Identity and Place *Marketing* for Sustainable Development) that has been in operation in five European places since 2004: Nea Ionia/Magnesia/Greece (lead partner), Chester/UK, Kainuu/Finland, Rostock-TLM/Germany and Pafos/Cyprus. *CultMark* is applying a place marketing strategy with a cultural approach and its main aim is to create a final successful image for each city/region partner, as well as the study area as whole. We would like to express our thanks to the JTS INTERREG IIIC East and to the partners for the use of the delivered material

As a case study, the elaboration of the marketing plan of Nea Ionia/Magnesia/Greece has been chosen, and the aim of this paper is to show the inter-connection of marketing and planning by trying to answer, among others, the following questions:

- a. Does marketing planning constitute strategic planning?
- b. How can marketing contribute to sustainability?
- c. Can cultural heritage be marketed?

2. The Definition of City Marketing as a Strategic Process

Place/city marketing constitutes one of the most interesting areas of research in the last twenty years, since many cities, especially in Europe, use promotion policies in order to support their images and become competitive among other cities (Ashworth and Voogd, 1990; Kearns and Philo, 1993; Gold and Ward, 1994; Kotler *et al.*, 1993; 1999; Duffy, 1995; Ward, 1998; Avraham 2000, 2004; Urban, 2002). Apart from the Anglo-Saxon experience, there is also a strong German experience (Zerres, 2000; Tsegendi, 2001; Konken, 2004). With reference to European regions and cities, Kotler *et al.* (1999) point out that the economic dynamism of a region/city also impacts on the development dynamics of that place, attributing an attractive or unattractive character to it. Regions/cities are characterised by their

necessity to present, in their external environment, a positive image as far as their economic development is concerned, and for this reason they adopt promotional programmes and actions, which they subsequently implement (Hall, 1998/2001). In the case of place marketing, this product (Goodwin, 1993) or “good” (Metaxas, 2003) is a place or city or island, especially when we are talking about tourist destinations (Buhalis, 2000; Chaudhary, 2000) or tourism products (Meler and Ruzic, 1999; Morrison, 1989/2001), or destination products (Oppermann, 1996; Choi *et al.*, 1999; Murphy *et al.*, 2000; Morgan *et al.*, 2002/ 2004).

Place/city marketing concerns the adaptation of the traditional model of Marketing’s 4ps (product, price, place, promotion) and its performance in the procedure of place/city marketing. According to Short and Kim (1998), the realisation of place/city marketing as a procedure is based, first of all, on the realisation of marketing procedure as a science and practice. Marketing evolved largely among commercial enterprises in the inter-war period, as a means of selling physical products to paying customers for short-term financial profit (Ashworth and Voogd, 1994). Ashworth and Voogd (1990: 27) define place/city marketing as:

“a process whereby local activities are related as closely as possible to the demands of targeted customers. The intention is to maximize the efficient social and economic functioning of the area concerned, in accordance with whatever wider goals have been established. This definition significantly shifts the secondary definitions of product, customers and goals compared to conventional marketing”.

Kotler *et al.* (1999) support that:

“place marketing refers to a place planning procedure concerning the satisfaction of the needs of target markets. It can be successful when it satisfies two main parameters: a) the enterprises’ and the residents’ satisfaction from the purchase of goods and services that the place provides, and b) the satisfaction of the expectations of potential target markets (enterprises and visitors), as long as the goods and the services that the place provides to them are those that they wish to get”.

The most significant issue is that the vision of the city and the development objectives and strategies, depend on the local distinctive characteristics and particularities of each city, and the strategic City Marketing Final Plan (CMFP) in order to become effective should be based on these characteristics.

3. City Marketing and Urban Planning

City marketing complements, and does not substitute, urban planning. The main fields of complementarity are the following:

- d. urban development,
- e. urban management,
- f. urban governance,
- g. cultural planning,
- h. city branding,
- i. planning of demonstration actions,
- j. urban regeneration, and
- k. urban policy.

The application of city marketing policies as tools for *urban development* has expanded in several sectors, such as tourism, sports, recreation, the arts and the media (Bianchini, 1993: 29), creating, at the same time, powerful cultural industries, including a variety of activities such as fashion and design, architecture and townscape, heritage, local history, eating and entertainment, and generally a city's identity and external image (Pratt, 1997; Deffner, 2000; Kong, 2000). City/place marketing is also connected to urban/spatial development as an innovative approach to planning (see Section 5).

Primarily, a city marketing procedure should be evaluated under the philosophy of *urban management* (Ashworth and Voogd, 1990), in the same way that the promotion process is a basic part of marketing (Sandhusen, 1998/2000). The strategic planning process concerns the analysis of the internal and external environment of cities (SWOT and PEST analyses)¹, relating to the examination of the relationships, which developed inside the organization (city/place).² City marketing depends on the co-operation of a

¹ SWOT analysis: Strengths, Weaknesses, Opportunities and Threats;
PEST analysis: Political, Economical, Social and Technological factors.

² In the case of Place Marketing case, but also in Marketing generally, the analysis parameters are the following:

- a. Basic factors examining the identification of the relationships between the organisation and Strategic Planning in the past (where we were).
- b. Basic factors examining the identification of the relationships between the organisation and Strategic Planning in the present (where we are).
- c. Basic factors examining the identification of the relationships between the organisation and Strategic Planning in the future (where we would like to go).

(Needham, *et al.*, 1999: 17).

plurality of local actors and the building of social consensus, and thus relates to *urban governance*.

A very interesting recent elaboration argues for an alternative, *cultural planning* approach to place marketing that, apart from the link to place development, can contribute to the sense of place (Murray, 2001). This initiates an additional link to the construction of local identity and the promotion of cultural heritage (see Section 5). Generally, the work done in cultural planning indicates that, in order for cities to be successful, marketing must be inter-connected with planning. There are even international examples of cities that have elaborated marketing plans in order to attract the potential target markets (new investments, tourists, new residents etc). A city, in order to be successfully marketed, has to be “branded”, or vice versa, thus city marketing is interrelated to *city branding* (Morgan *et al.* 2002/2004; Patteeuw/Urban Affairs, 2002; Kavaratzis, 2004; Kavaratzis and Ashworth, 2005). City marketing is also related to the planning of demonstration actions (see Section 6).

From the aforementioned issues it is clear that city marketing is related to urban regeneration as well as the implementation of urban policy actions (see Section 5).

4. City Marketing in the Field of Culture and Tourism

The international experience indicates a focus on tourism and culture and shows an extensive variety of initiatives that concern urban regeneration, by using particular strategies and tactics (i.e. the cases of Sheffield – Bramwell, 1998; Bradford – Hope and Klemm, 2001; Pamplona and Holstebro in Spain – Kotler *et al.*, 1999; York – Snaith and Haley, 1999). All these cases focus on tourism development and use as *tools* some particular actions in order to achieve their main goals. These tools are: a) identification of the city’s environmental strengths and weaknesses, b) identification and evaluation of the particularities and distinctive characteristics in the city, c) use and implementation of market research analysis, d) development of promotional policies, and e) development of partnership between the city’s actors.

The existence of *a sustainable and effective tourism and cultural economy* is based on the capacity and knowledge of the internal actors of the place to create particular plans of action, by evaluating which fields of implementation of tourism and cultural policies could constitute a competitive advantage at a given time (Deffner and Metaxas, 2003). The contribution of

tourism and culture must be related to the marketing of heritage (Misiura, 2005) the conformance and the implementation of urban policy actions, the focus on the satisfaction of the needs and demands of the potential target markets, the enforcement and promotion of the cultural identity and image of the place, the contribution of citizenship to achieving a better quality of life, and to the construction of a place-specific competitive advantage.

5. The *CultMark* Project

CultMark (Cultural Heritage, Local Identity and Place *Marketing* for Sustainable Development) is an INTERREG IIIC project. *CultMark* is applying a place marketing strategy with a cultural approach. This means that it emphasises both the cultural dimension of marketing, as well as the promotion of the cultural resources of each place in connection with the planning of demonstration actions.³

The main aim of *CultMark* is to create a final successful image for each city/region partner, as well as the study area as whole. The main objective is the development and implementation of innovative place marketing strategies, based on the elements of local identity and the cultural assets of the partner areas, in order to contribute to their sustainable economic and social development. Its secondary objectives include: the promotion of heritage as a significant factor in local and cultural development, the promotion and improvement of the investment climate of each area, the global promotion and support of the image of each area, the connection between place marketing and spatial development as an innovative approach to planning, the promotion and support of the representation of common developmental interests, the promotion and support of local knowledge and skills, the development of common and individual demonstration actions – taking into account the particularities of each area, the support of the provision and diffusion of knowledge and know-how to actors, encouraging the development of entrepreneurial skills.

³ The scientific support of *CultMark* is provided by the Laboratory of Tourism Planning Research and Policy (LA.TOU.PREP), Department of Planning and Regional Development, University of Thessaly. The director is Alex Deffner, Assistant Professor of Urban and Leisure Planning, and the members are Pashalis Arvanitidis (Lecturer), Nick Bogiazides (Adjunct Assistant Professor), Theodore Metaxas (Adjunct Lecturer), Christos Liouris, Penelope Melidou, and Christina Vlahopoulou. Sections 6.2 and 6.3 are based on the Cultural Data Report (2005), which was elaborated mainly by P. Arvanitidis with the initial help of C. Liouris and P. Melidou.

6. The Production of the City Marketing Pilot Plan (CMPP) for Nea Ionia

City marketing needs a plan like urban planning needs a plan. The CMPP is based on the City Marketing Pre-Plan (CMP-P) and aims to establish the main axes for the preparation and the development of the City Marketing Final Plan (CMFP). Taking into consideration the CMP-P, as well as the available data and all the reports that have been produced up till now in the context of the *CultMark* project, the CMPP aims to become a guideline for the effective implementation of the CMFP. The CMPP has a strategic character. It constitutes a significant means of CMFP implementation, in order for the image of each city to be effectively promoted and supported to the potential target markets. All plans are based on the strategic planning process, always starting from the identification of the vision of each city and the primary urban development objectives that have to be satisfied (*CultMark*, 2005b).

This paper uses material from the following *reports* that have already been delivered:

- a. “The Mini Investment Guide” (which briefly provides concrete information for the economic and investment profile of the partner areas) [June, 2004],
- b. “The Strategies, Tactics and Alternative Scenarios Report” (which deals with the application of specific strategies, tactics, and alternative scenarios of the promotion and support of the image of each area, both in its external and internal environment) [June, 2004],
- c. “The Final Provided Good Report” (which presents the final provided good for each area, based on the available research data and the local distinctive characteristics) [December, 2004], and
- d. “The Promotional and Distributional “Maps’ Report” (which presents the ways and means of distribution and promotion of the image of each area, both in its external and internal environment) [December, 2004],
- e. Cultural Data Report (which concerns the analysis of the internal environment of the cultural sector and the identification of its role in economic development) [June, 2005],
- f. City Marketing Pilot Plan for Nea Ionia [December, 2005].

The structure of the CMPP is presented in Tables 1 and 2.

Table 1. The Structure of the City Marketing Pilot Plan (Use of Primary Data)

Steps	Method	Purpose	Sources
<i>The identification of the vision</i>	<p>Questionnaire 3 Interviews and survey-questionnaire analysis (open-ended questions and Likert scale 1-5) to "key" local actors and decision-makers in each place</p> <p>(sample: 20-30 individuals per place)</p> <p>[period: January to March, 2005]</p>	<ul style="list-style-type: none"> • Identify the factors that constitute advantages of the cultural sector • Identify the vision and the image of each place 	Cultural Data Report (June 2005)
<i>The identification of the image as a final provided good</i>	<p>Questionnaire 2a A survey-questionnaire analysis (open-ended questions and Likert scale 1-5), to domestic visitors (70%) and foreign tourists (30%)</p> <p>(sample: 50-100 individuals per place)</p> <p>[period: June to September, 2004]</p> <p>Questionnaire 2b A survey-questionnaire analysis (open-ended questions and Likert scale 1-5), to "key" local actors and decision-makers in each place</p> <p>(sample: 20-30 individuals per place)</p> <p>[period: June to September, 2004]</p>	<ul style="list-style-type: none"> • Identify and evaluate visiting criteria to each place • Identify and evaluate the degree of place capacity to satisfy the demands of the target markets 	Final Provided Good Report (December, 2004)
<i>The identification of the potential target markets</i>	Questionnaire 2a and 2b	Propose the appropriate target markets for each place	Promotional and Distributional Maps Report (December, 2004)
<i>The selection of the appropriate strategies</i>	Questionnaire 2a, 2b and 3	<ul style="list-style-type: none"> • Identify tourism services provided by each place • Identify promotional policies that are implemented by the local actors 	Strategies, tactics and alternative scenarios report (June, 2004)

Table 2. The structure of the City Marketing Pilot Plan (Proposed Methods and Actions)

Steps	Purpose	Sources
<i>Connection of the implementation of the selected strategies with the vision and the development objectives</i>	To provide an important link between the selected strategies and the vision and the development objectives of each place, to the local decision-makers	City Marketing Pilot Plan Report for Nea Ionia (December, 2005)
<i>The implementation of Critical Path Analysis method</i>	To provide a technical tool, based on project planning, by putting the whole CMPP, into a specific time horizon, identifying the primary and secondary actions per phase.	City Marketing Pilot Plan Report for Nea Ionia (December, 2005)
<i>The implementation of "8ps" model by Morrison</i>	To present and propose a marketing mix model, that is fixed to the effective promotion and support of the image of the places as final provided goods	City Marketing Pilot Plan Report for Nea Ionia (December, 2005)
<i>The development of Communication process</i>	Places decision-makers and planners have the opportunity to audit the weaknesses of each step and each tactic in order to re-design or to re-construct the main strategies by using other alternative ones.	City Marketing Pilot Plan Report for Nea Ionia (December, 2005)

7. The Case of Nea Ionia, Magnesia, Greece

7.1. Profile

The Prefecture of Magnesia, having a central geographical position in Greece and being almost equidistant from the two major urban centres of Athens and Thessaloniki, constitutes a very important junction. By having one of the most significance harbours of Greece (Volos), it has a developed system of sea transport and a high level of communication infrastructure in the sectors of transport and energy.

The urban agglomeration includes the municipalities of Volos, Nea Ionia and other smaller areas, and it has a population of about 130,000. Volos and the wider area have been developed as manufacturing and industrial centres, especially in the last three decades. The economy of the city is based on the industrial and the service sector.

An important advantage in the attempt to develop tourism in Nea Ionia is the construction of a modern, organised and large (in size and potential) sports centre around the Panthessalikon Stadium, and the gratis international promotion of the city. This constitutes a comparative advantage against other cities that, like Nea Ionia, don't have a classic tourist destination

profile to promote. The elements that could lead to tourist development should be focused on:

- The staging of special sport events after the Olympics (this is actually happening: European Gymnastics and Volley Championship)
- The promotion the great arched Mycenaean tomb in the “Kazanaki” area that could become the “heart” of a visited archaeological site
- The promotion of the local cuisine.

7.2. Analysis of the Cultural Sector

In Nea Ionia, most local experts (sample: 20 individuals) believe that the cultural sector has a moderate to low influence in the local economy. Medium economic impact is perceived through the use of the cultural sector as a vehicle for participation in European programmes. Other areas where the cultural sector is reckoned to have an influence, albeit a weak one, are in contributing towards GDP growth, a reduction in unemployment and the enhancement of competitive advantage, whereas the least impact is seen in the creation of an entrepreneurial climate and the attraction of foreign investment to the city (Table 3).

Table 3. Contribution of the Cultural Sector to Economic Development
(Likert scale - 1: lowest, 5: highest)

Contributing factors	Nea Ionia
Constitution of the main axis of city participation in European programmes for culture	2.7
Reduction or minimization of unemployment	2.3
Support of the economic dynamism of the city through the creation of competitive advantage on the field of culture	2.2
Creation of higher GDP per capita	2.0
Production of positive economic effects not only to the city but to the wider community	2.0
Retaining the high qualified workforce in the area	1.8
Growth of foreign investments in the area	1.4
Support of the creation of a powerful entrepreneurial climate in the area	1.3
<i>Average</i>	2.0

Source: *CultMark*, 2005a

7.3. Factors that Constitute Advantages of the Cultural Sector

Nea Ionia is moderate with regard to the specific cultural elements that give an advantage to the city. Most of the specified factors are seen as not particularly important, apart from the existence of private and public cultural organizations with an active role in the planning and implementation of cultural activities, which are perceived to support the cultural sector to a moderate degree. Furthermore, the attraction of investments and European funds seems to be quite advantageous factors but they are not able to create, in isolation, a strong advantage for the city. Areas that are regarded as least significant are the existence of museums and art galleries. It is characteristic that all other factors are evaluated very low (Table 4).

Table 4. Factors That Constitute Advantages of the Cultural Sector
(Likert scale - 1: lowest, 5: highest)

Factors	Nea Ionia
The existence of private cultural organisations with active participation in planning and implementing cultural activities	3.2
The existence of public cultural organisations with active participation in planning and implementing cultural activities	2.7
The existence of a strong historical background with worldwide fame	2.3
The exploitation of European funds for the development and support of cultural investments	2.3
The existence of conservatoires and/or orchestras with worldwide fame	1.8
The existence of cultural heritage buildings with worldwide fame	1.8
The holding of major cultural events (festivals, exhibitions, etc) with worldwide fame	1.8
The existence of a qualified and specialised work force in cultural organisations	1.8
The existence of strong commercial activities (businesses that focus on the production of cultural products)	1.7
The existence of graduate or postgraduate programmes in cultural studies	1.5
The existence of theatres and/or operas with worldwide fame	1.3
The existence of famous historical personalities related to the city	1.2
The existence of museums (archaeological and/or modern) with worldwide fame	1.2
The existence of large cultural art galleries with worldwide fame	1.2
<i>Average</i>	1.8

Source: *CultMark*, 2005a

Nea Ionia focuses on cultural development, but the major contradiction is that it presents a strong cultural historical background with weak contemporary facilities and an even weaker cultural environment. The main focus seems to be on specific cultural events and projects, even if these factors present a low score as advantages (see Table 4). International experience shows that both these dimensions are based on the ability and the capacity of each city to provide a strong cultural position, in connection to its ability to satisfy the demands and expectations of cultural tourism each time. This creates the necessity for public and private organisations to be appreciated as the main advantage factors of the cultural sector, so that they can evaluate the weaknesses of the city, and plan the appropriate policies and actions that enforce Nea Ionia's cultural position, in order that the "final provided good" has positive impacts for economic development and competitiveness.

7.4. The Definition of the Vision of Nea Ionia

Nea Ionia envisages a city that is economically robust, socially balanced and pays due respect to both the natural and the cultural environment. Experts regard that a well-planned development, which takes care of the environmental problems (including traffic) and provides the necessary cultural infrastructure (museums, theatres, galleries or other spaces to house culture), will support further development of the city as a tourist destination and attraction pole. The local cultural characteristics of the people (mainly refugees from Asia Minor), the beauty of the natural environment of the wider area, and the available sports infrastructure (mainly developed for the 2004 Olympics), constitute some of the main assets of the place (*Cult.Mark*, 2005a).

Regarding the factors that contribute to the accomplishment of the city vision, there are two that score high: the participation in European development programmes in co-operation with other cities, and the acceptance of the vision by the local community. The diagnosis and evaluation of the distinctive characteristics of each development sector for Nea Ionia is a crucial factor that could contribute to the accomplishment of the vision. In addition, the significance of developing partnerships between local authorities with the universities and citizens, in the context of a co-operative marketing strategy, is absolutely crucial in order that the vision of the city is satisfied. Also, the ability of local authorities to adopt and implement innovative policies presents quite a high degree of importance (see Table 5).

Table 5. Factors that Contribute to the Accomplishment of the Vision
(Likert scale - 1: lowest, 5: highest)

Factors	Nea Ionia
The participation in specific European development programmes in co-operation with other cities	3.8
The understanding of the community that the vision of the city is a common interest	3.5
The planning and the development of partnerships between the local authorities and the citizens	3.3
The adaptation and the implementation of new innovative promotional policies by local authorities	3.2
The diagnosis and the evaluation of the city's distinctive characteristics in each development sector	3.0
The planning and the development of partnerships between the local authorities and the academic or research centres	3.0
The representation of common interests for city development by the local authorities, the enterprises and the community	3.0
The level of capacity and the level of knowledge of the local authorities to plan and to implement development policies	3.0
The planning and the implementation of a particular urban development plan	2.8
The development of systematic collection of data and information supporting the decision-making process	2.8
The identification of particular main development goals	2.5
The planning and development of partnerships between the local authorities and the business community	2.5
The analysis of the city's internal and external environment (based on particular methods, such as SWOT analysis)	2.0
<i>Average</i>	3.0

Source: *CultMark*, 2005a

7.5. *The Definition of the Image of Nea Ionia as a “Final rovided good”*

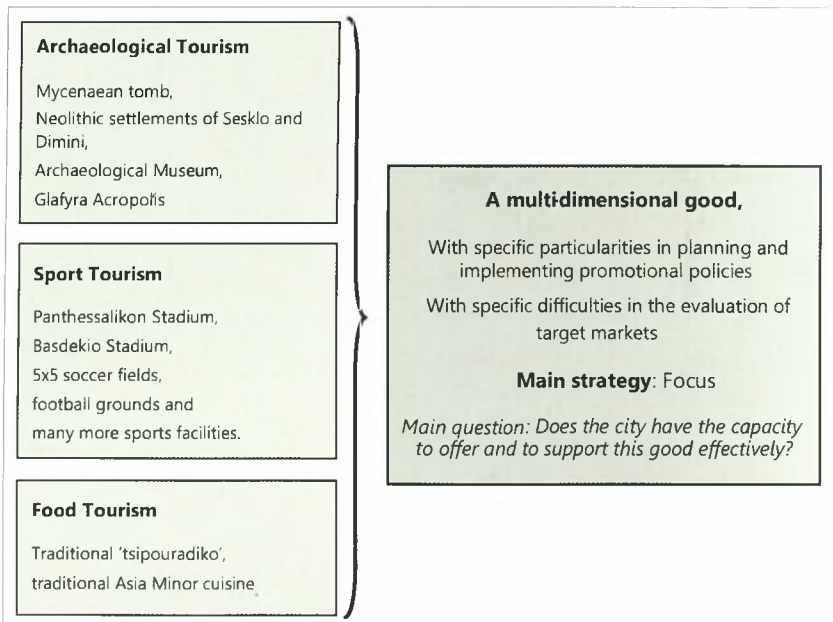
The image of Nea Ionia consists of two elements, the traditional and the modern. On the one hand, it is a city that seeks to keep its links with its distinctive traditions and cultural heritage, and, on the other hand, it strives to become modern and economically robust, confronting the same problems of urbanisation that most Greek cities face (i.e. congestion, pollution, etc). Local experts support that the city has a high level of natural environment quality (77.8%, i.e. the added percentages of columns 4 and 5), of

local community hospitality (66.7%) and of the provision of open and green spaces (55.5%).

The combination of the traditional and modern image is also supported by the responses of tourists (*CultMark*, 2004a). Most of the tourists believe that Nea Ionia constitutes a strong “attraction tourism pole” (69.5%), is a destination which provides the opportunity to develop several kinds of tourist activities (65%), and combines a modern and traditional image which is acknowledged worldwide (50.9%).

Combining the results above and considering the particular strategies that Nea Ionia wants to develop, its final provided good is based on tourism with the following three dimensions: culture, sport and food activities (Figure 1).

Figure 1. Shaping the the Final Provided Good of Nea Ionia



The main question relates to the capacity of Nea Ionia to support and promote this good effectively to the selected target markets. The particular combination is very difficult, since it requires particular promotional policies and, consequently, particular sub-promotional channels, but it offers the opportunity for a multi-dimensional good. The creation of specific

promotional packages will be a very positive action, but it depends on the identification of the particular tourist markets that Nea Ionia wants to attract.

7.6. *The Definition of the Appropriate Target Markets in Nea Ionia*

The “Promotional and Distributional “Maps’ Report” (*CultMark*, 2004a) selected the target markets where Nea Ionia can distribute and finally promote its image. In all *CultMark* places the selected target markets were separated into two levels of activity: the microeconomic and the macroeconomic one. At the first level, the selected target markets concern the internal city environment (residents, enterprises, organisations, local authorities, groups with special needs and characteristics, minorities, decision-makers, unions, universities, research centres, etc). All these groups are potential “consumers” of the final provided good, and all of them want to satisfy their needs and perceptions. The most important point is to identify which of these target markets are profitable for the city, i.e. which target markets are relevant to the final provided good. In the case of Nea Ionia, the focus is on the following internal potential target markets:

- *Enterprises* that relate to the multidimensional character of the final provided good (arts, sports centres, restaurants, hotels, travel agencies, etc). The role of these markets is crucial, since they are representative of Nea Ionia’s image. These enterprises should provide the best quality of services, satisfying the demands and the perceptions of the potential target markets. These enterprises are also “consumers” of what Nea Ionia offers.
- *Decision-makers, authorities, organisations* that relate to the multi-dimensional character of the final provided good (cultural organisations, public enterprises, tourist associations, universities, etc). The role of these groups is very important, since it is related with the decision-making process.
- *Residents*: This group is the key factor in order that a local community effectively adopts and performs a place marketing policy. Residents are both consumers and providers of the distinctive goods that Nea Ionia offers.

At the macroeconomic level, the final provided good has to be supported and promoted at national, European and international level. The identification of the selected target markets is more difficult and requires a

strategic development process. Taking into account that Nea Ionia is a small area that has decided to promote a multi-dimensional image, the selection of the image receivers has to be done very carefully. The existence of three tourist dimensions in the creation of the final good requires the identification of separate groups for each dimension, and also the creation of common promotional packages, where the “consumer” could combine activities through this package. More particularly:

- *Tourists with special interests at national, European or international level:* This target market consists one of the most important and profitable for Nea Ionia. The procession of this market is difficult, since in order to attract people with special interests, the city should have the ability to satisfy their demands offering high quality services and should combine innovative promotional packages. The attraction at European level is even more difficult, since it is related to a continuous representation of Nea Ionia’s distinctive image in the international tourism market.
- *Cultural, tourist and sports organisations at national and European level (museums, galleries, exhibitions etc):* The representation of these organisations is crucial. It is related with the international promotion of Nea Ionia and its relevant worldwide acknowledgement. Nea Ionia should attract national and European organisations in order to host and organise special events, which is the most important goal of its marketing orientation. Especially in the case of sport, the new facilities gained by being an Olympic municipality offer the opportunity to develop special sporting events.

7.7. *The Identification of the Distribution Channels*

The identification of the distribution channels concerns the transmission of the final provided good, the “message” of the city to the potential target markets. Two kinds of geographical distribution channels are identified: the internal and the external, relating to the separation of the aforementioned selected target markets. “Level A” concerns some generic distributors that also constitute target markets at national, European and international level, and “Level B”, concerns the selection of distributors relating to the multi-dimensional character of the final provided good.

The management of these distribution channels concerns the rapid and effective transmitting of the “final provided good” to the potential target

markets. Each of the distributors has to be able to inform and to propose Nea Ionia as a destination with multi-dimensional tourist character, able to satisfy the demands and the perceptions of the selected groups. The separation of the distributors according to the character of the provided good is an important process and it is related to the effectiveness of the distribution. This separation also satisfies Nea Ionia's effort to become known for specific tourist activities focusing on culture, sport or food. Each dimension is working on two levels. The first level requires the planning and the performance of specific actions per sector. At the second level, all the sectors participate in the implementation of common activities. The primary goal is to promote and to distribute Nea Ionia as a "multi-tourist destination", but this goal is very difficult to achieve quickly in relation to the acknowledgement within European or international target markets. Thus, it is proposed that city planners and marketers focus primarily on the effective promotion at national level and then move to activities at European and international level.

In both these channels, the feedback procedure plays a crucial role. The effective contribution of this process requires the existence of alternative scenarios and tactics in order to face problems that might rise. Finally, the whole distribution process presupposes the existence of a promotional office with a specialised workforce.

7.8. Proposed Strategies and Tactics

The identification of the strategies should satisfy the development objectives of the place. Kotler *et al.* (1993, 1999), pointed out two crucial questions concerning strategy formulation: a) what advantages do we possess that suggest we can succeed with the strategy?, and b) do we have the resources required for successful implementation of the strategy? Concerning the evaluation of the most appropriate strategies, Porter (1980) proposed two basic strategies that could be implemented in the case of city/place marketing: a) differentiation strategy, and b) focus strategy. The first strategy is related to the awareness of the competitive advantages and the uniqueness of the place, while the second one focuses on a specific target market in which the place should cover and satisfy particular needs. Deffner and Metaxas (2006), proposed two additional strategies, those of penetration strategy and co-operative marketing strategy. In the first, the place image penetrates into a new target market, promoting and supporting the local goods that already exist, while the second strategy requires the planning

and the implementation of promotional actions, through the representation of common interests of the internal actors of the place.

In the case of Nea Ionia, the main proposed *strategy* is the focus one. The implementation of this strategy relates neither to large metropolitan centres, nor large urban centres, but to small and well-organised places which focus on the provision of their image to particular target markets aiming to increase their market share on these markets. The effectiveness of this strategy requires the identification of city's major strengths (answering the question: which is our distinctive competitive characteristic?) and then the provision of this characteristic to the selected target markets.

The main *tactic* refers to the correlation between the diagnosis of the specific demands and perceptions of the distinctive selected target market and the level of capacity of the place to satisfy these to the highest degree.

Taking into consideration that the vision of Nea Ionia is based on the identification of distinctive characteristics and the strong cultural identity, a *focus strategy* could satisfy the vision and the development objectives for the following reasons:

- a. the city is trying to increase its market share of specific tourist markets at national level and to penetrate in the same markets at European and international level. Thus, the enforcement of its tourist economy is based on the effective attraction of these target markets and the total satisfaction of their needs and perceptions,
- b. the creation of a competitive advantage based on the analysis and the evaluation of these target markets. Nea Ionia should focus on their particularities, in order to plan and to perform the appropriate actions that secure the successful development of its promotional policy,
- c. the vision of Nea Ionia is to become an attraction pole, promoting a multi-dimensional image to the potential target markets. The implementation of a focus strategy provides the opportunity to the city to gain knowledge and experience through this process that allows, at the same time, the satisfaction of its development objectives, and
- d. the implementation of a focus strategy is closer to the vision and the objectives of the city, since it is a strategy that is proposed for small cities, with a low level of reputation, low ability to implement a variety of promotional policies and also an internal weakness in developing effective partnerships between the city's internal actors.

8. The Methodology of the CMPP

8.1. The Implementation of the Critical Path Model

The implementation of the CMPP of Nea Ionia has a temporal horizon of 410 “working” days. The character of the Pilot Programme “Promotion Methodology” is strategic and could be characterised as a “project”, in the whole process of the CMPP. The method used in the research in order to set up a particular time limit for the promotion methodology is based on the “Critical Path Method Analysis” (Aravantinos, 1987/1994: 78-9; Nokes *et al.*, 2003).

CPM is based on the identification of three basic factors:

- a. *Hierarchical Presentation of activities.* This characterises each activity with a particular name. The presentation of the activities is hierarchical. The important thing is to include all the appropriate actions in order for the City Marketing Pilot Plan to become a useful database, for the implementation of the City Marketing Final Plan.
- b. *Immediate predecessor:* This presents those activities (one or more) that have to be finished first in order for the present activity to take place. This view has major significance for the project, since it allows estimating which of the activities are core (have to be done first and any delay in the implementation of which affects the total planning of the project), and which are secondary (they could be implemented at the same time as other activities)
- c. *Temporal horizon:* The existence of a specific temporal horizon is very important for each step and of course for the whole project. The time horizon is closely related to the satisfaction of city’s objectives in the frame of specific time planning. Time planning also related to the existence of alternative scenarios in case some actions have to be changed and replaced by others.

CPM includes the following four main phases of the project:

- *Planning:* In this phase, the city decision-makers and the local actors have to plan and prepare all those actions that relate to the promotion and support of the Nea Ionia multi-dimensional good. The first step is the creation of the Executive Management Group (EMG), which will take overall responsibility for planning and performing the City Marketing Pilot Plan for Nea Ionia. Each part of this model

has been separated into particular steps of the planning phase, in order to become a guideline for the EMG. The crucial point is that the effectiveness of the whole project is based on the planning phase. Any kind of delay in any of the stages, means a delay in the following phases and consequently a delay in the whole project. The overall temporal horizon of this phase is 120 “working” days. The primary actions need 65 days and the secondary actions 55 days.

- *Programming*: In this phase, the EMG has the main responsibility for programming, a number of core actions that have take place before the phase of implementation. These actions concern the construction of the communication process, the preparation of focus group analysis, the positioning of the final provided good of Nea Ionia to distributors and finally, the development of a mini-guide seminar to all participants and the selected distributors. This phase requires brainstorming methods and discussions, for the continuation of the CMPP. The temporal horizon of this phase is 60 “working” days. The primary actions need 45 days and the secondary actions 15 days.
- *Implementation*: This phase is characterised by the existence of a promotion process, in almost all of the actions. In particular, this phase is the promotion phase. The core actions related to the focus groups analysis, the primary research, the improvement or the creation of the website, and, finally, the implementation of a variety of advertising activities in the media, magazines, newspapers, etc. In addition, the participation of Nea Ionia in two events (i.e. exhibition) at national and European level, is also proposed. It is crucial that the implemented actions are supported by a good and effective group of public relations. Finally, the project proposed some additional actions, such as the creation of a TV programme (documentary), the creation of info-kiosks, the production of DVDs, CD-ROMs and videos. All the promotion activities of this phase are part of an ongoing process. The temporal horizon of each is a potential time and mainly concerns the time of scheduling these actions. The phase of implementation is the longest of the pilot project: it takes 175 “working” days. The primary actions need 65 days and the secondary actions 110.
- *Evaluation – Feedback*: This phase is related to the evaluation of the actions that take place in the phase of the implementation. The main aim of this final phase is for the EMG to reach the final decisions in order to continue the programme by preparing the City Marketing

Final Plan, or to reject the whole effort. So, it's very important for the EMG to analyse all the available resources and evaluate in which phases of the project changes, reductions, reconstructions, etc are required. One very important point, of this phase is that the EMG has to prepare a totally functional City Marketing Final Plan, with specific actions and paying particular attention to the support and promotion of the distinctiveness of Nea Ionia. The umbrella of this process is the vision of the city and the major development objectives. The EMG needs to implement a plan that is flexible, innovative, and accords with the evidence and the guidelines of the City Marketing Pilot Plan. In other words, it is necessary to provide an official plan that faces the demands of the potential target markets on the one hand and the city's development aims on the other. The whole phase needs 56 "working" days: 46 for primary actions and 10 for secondary ones.

Figure 2 and Table 6 present the proposed steps of the first phase of Critical Path Method (Planning), which is common for all the places of *Cult.Mark* project, and therefore applies to the case of Nea Ionia.

Figure 2. Critical Path Diagram of the 1st Phase

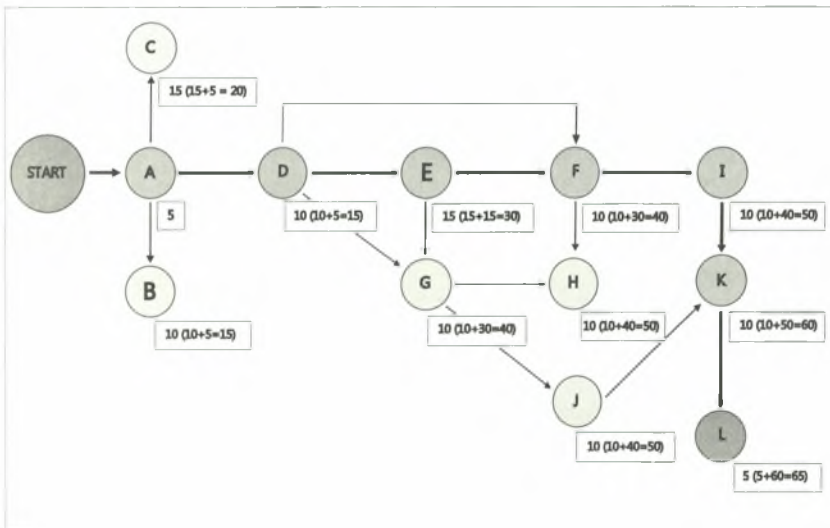


Table 6. The Steps of the Planning Phase for the CMPP of Nea Ionia

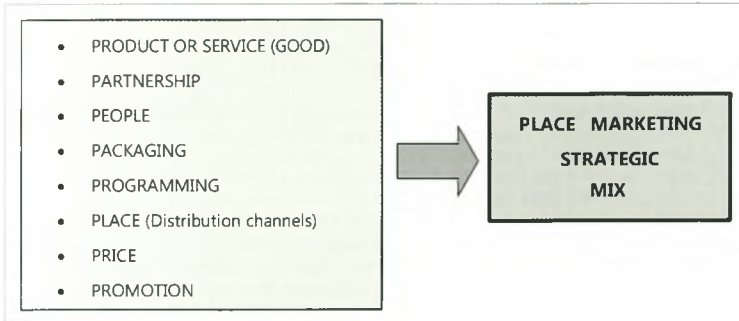
	Activities	Activity	Immediate Predecess	Time (Days)
	1st phase: PLANNING (1-12)			
1	Composition of the Executive Management Group (EMG) and the groups that participate in each action (Morrison model: partnership and people)	A	-	5
2	Analysis of the competition at regional and national level	B	A	10
3	Analysis of the competition in the Balkans and at European level	C	A	15
4	Identification of the “final provided good” – The “multi-dimensional good” of the city (Morrison model: product)	D	A	10
5	Creation of tourism, cultural and sports “packages” (Morrison model: packaging and pricing)	E	D	15
6	Re- evaluation of the selected target markets based on their characteristics analysis– Choose the appropriate sample (internal environment)	F	D, E	10
7	Re- evaluation of the selected target markets based on their characteristics analysis– Choose the appropriate sample (external environment)	G	D, E	10
8	Evaluation and selection of the distributors for each part of the “final provided good” (Morrison model: place)	H	F, G	10
9	Evaluation of the selected strategies and tactics per target market (internal environment)	I	F	10
10	Evaluation of the selected strategies and tactics per target market (external environment)	J	G	10
11	Evaluation and final selection of the promotional means (Morrison model: promotion)	K	D, E, I, J	10
12	EMG meeting 1	L	K	5
	End of the first phase			120

8.2. The Proposed Model of “8ps”

In the case of all partners, the study used two models from the world of marketing world in order to set up a “production procedure”. The first one is the generic and very popular model of “4ps” (Kotler and Armstrong, 2005): product, price, place and promotion. The second one is more complicated and is called the “8ps” model (Morrison, 1989/2001): product,

partnership, people, packaging, programme, place, price, promotion. From the two models, the study selects the model of “8ps” as the most appropriate. The “8ps” model is mainly used for tourist destinations, which have as their main axes travel and hospitality.

Figure 3. Place Marketing “8ps” Model by Morrison

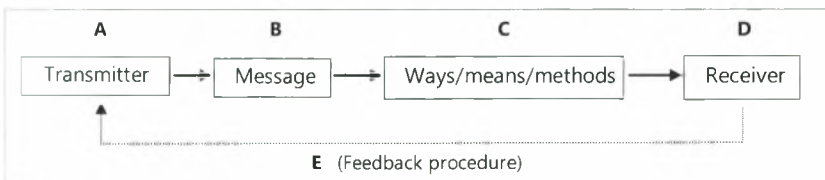


The 8ps for Nea Ionia focus on the parameters presented in Table 7.

8.3. The proposed Model of the Communication Process

A city promotional plan is developed in the last phase of the City Marketing Pilot Plan, which is the promotional one. At this stage, the planners/actors/marketers have to design, evaluate and implement those strategic actions which connect the image of the place with the potential external and internal target markets (communication process) (see Figure 4). The effectiveness of the promotional package is related to the feedback procedure which concerns the collection and the evaluation of the potential target markets reactions and attitudes.

Figure 4. The communication process - Steps



Source: Morrison, 1989/2001; Metaxas, 2003

Table 7. The “8ps” Model for Nea Ionia

8Ps	Nea Ionia
PRODUCT (GOOD)	A multiple tourism good based on heritage, sport and food”, a combination of distinctive features that characterised the city.
PARTNERSHIP	<p>The study proposes three levels of partnership for Nea Ionia:</p> <ol style="list-style-type: none"> partnerships with actors and decision-makers within the place environment, at regional level and at national and European level. <p>These actors include: local and regional authorities, enterprises, cultural organisations, industrial and commercial associations, chambers of commerce and industry, food organisations, tourist agencies, universities and research centres, EU cultural and sports organisations, environmental associations and residents..</p>
PEOPLE	<p>Focus on two dimensions:</p> <ol style="list-style-type: none"> <i>The “Human resources management” process.</i> Referring to human resources management in order to attract visitors, Swarbrooke (1995/2002: 244) supported that it is concerned with obtaining, organising, training, motivating and rewarding the people needed by the organisation so that they can perform in a way which allows the attraction to meet the needs of customers, and <i>the citizens’ contribution to the city’s development.</i> The citizens of a location have been recognized as one of the most important internal target markets (actors) of a city’s environment. According to Woolley (2000) “local people are the key to urban vitality”. <p>McIntosh <i>et al.</i> (1995) used the term “motivation” supporting that the citizens have to be motivated in order to develop actions or to participate in decision analysis procedures, i.e. the case of Winterhur in Switzerland (Ringli, 1997), or to express their opinions on the implementation of particular issues which concern cultural activities, tourism programmes or international events (i.e. festivals, Hanefors 2000; Yeoman <i>et al.</i>, 2004)</p>
PACKAGING	<p>The proposed packages are:</p> <ul style="list-style-type: none"> In CULTURE –HISTORY –NATURE [Archaeological tourism package (Karla, the Neolithic settlements of Sesklo and Dimini - Nea Ionia and the prefecture of Magnesia), Escorted tours package (Nea Ionia and the rest of the Thessaly region), “Places of Spirit” (Nea Ionia and the rest of Magnesia and Thessaly) Nature tourism packages focusing on the development of “alternative forms of tourism”] In FOOD-LOCAL CUISINE (Tsipouradika package, special and traditional cuisine) In SPORTS (“Panthesalikon package”, “Preparation Teams” from Greece and Europe, Summer and winter sports activities’) In EVENTS (common package for all <i>CultMark</i> places) [Cultural, food and sports events] In CONVENTION AND CONFERENCES MEETING (common package for all <i>CultMark</i> places) [in culture, food and sports] All packages have a particular duration and are applied to specific target markets

Table 7. (Continued)

PROGRAMMING	<p>Programming is very closely related to packaging. Actually, it is the process that completes the “Successful Provided Package”. Programming is based on the existence of “Available Time” of the visit, of the event, and of any kind of activity that the potential target market spends in the city’s environment. Programming has an “organised dimension”. In other words, we talk about Effective Time Management, since each of the provided packages has to be planned and also programmed in such a way as to ensure timing to suit the potential target markets, in the specific and limited time that they have, in order that they receive the maximum from the services the city has to offer.</p>
PLACE (Distribution) channels)	<p>Each of the distributors has to be able to inform and to propose Nea Ionia as a destination with multi-dimension tourism character, able to satisfy the demands and the perceptions of the selected groups. The separation of the distributors according to the character of the provided good, is an important process and is related to the effectiveness of the distribution. This separation also satisfies the effort of Nea Ionia to become known for specific tourism activities focusing on culture, sports or food. Each dimension is working at two levels. First, separately: this level requires the planning and the performance of specific actions per sector. Secondly, all the sectors participate in the implementation of common activities. On this point we have to mention that the primary goal is to promote and to distribute Nea Ionia as a multi-tourism destination”, but this goal is very difficult to achieve quickly, especially with regard to the acknowledgement of the European or international target markets.</p>
PRICE	<p>The identification of pricing concerns all the services that Nea Ionia provides to the potential target market. This is the general option of pricing and something that concerns all the participants in the provision of these services.</p> <p>The second option relates to the pricing of the proposed packages. The EMG has to identify what will be the final cost of each package, taking into consideration the relationship between pricing and quality. This is very important since it is related to the implementation of the strategies that we proposed, in order for the final provided good to be potentially effectively in the market that each place wishes to penetrate.</p> <p>The third option is related to the promotion costs of the multi-dimensional good. For instance and according to the CPM, Nea Ionia has to run a number of advertising campaigns (electronic and printed media, etc.). For each of these means, it is necessary to have a particular cost budget (i.e media: the scenario, actors, timing – TV programme zone, frequency, copyright, etc).</p> <p>The study proposes the creation of a particular cost-budget analysis plan that will include all the promotional activities of each place on an annual basis in order that the whole cost be covered by the Total City Marketing Budget of Nea Ionia.</p>
PROMOTION	<p>Proposed promotional means: television, Internet, magazines, newspapers, newsletters, brochures, prospectus, direct sales, exhibitions, fairs and events, etc</p>

Source: *CultMark*, 2005b

Analysing each of the steps in Figure 4, we have to concentrate on the following:

- *Transmitter*: The transmitter is Nea Ionia (internal actors: planners, marketers), which transmits the message to the potential target markets (receivers).
- *Message*: The message is related to the image of Nea Ionia. At this point, the image of the place has to be specific, based on the city's distinctive characteristics. In addition, the message has to be related to the character, the particularities, the needs and the perceptions of the potential target markets where it is applied. This point is crucial because it concerns the level of understanding and acceptance of a city's image by the potential target markets. Under this option, the message has to be clear, direct, real and orientated towards the satisfaction of the demands and perceptions of the potential target markets, based on the level of city's capacity to cover all these. This last point has major importance since it concerns the relation between the image that has been produced by the city image planners and the perspective image that the potential target markets have for the city. If the produced image does not respond to the perspective image (i.e. if it is worse) then this phenomenon has a negative effect on the development of the city.
- *Ways/means*: According to Haider (1992), advertising is the main tool/strategy of the promotion of local economies. The use of slogans and campaigns is also very popular in a cities' promotion process. In addition, public relations, the Internet and cyberspace are very important promotional tools, concerning the significance of image creation of the place and the purchase of this image by the potential target markets.
- *Receivers*: To whom does the image of Nea Ionia apply and why? This question is related to the necessity of market research and market segmentation processes on a Place Marketing procedure. The place image planners/marketers have to analyse and evaluate the characteristics, trends, demands and perceptions of the potential target markets, in order to focus on the particular market segments.
- *Feedback procedure*: this step concerns the evaluation of the receivers' responses. The feedback procedure is an ongoing process. The decision-makers and planners have the opportunity to audit the weaknesses of each step and each tactic, in order to re-design or to



re-construct the main strategies, by using other alternative ones. Furthermore, this step is related to the level of image management capacity, since the feedback procedure is performed in order to improve the communication process, every time, by increasing the degree of place/city marketing effectiveness.

9. Conclusions

It is time to return to the three main questions set out in the introduction. Contemporary urban planning in Greece must focus on strategic planning. However, planning is not sufficient by itself if a city wants to attract businesses and investors, international and/or domestic tourists or new residents, or create a sense of place and civic pride for its existing residents. To achieve these aims, it needs city marketing, which, nevertheless, cannot substitute planning but only complement it. *City marketing* can proceed without planning, but planning can substantially contribute to marketing, which also needs to be *strategic* in order to achieve the aforementioned aims. The strategic planning process also concerns the analysis of the internal and external environment of cities (SWOT and PEST analyses) as a well as the process of urban regeneration, especially focusing on tourism and culture.

The INTERREG IIIc *CultMark* project is applying a place marketing strategy with a cultural approach. The City Marketing Pilot Plan of the studied case of Nea Ionia has a strategic character. It constitutes a significant means of City Marketing Pilot Plan implementation, in order for its image to be effectively promoted and supported to the potential target markets. The plans of all partners are based on the strategic planning process, always starting with the identification of the vision of each place and the primary development objectives that have to be satisfied.

The *link of marketing to sustainability* is something that is difficult to perceive immediately. It is easier to be grasped if the focus is on tourism and culture, since the existence of a sustainable and effective tourism and cultural economy is based on the capacity and knowledge of the places' internal actors to create particular plans of action, by evaluating which fields of implementation of tourism and cultural policies could constitute a competitive, as well as sustainable, advantage at a given time.

The main objective of *CultMark* is the development and implementation of innovative place marketing strategies, based on the elements of local



identity and the cultural assets of the partner areas, in order to contribute to their sustainable economic and social development.

As far as the possibility of *marketing cultural heritage* is concerned, one could skip the argument that everything can be marketed, and concentrate again on the focus on tourism and culture, arguing that the contribution of tourism and culture must be related to the marketing of heritage. The secondary objectives of *CultMark* include the promotion of heritage as a significant factor in local and cultural development and the final provided good of Nea Ionia is a multiple tourism good based on heritage, sport and food.

Thus, marketing planning constitutes strategic planning, it can contribute to sustainability, and it can include cultural heritage.

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Thessaloniki and the International Trade Fair: A Case of Conflict?

Christos Th. Kousidonis

Abstract

The “Thessaloniki International Trade Fair (TIF) SA” was established in the 1920s and the General Trade Fair, organized by the TIF SA on an annual basis, has since become a major event for the city of Thessaloniki, Northern Greece. The TIF SA expanded in a wide range of exhibition related activities while the Trade Fair itself is currently facing very serious competition. The Trade Fair takes place in facilities in an 18ha property, at the geometric centre of the city, in a ribbon-like zone of public open spaces and educational, cultural, recreational, sports and exhibition activities. The recent plans of the TIF SA to redevelop the 18ha property ignited a strong debate among the major city actors and brought about new and older scenarios revolving around two apparent extremes: Adoption of the TIF SA proposal or comprehensive redevelopment of the wider, ribbon-like, zone with priority to the public open spaces and pedestrian walkways.

This article reviews the debate on the future of the central area of the city, commends on the related city governance and company development issue and examines the potential of this critical situation for both the development of the local exhibition industry on the one hand and redefining the spatial structure, the image, and the quest for the city of Thessaloniki in gaining international recognition as a highly developed urban centre on the other hand.

Keywords: International fair, trade fair, competition of cities, spatial structure, city governance.

1. Introduction

Thessaloniki, Greece, has been a major centre of south-eastern Europe since the third century BC. The Thessaloniki International Fair, established in the 1920s, became a significant factor of the economic and social life of the

city. A recent proposal for a rather intense redevelopment of the site of the International Fair in the central area of the city ignited a conflict between the “Thessaloniki International Fair S.A.” and the City Council and brought to the fore questions about the central area, the spatial structure of the city and, ultimately, the future of the city as a socio-spatial entity.

2. Large-scale Territorial Setting

2.1. History and Geopolitics

Thessaloniki was founded in 315 BC by King Casandros, who united 26 settlements into a city. Christened after Casandros’ wife, sister of Alexander the Great, it became the major city of Macedonia and retained a similar, if more formal, position during the Roman period, when it was appointed capital city of the Region of Macedonia. An administrative and cultural centre and a major trade and transportation hub, it attained a population exceeding 200,000 in the second century AD.¹ *Via Egnatia*, the famous road was leading from Dyrrachium, a major port at the Adriatic, to Thessaloniki and, later, through there to Constantinople. Thessaloniki was one of the most important urban centres of the Byzantine Empire, combining a great port with a nodal position on the road network. In 1490, the Turks took over the city. It remained under Ottoman rule until 1912, when it became part of the contemporary Greek State.

The years 1912 to 1922 were a period of radical transformation in south-eastern Europe. The Balkan wars of 1912-13 ended with the emergence of a new state (Albania) and major territorial expansions of Greece, Bulgaria and Serbia at the expense of Turkey. The turbulent period culminated in the Greek-Turkish war of 1919-1922, that led to a massive population exchange between Turkey and Greece. More than 800,000 (out of a total of about 1.5 million) of the Greek immigrants from Turkey settled in the prefectures of Macedonia. The northern borders of Greece, as agreed upon at the end of 1922, remained the same to the present day.² 1917 was the year of the great fire that turned most of the city to ashes. The decision for drastic redevelopment led to the implementation of a plan that continues to be a principal component of the city’s spatial form.³

¹ Thessaloniki, entry in: Encyclopaedia Papyros-Larrouse. See also: *Istoria tou Ellikikou Ethnous*, vol. 6.

² *Istoria tou Ellikikou Ethnous*, vol. 14.

³ For a history of Thessaloniki from a town-planning point of view, see Karadimou-Gerolympou Al. (1995).

The interwar years from 1923 to 1940 were a period of intense economic, political and social problems. The 40s were spent almost entirely at war (WW II and civil war) and that ignited a heavy and long-term polarisation of a large part of northern Greece on a zone of settlements and activities around Thessaloniki.⁴

The 1950s found northern Greece in the awkward situation of being the borderland to the “iron curtain” countries. The impact of this remained strong until the 1970s, when it gradually began to diminish with the change in the political climate.

2.1.1. The Current Geo-political Environment

The 1990s brought global-scale changes with the developments in the former Soviet Union and the Eastern European States and the prevailing of a free market economy. The repercussions of this in the wider region of Thessaloniki were dramatic, reaching the level of actual warfare within and among the States of the former Yugoslavia and eventually resulting in the dissolution of Yugoslavia. The Balkans once again went, and indeed are still going, through a period of territorial rearrangement together with the emergence of new States, the most recent incidences being the May 21st, 2006, vote to establish Montenegro as independent from Serbia, and the diplomatic moves regarding the question of Kosovo’s independence, currently led by the Martti Ahtisaari plan, shortly to be formally presented to the UN Security Council.⁵

The formation and enlargement of the EU (European Union) is the second major component of the current geo-political scene to which Thessaloniki should adjust or rather, and indeed as the *Zeitgeist* of the day would command, *invent* its regional role. To vividly illustrate the new picture that the Balkans is rapidly morphing to, it will probably suffice to mention that Bulgaria and Romania, formerly members of the Soviet block, became full members of the EU as of January, 2007. One of the latest developments regarding the EU and the Balkans is the Stabilization and Association Agreement signed on March 15th, 2007, by Montenegro and the EU.⁶

⁴ For a short account on the subject see, for example, Dimitriadis E. P., Kousidonis Ch. Th. (2002).

⁵ The Economist, March 24th-30th 2007, p. 33.

⁶ The Economist, March 24th-30th 2007, p. 33.

2.2. Thessaloniki as a Central Placecommunications Hub

As alluded to above, Thessaloniki has consistently been an important centre in the urban network of south-eastern Europe. Its nodal position was closely associated with the development of the major road network and the importance of the port.

The hinterland of the port extended a long way to the north, covering a large part of the territory of the former Yugoslavia. After the liberation of the city in 1912, a “free zone” was established as a major part of the port, to accommodate cross-border trade and transportation. Free zone functions included manufacturing. Yugoslavia held its own Free Zone. The potential of the port was boosted by the development of the railway network. The railway connection to Skopje was established as early as 1871; to Belgrade in 1880, to Istanbul in 1895, and to the south of Greece in 1914.⁷

At present, the main components of the communications network of the region are considered as an integral part of the TENs (Trans European Networks) developed by the EU⁸ (see Figure 1).

Montenegro’s decision for independence makes the port of Thessaloniki the obvious, if not the only, choice for FYROM and Serbia. The interest expressed by COSCO (China Ocean Shipping Company) in upgrading its own use of the port to a large-scale gate for Chinese imports to south-eastern Europe, probably including a manufacturing stage, might lead to major developments. This should be seen as one part of a kaleidoscope combining the Chino-Greek and Chino-EU relations, the Balkan conditions, the policy on ports or port-management privatisation and on public-private partnerships, the competition between ports and between shipping and logistics corporations.⁹

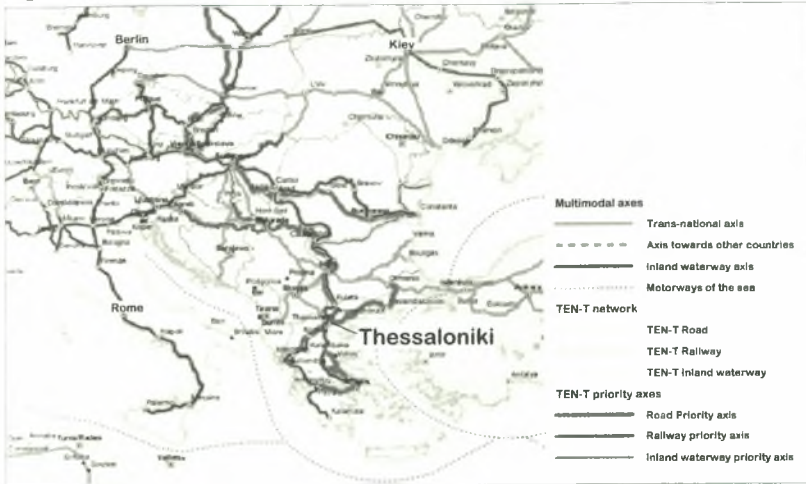
Thessaloniki has an international airport and good road connections to nearby areas of tourist attraction, mainly the coast of Halkidiki, and several locations of cultural interest, including the Byzantine era monastic community of Mount Athos and various ancient archaeological sites (see Figure 2).

⁷ Encyclopaedia Papyros-Larrouse.

⁸ See http://ec.europa.eu/ten/index_en.html

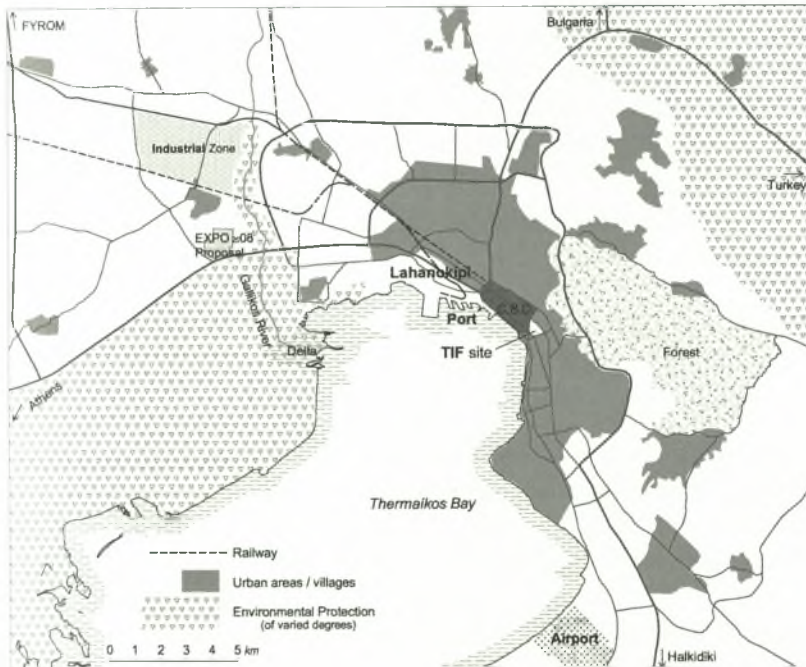
⁹ There are many articles on COSCO and the port of Thessaloniki and related issues. See for example: <http://www.marineews.gr/article.asp?Newid=2240> (article for the Axia newspaper published on 2007/02/04), Vima 2006/10/01, <http://www.euro2day.gr/articles/111147/> (article published on 2006/09/15), <http://www.euro2day.gr/articles/106592/> (article published on 2006/07/05).

Figure 1. Thessaloniki and the Trans-European Transportation Networks



Source: European Commission, 2005

Figure 2. Conurbation of Thessaloniki. Wider Area and Major Transportation Networks



Source: HELEXPO and Expo2008, 2004, with adaptation

2.3. Thessaloniki and Territorial Administration

The city of Thessaloniki does not coincide with a single territorial administrative unit. Its namesake Municipality, the Municipality of Thessaloniki, is actually just one part of a coherent city. The next semi-formal territorial formation is the *Poloedomikon Syngrotima* (usually translated as “Conurbation”) of Thessaloniki, comprising 15 municipalities (NUTS IV level), the combined urban parts of which form what we loosely call the city of Thessaloniki (the term “city of Thessaloniki” bearing no formal status), with a population of around 900,000 in 2001. The Municipality of Thessaloniki, with a population of around 365,000 in 2001, is in every sense the most important among the 15 municipalities.

Moving up to the next level of territorial authority, we encounter the area of jurisdiction of the “Organisation of Thessaloniki”, this being the territory of the “Master Plan and Environmental Protection Programme for the Greater Area of Thessaloniki”. The “Organisation of Thessaloniki” is supposed to monitor, evaluate and adjust the development of the greater Thessaloniki area, mainly in spatial terms, as in the case of monitoring the implementation of a master plan. The population of this area is around 1,000,000.¹⁰ Moving up one step at a time, we arrive at the “Prefecture of Thessaloniki” (NUTS III level, elected administration), the “Region of Central Macedonia” (NUTS II) and the Ministry of Macedonia-Thrace, whose territorial jurisdiction comprises the Region of Central Macedonia and two other Regions of the NUTS II level.

The site of the Thessaloniki International Fair is located in the Municipality of Thessaloniki.

3. Thessaloniki, the TIF and the EXPO Institution

3.1. A Brief History of the TIF

In 1926, when the first Thessaloniki International Fair (TIF) was held, trade fairs already had a long history of being a strong factor in European economic and social development. TIF was planned as an annual event, in order to improve the trade relations with foreign countries and businesses. The organisation of the first TIF encountered various pitfalls, including the negative attitude of the Greek manufacturing industry and Athens-based

¹⁰ Greece, Thessaloniki, in: *Structural Change in Europe 4* (2005), p. 9.

businessmen. In spite of the adversities, the new institution gained momentum attracting increasing numbers of private and official foreign State participants¹¹, and as early as 1929, it was officially recognised as “International” by the Union of International Fairs (Foire Internationale Union).¹²

Since its inception, the International Fair has always taken place on a site to the east of today’s Central Business District, to the east and close to the fortification wall that surrounded the old city. The site is practically identical to the geometrical centre of what we could call the contemporary city of Thessaloniki (as opposed the Municipality of the same name) and covers an area of some 18.4ha (Figure 2). The facilities are used not only for the *Annual General Fair*, as the original Trade Fair came to be called, but for various specialised exhibitions, congresses and cultural events as well. In recent years, the Annual General Fair gradually became a costly enterprise, with diminishing foreign private sector participation.¹³

The TIF eventually developed into a company with varied activities under the brand name *Helexpo – TIF* and went on in that form until 1999, when Helexpo – TIF split up into two companies: *HELEXPO S.A.* and *Thessaloniki International Trade Fair (T.I.F) S.A.*¹⁴

The site and the facilities in general are property of the TIF S.A., while HELEXPO S.A. has the right to use the site in general, and exclusively the right of use of facilities of special importance for holding exhibitions, conferences and similar events. Both companies are engaged in the organisation of fairs, exhibitions, conferences and cultural events. The Mayor of Thessaloniki believes that the split caused a series of problems and that the two companies are, in essence, competitors to each other; his opinion seems at least partly justified.¹⁵

Both companies are, for the time being, controlled by the state. According to the 1999 statute of the TIF S.A., article 6, “*The shares of the*

¹¹ For the early history of the TIF (until 1940) and interesting period photos of the facilities, see Dangas Al. *et al.* (1998).

¹² <http://www.ufinet.org/pages/ufimembers/membrdetails.asp?ldMember=403>

¹³ See *Eleftherotipia*, September 10, 2006, and *Kathimerini*, September 12, 2006.

¹⁴ For the two companies see <http://www.helexpo.gr/portal/> and <http://www.TIF.gr/>

¹⁵ For the Mayor’s opinion see: http://www.thessalonikicity.gr/Ypiresies/Grafeio_Dimarxou/apologismos/2004/apolog04_HELEXPO-DETH-EXPO2008-toyrismos.htm. HELEXPO’s April 2006 announcement of plans to redevelop the TIF site just after the presentation of TIF S.A.’s own plans to the City Council was viewed as evidence of friction between the two companies (see 4.4. The major actors’ reaction to the TIF SA’s plans, below).

*Company all belong to the Greek State and cannot be transmitted.*¹⁶ The State has recently tried, without success, to sell or privatise the HELEXPO.¹⁷

3.2. Thessaloniki as an EXPO Candidate

3.2.1. The International Fairs/EXPOs

Helexpo S.A. is a member of three international associations involved in the organisation of exhibitions or congresses and conventions, namely *The Global Association of Exhibition Industry* (UFI), the *International Congress & Convention Association* (ICCA), and the *International Association of Congress Centres* (AIPC).¹⁸ The members of these associations are, to varying degree, involved in activities of a commercial nature.

As already stated, the organisation of trade fairs is deeply rooted in European history. Yet, a different kind of major exhibition has been established, which defines another already long tradition, clearly distinct from that of the trade fairs. It's the "International Exhibitions", in recent years commonly known as EXPOs. The success of the London 1851 Exhibition, considered to be the first proper International Exhibition, set a trend that produced many similar events throughout the world. Some of them were just poor imitations that threatened to disgrace the emerging genre. To address the situation, "a *diplomatic international convention*" on International Exhibitions, held and signed in Paris in 1928, "established the BIE [Bureau International des Expositions (International Exhibitions Bureau)] and set out simple rules, which restricted the number of exhibitions which could be held and defined their characteristics. The original 1928 Convention has been amended by various additional protocols, but the basic framework of that Convention is still valid today."¹⁹ The organisation of international exhibitions is essentially controlled by diplomatic decisions. The exhibitions are officially organised by a nation and care is taken to preserve their non-commercial character.²⁰

¹⁶ <http://www.TIF.gr/en/katastatiko.htm>

¹⁷ http://www.thessalonikicity.gr/Ypiresies/Grafeio_Dimarxou/apologismos/2004/apolog04_HELEXPO-DETH-EXPO2008-tovrismos.htm

¹⁸ <http://www.helexpo.gr/>

¹⁹ <http://www.bie-paris.org/main/index.php?p=-198&m2=238>

²⁰ The function of the BIE "is to regulate the frequency and quality of exhibitions falling within its remit. This may simply be defined as covering all international exhibitions of a non-commercial nature (other than fine art exhibitions) with a duration of more than three weeks, which are officially organised by a nation and to which invitations to other nations are issued through diplomatic channels. The BIE is therefore not concerned with trade fairs and indeed the degree of commercial activity carried out at BIE exhibitions is carefully regulated." (<http://www.bie-paris.org/main/index.php?p=-198&m2=238>)

From the earliest date, the BIE has accepted the need to differentiate between two categories of exhibitions: major events which last for six months and with a theme of a general nature and shorter, more economical events, where the theme is more precise and specialised. The characteristics of these two kinds of Exhibitions are listed on the table below:

Table 1. The Two Categories of Exhibitions Controlled by the BIE²¹

	International Registered Exhibition (or World Exhibition)	International Recognised Exhibition
Frequency	every five years	during the interval between two International Registered Exhibitions
Duration	(more than 3 weeks) - 6 months at most	(more than 3 weeks) - 3 months at most
Area	not restricted	25ha at most
Theme	general	specialised

Greece has been a member state of the BIE since 1928.²²

The next International Recognised Exhibition is scheduled for 2008.

The next International Registered Exhibition is to take place in Shanghai, China, from May 1 to October 31, 2010, the theme being “better city, better life”.

3.2.2. The Run for EXPO 2008

As stated above, the International Exhibitions “are officially organised by a nation”, but they are named after the city in which they take place, and every proposal is indeed city-related. Thessaloniki was one of the three candidates for the 2008 Expo, the other two being Trieste, Italy, and Saragossa (Zaragoza), Spain. The winner was Saragossa and the theme of “Expo 2008 Zaragoza - Spain” is “Water and the Sustainable Development of Cities”.

Thessaloniki proposed a site of some 9.5 ha, west of and close to the city, comprising:

- a. the proper Expo Site, the EXPO Hotel and accompanying facilities, and
- b. the EXPO village (see Figure 2).²³

²¹ <http://www.bie-paris.org/main/index.php?p=-198&m2=238>. Besides these two categories, the BIE continues to recognise some Horticultural Exhibitions and the Milan Triennale.

²² <http://bie-paris.org>

²³ For the spatial organisation of the proposal see: HEI.EXPO and Expo2008 (December 2004).

The planning proposal went into details to address the issue of accessibility and the visitors' accommodation. The theme would have been "Terra Mater: Knowledge of the Earth, Agriculture and Nutrition".

Helexpo S.A. was a leading actor in preparing the dossier of the application for EXPO 2008.

3.2.3. Future Prospects and Competition

The application to organise EXPO 2008 in Thessaloniki did not meet with success, but the effort was not totally in vain. Besides being an exercise in collaboration among several local and national actors, it probably left the city with the ambition to rebound. Applying for a future EXPO, to take place in 2012 or 2017, is a possibility that surfaces in scenarios regarding the development of the city or relevant actors like the Municipality of Thessaloniki, the Helexpo S.A. and the TIF S.A.²⁴ Running for a future EXPO has not attained the status of an official decision as yet, but apparently it is a factor to be reckoned with in the writing of future scenarios.

The exhibition-and-related-activities industry is highly competitive, and one heavily relying on publicity and *prestige*. Obviously, organising a major exhibition of worldwide attraction could seriously add to the potential of both the city (and the region) and the exhibition-related sector of the city (and the region).

Thessaloniki and the local exhibition industry (Helexpo and TIF in particular) are already facing competition on the cross-border²⁵ regional scale from Filipoupolis (Plovdiv), Belgrade and, most importantly, Istanbul. The picture is not complete without Smyrna (Izmir, Turkey), where a dossier to apply for the 2015 International Exhibition is being prepared.

²⁴ The years 2012 and 2016 or 2017 are mentioned several times in recent newspapers and Mayor's speeches. Both 2012 and 2016/7 are scheduled for Recognised Exhibitions. 2015, mentioned in several unofficial occasions, is scheduled for a Registered Exhibition; Registered Exhibitions are events of a magnitude probably well beyond Thessaloniki's capacity.

²⁵ Inside Greece, Athens is rapidly growing as a centre of the exhibition industry. HELEXPO S.A. and TIF S.A. are heavily engaged in the flourish of the Athens-located exhibitions.

4. TIF and the Spatial Structure of Thessaloniki

4.1. The TIF Facilities

As mentioned above, the TIF site covers an area of about 18.4ha. The area would be significant just in terms of size; but it becomes all the more important when the factors of location, activities and development are taken into account.

The built-up area is close to 50% of the total area of the site.

The on-site facilities include 44,000km² of exhibition spaces (some 64,000 when the auxiliary spaces of the exhibition buildings are included), two convention centres, one of which (Ioannis Vellidis) is a dedicated new building with a capacity to host 2,400 people, 16 stores, a major sports arena, a small open-air movie-theatre, a small to medium-sized museum of modern art, and two organised parking areas: one open-air (210 places) and one underground (420 or 430 places) at the basement of the Ioannis Vellidis Congress Centre. The total floorspace of the facilities is grossly about 90-95,000km², excluding the Ioannis Vellidis Congress Centre, the sports arena and the art museum.

4.2. The Site's City-scale Importance

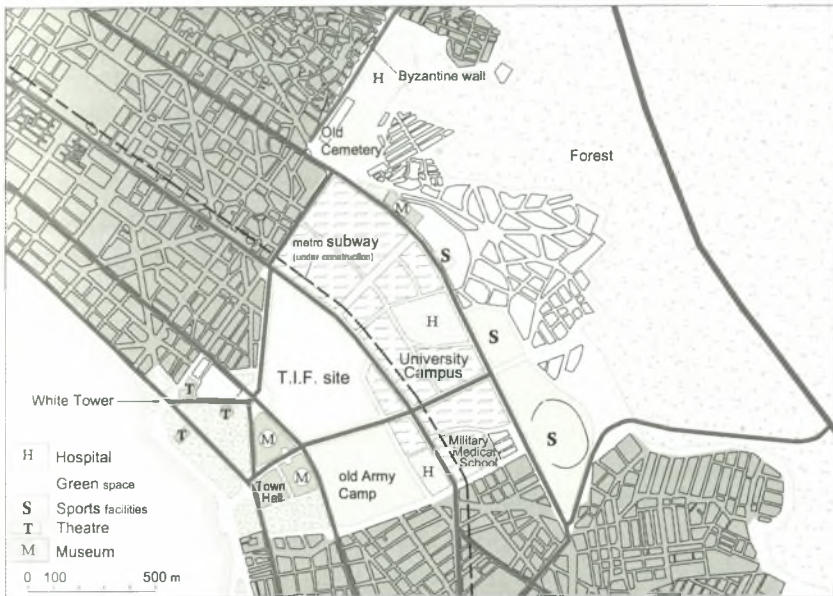
4.2.1. A Central Zone of Distinct Features

The city of Thessaloniki has a spatial form reminiscent of butterfly wings: It comprises two major, roughly triangular, built-up sectors aligned with the sea shore. These sectors are merging into a narrow zone of largely non-residential activities and low density development, spreading from the sea shore, in the south-west, to the hill forest surrounding the city in the north-east (*see* Figures 2 and 3).

This zone lies to the south-east of the CBD of Thessaloniki, in fact acting as a limit to the CBD; it contains the site of the TIF and has a number of important features (*see* Figure 3):

- Regarding physical development, the zone marks a sharp distinction from the adjacent areas of city, and indeed the rest of the city in general: It is relatively sparsely built-up and scores a very low gross density ratio (in the sense of floorspace relative to total area). What's more, considerable parts of it are green spaces.

- On the activities or uses of space level of analysis, it comprises mostly public, or semi-public, activities and facilities: Green spaces, education and culture, health-care, sports and administration facilities and, of course, the TIF exhibition facilities. The education activities include two universities. The zone contains the campus of the Aristotle University, which is the largest University of Greece, and the facilities of the University of Macedonia. Included among the culture facilities are two major museums, the Archaeological and the Byzantine museums, with exhibits of worldwide importance, and two major theatre buildings (one comprising two theatres). The Town Hall of Thessaloniki, currently under construction, is the latest important development in the zone. The site of the old army camp to the south-east of the site is a truly special case: the strictly military use of the camp has been reduced to administration headquarters, and part of it has been converted to war museum. Both the museum and the headquarters are housed in beautiful, turn-of-the-century, buildings. As a rule, the attraction of these activities covers, and in some cases evidently exceeds, the city-region scale. The theatres have a city-region scale, the hospitals exceed the region (as in NUTS-II) scale range and the universities have a nationwide attraction. The attraction of the General Trade Fair, some of the specialised exhibitions and the museums clearly exceeds the nation scale.
- The zone includes significant historical buildings and monuments: the “White Tower” on the promenade – part of the old fortifications and serving as a “symbol” of the city to many, parts of the city wall and a small, well-preserved tower, the old graveyard outside the city wall and some turn-of-the-century, neo-classical buildings.
- Regarding rights of property and/or control, the zone is own and controlled by the state or the municipality of Thessaloniki to a large extent. The TIF site is also state property (if only indirectly in some ways –cf. above).
- On the traffic flows and transportation level of analysis (inextricably related to that of the activities), the zone plays an important role: Not only is it a sort of hub of the road network of the city, and home to some of the worst traffic congestion points, but, as a container of some of the major traffic generators, it heavily contributes to the congestion problems. Apparently, the addition of the Town Hall will only worsen the traffic puzzle.

Figure 3. TIF and the Central zone of the City

The construction work for the long-overdue metro subway have just begun. For the time being, the scheduled works are restricted to only a 9.6km line, to be completed by late 2012. Expansion of this line to a proper network is loosely planned and will be subject to future decisions. The metro is expected to seriously ameliorate the road traffic. The metro is one of the two “major public works” requested by and promised to Thessaloniki, the other being an underwater-tunnel road by-pass in the central area - its construction is also scheduled to commence in 2007. Although asking for the underwater by-pass has been part of the local actors’ rhetoric for a long time, its feasibility in traffic, environmental and financial terms is heavily questioned by many and the specific project is actively opposed by citizens’ groups.

The TIF site is enclosed by major roads. Three of the worst traffic jams in the city occur at road crossings at the perimeter of the TIF site.

To sum up, the zone in question is a relatively sparsely built-up, low-density (in the sense of floorspace relative -to-total area ratio) area, mainly of public ownership, open to public use, and indeed covered to a high degree by public green areas. Regarding the important feature of being really, or

unconditionally, open to the general public, a short comment is in order: some parts of the zone are formally and practically public open spaces; others are only practically and, perhaps, temporarily or periodically so, as is the case with the open spaces of the university campus and, to a certain extent, with part of the TIF site. The open spaces form a ribbon that virtually, and indeed perceptually, connect the seashore with the small forest on the hills surrounding the city from the south-east.

Evidently, this zone presents a potential of critical importance for the spatial organisation and, in the final analysis, for the development of Thessaloniki.

4.2.2. The Site's Potential

It seems that the zone could morph into a functionally coherent zone of mostly open-space activities. Other activities (non open-space), already present in the area or not, could be integrated into the zone. The open space and the open-space activities could provide the integrating factor, while simultaneously, and also metaphorically and literally, allowing the space for the other activities to present themselves.

The planning direction towards which this assessment could lead is not an automatic consequence of a neutral survey of the situation. It is based on implied goals regarding the quality of everyday city life, the spatial structure and the development of the city as a whole.

Before the decision to pursue such a planning direction is actually made, the expected costs and benefits should be estimated from different points of view and for a variety of actors, interested or affected parts, users or potential users. And of course, the synergy, compatibility or contradiction should be assessed between the general planning direction and certain developments, planned or otherwise, that could drastically change the perceived situation. Such is certainly the case with the recently revealed plans of the TIF S.A. for the development of the TIF site.

4.3. TIF S.A. Plans to Develop the Site

Around the end of 2005, the TIF S.A. announced specific²⁶ preliminary plans for “renovating the Site of the International Trade Fair”, in the form of a “financial feasibility study”. The outcome of this study was a proposal

²⁶ The announcement of these plans was preceded by leaks in the September 2005 newspapers about a project designed by the architect Santiago Calatrava, “secretly” presented to selected city actors in a closed meeting

based on a rather radical redevelopment of the site, to be undertaken by a PPP (Public-Private Partnership) scheme. The legal framework for the PPPs in Greece had just been imposed by law on the PPPs (Law 3385/2005). The new development included 12,500 m² of retail facilities, 13,500 m² of office facilities, an 11,200 m² multiplex with restaurants/cafeterias and movie-theatres, and a “parking station” (2,880 underground and 500 ground-level places). A lot was assigned for a future hotel development (24,200 m², 300 beds).²⁷ The proposal had already been submitted for approval to the Ministry of Economy and Finance, Special Secretariat for the PPPs.

The TIF S.A. claims that the proposal is beneficial to the city in several ways: It provides more parking places (although not on a free basis), helps to address the traffic problems, opens a “secured and relaxed urban environment of culture and recreation”, and reinforces the traditional centre of the city in general and the in-town shopping in particular.

4.4. The Reaction to the TIF S.A.’s Plans and the Question of TIF’s Location

In spite of the claims of the TIF S.A. about their plans for the TIF site redevelopment, the reaction from the major actors was certainly far from being warm.

The president of the TIF S.A. made a presentation of the proposal to the (Municipality of Thessaloniki) City’s Council Meeting on January 26th, 2006. The Mayor was more than clear in his position: “This, I call it a mall.” he said about the proposal, and asked the TIF S.A. to withdraw it, “as a gesture of good will towards the city”. Furthermore, he threatened to file a formal claim for an area of 1.5ha inside the TIF site, thus neutralizing the proposal. The Mayor went on to stress that if the proposal were to be implemented, it would cause serious problems to the city centre. All parties of the City Council were unanimous in rejecting the proposal. Given the explicit rejection of the proposal, their positions covered the range from exclusively accepting exhibition activities, provided that the city is not given the opportunity to develop another exhibition site, to asking for the site to

called by the TIF S.A. and The Ministry of Macedonia-Thrace, on Friday September 9, 2005 (see 4.4. The reaction to the TIF S.A.’s plans (...), below).

²⁷ All area measurements in this paragraph refer to floorspace. The figures are taken from Doxiadis Office, 2005, a pamphlet documenting the TIF S.A. proposal. The pamphlet was part of the dossier supporting the presentation of the proposal to the Technical Chambers of Greece, hosted by the TIF S.A. in January 17, 2006.

be turned into a public green space. The position of the mayor's party was the conditional acceptance of exhibition activities.²⁸

The Ministry of Economy and Finance was only prepared to consider the TIF S.A. proposal on the condition that it was unanimously accepted by the city actors; in this context, the rejection by the City Council meant the proposal reached a dead-end.²⁹ This, of course, does not mean that an essentially identical proposal, submitted in a slightly different package and under more favorable circumstances, could not hope for better luck in the future.

A related point of friction was the TIF S.A.'s commissioning of world-famous architect, Santiago Calatrava, a household name in Greece since his work for the Athens 2004 Olympics, to design a project for the TIF. The project was never really presented in public,³⁰ but apparently encompassed zones and locations well beyond the TIF site. As mentioned above, it was first referred to in the newspapers in September, 2005. The procedure of privately commissioning such a project caused strong criticism from several city actors.³¹ In the City's Council Meeting on January 26th, 2006, the Mayor and the President of the TIF S.A. argued as to whether the Mayor had been initially supportive to the Calatrava project, the Mayor strongly denying that he had.³²

In general, the major actors in the city were against the TIF S.A. proposal.

In April, 2006, the President of the HELEXPO S.A. announced that the company had prepared its own plans for the redevelopment of the TIF site. Unlike the TIF S.A.'s proposal, this one was self-financed and strictly exhibition-oriented and would be presented to the city authorities and actors at first. To date, this announcement does not seem to have been supported

²⁸ See the city's newspapers (*Angelioforos*, *Avriani Makedonias Thrakis*, *Makedonia*, *Tipos Thessalonikis*) of January 27, 2006. *Angelioforos* and *Makedonia* went into more details.

²⁹ See *Angelioforos*, January 27, 2006.

Note that in September, 2006, the President of the TIF S.A. maintained that the proposal to redevelop the existing site was still active, and the TIF S.A. was expecting the response of the Special Secretariat for the PPPs to their application to form a PPP scheme to realise the project (*Ethnos*, September 9, 2006).

³⁰ See footnote 21.

³¹ Among them the Technical Chambers of Greece (the Union of Registered Architects and Engineers of Greece, official advisor on technical issues to the State), the Architectural Association of Thessaloniki, and professional parties in the fields of architecture and engineering.

³² *Makedonia*, January 27, 2006. Also see *Angelioforos*, January 27, 2006.

with any subsequent steps. HELEXPO's move was interpreted as concrete evidence of the friction between the two companies.³³

The issue of the TIF site's development, even specifically from the exhibition industry's point of view, should be addressed in the context of the opportunities presented to, and the demands expected of, the exhibition industry itself. One such major opportunity presents itself in the will of the city to apply, with a new proposal, to host either the 2012 or the 2017 EXPO. In the event that the will of the city actors, particularly the municipality, receives the necessary central government support, the site of the event should be an important feature of the application. By all accounts, the current TIF site does not meet the standards of such an event³⁴ and this was obviously the reason why the unsuccessful application for the 2008 EXPO provided for a different site.

The Mayor asked central government to announce whether it was going to support the city in applying for the 2012 or 2017 EXPO.³⁵ In the case of State support, the municipality is willing to develop a contemporary exhibition centre in Lahanokipi³⁶, an area in the west of the city, as yet not included within the "town plan" limits, and close to the port. Then, the TIF could relocate to Lahanokipi.

Proposals for relocation of the TIF and development of its current site as an integrated part of the city have been a recurring theme in public discussions on the future of the city. The "General Development Plan of Thessaloniki", issued in 1993 and attaining the status of law, reserved a site of 6.5 to the west of the city and a short distance from it, for exhibition and trade-related activities. This provision was madetaking into account that the TIF S.A. owned the site, but the possibility of relocating to the site has been dismissed because the site came under the conservation status of the Ramsar Sites. The Lahanokipi alternative did not reach the stage of accurately delineating any specific site (on the lot scale). But given that the area

³³ The President of the TIF S.A., questioning HELEXPO's role, noticed that the HELEXPO does not own the property rights of the site. (*Erhnos and Eleftherotypia*, April 10, 2006, *Express*, April 21, 2006). Also see: *Typos Thessalonikis*, *Naftemporiki* and *Kerdos*, April 8, 2006, and, on other areas of friction: *Makedonia*, February 11, 2006, and *Makedonia*, May 9, 2006.

³⁴ To include every relative proposal, explicit or implicit, note that the Minister of Macedonia-Thrace, on the basis of the Calatrava project, implied that the current TIF site and the old military camp could be proposed as the EXPO site (stated with disapproval in *Makedonia*, September 16, 2005; see also *Makedonia*, September 13, 2005, *Kerdos*, September 14, 2005, *Angelofoiros*, October 2, 2005).

³⁵ As stated above, the proposal to the BIE is formally submitted by the State, not the city.

³⁶ Lahanokipi means vegetable gardens. Formerly a rural area on the city fringe, mixed rural and low density residential-manufacturing, and in recent years attracting offices, recreation and retail activities.

has not been really built-up, nor has it become part of a proper town-plan, it would be easy and economical in both legal and financial terms to assign a site as an “exhibition and related activities area” and buy (or expropriate) it. Most importantly, the area is not reserved in any way that would exclude the exhibition and related activities. In that sense, relocating to Lahanokipi is still an option. In fact, Lahanokipi was the choice of the Technical Chambers of Greece for the 2008 EXPO site (a choice not shared by the official proposal).

4.5. Reassessing the Scenarios

The wide publicity, negative for the most part, received by the TIF S.A. proposal had an important side effect. It brought the development of the central zone of the city to the attention of the media and consequently, to a certain degree, the general public. More specifically, it forced the parties of the city council and other actors of the local community to express an opinion on the issue or, at least think about it so as to be ready to stand up for their interests. Hopefully, this may lead to a reassessment of the scenarios regarding the development of Thessaloniki as an integrated socio-spatial formation, with the intent to co-ordinate the actions of the local actors, and indeed of all those acting on site (in the wider territory of the city) so as to create the highest possible synergies. This would mean proceeding with an efficient governance scheme that could eventually produce and/or embrace and implement new innovative scenarios for the city.

Some first steps towards participation, exchanging views and finally efficient governance have already been taken. Moving in this direction, the Technical Chambers of Greece, Central Macedonia Branch (TCG-CMB), invited all the significant actors to participate in a formal discussion about the future of the central area of Thessaloniki, on Monday, June 19, 2006. Prior to that, TCG-CMB formed a team of its members to consult its Executive Committee on the subject.³⁷

During the period between October 2006 to March 2007, the issue of the TIF site and the central area of the city did not feature in the newspapers.

³⁷ The author was a member of the team. The team formed in November, 2005.

5. Conclusion

As already implied, the future of the TIF site in the central zone of Thessaloniki is not clear. The conflict about the (re)development of the TIF site, not only is still open in my opinion, but it may eventually resolve in opposite directions.

The conflict touches on several interesting topics, including corporate social responsibility, urban management, participation and communication, or public relations, in planning.

Apparently, the core issue is a conflict of interest between the part and the whole. But, with more careful reading, it may well be a conflict of perceived interest. It is true that the financial interest, in monetary terms, of the TIF S.A., at least for a limited time span, seems to be served by the TIF proposal. Yet, and still on a strictly business basis, it also seems like a no risk - no vision approach, unless of course the TIF S.A. were to seriously claim that the proposal was just meant as a first step into inspired broader plan. As it is, one is led to believe that the TIF S.A. simply tried to seize the opportunity to gain profit as a land owner and real estate developer.

On the other hand, if the TIF S.A. were to consent to relocate to Lahanokipi or a spatially equivalent site, perhaps in exchange for having its property in the centre, it could be a partner in developing a contemporary exhibition-and-related activities complex. This new development would be an asset if the city is to apply for a future EXPO. In any case, the exact content and magnitude of this development should be monitored in accordance to major parameters, applying for or ultimately organising an EXPO being one such example. Relocating to a new site would create a cyclical process of synergies among the exhibition activities and the city. The TIF would be hosted in better facilities, with positive effects on and from the other activities in the new complex. The new site, if properly designed, would be an asset for the city as a whole. The central zone of the city, relieved from some old facilities, could be an important element not only for everyday life but also in creating a better image of the city, hopefully well-crafted and thus able to assist in the international promotion of Thessaloniki. The central zone and the (new) exhibition site (should) present the city with the opportunity, if not the obligation, to create emblematic or iconic buildings or spatial compositions. The central zone and the new exhibition site should be an asset to each other.

For the time being, one can only wish for efficiency in governance, imagination in company management and innovation in planning.

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Measuring Urban Dynamics Through Public and Private Sector Concentration Patterns: The Case of Thessaly, Greece

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Abstract

After the intense and unprecedented urbanisation of the last centuries, it is more than evident that a clear understanding of the ongoing trends of urban growth and clustering is needed if we are to aim for a better insight as to their possible future. The main aim of this paper is the definition of a methodological framework for the determination, analysis and cross-evaluation of urban clusters which are formulated within wider study areas, such as administrative regions. To this end, different methods and techniques are utilised, that stem from the fields of Statistics and Quantitative Spatial Analysis and which, during recent years, are all the more commonly applied to the different stages of Geographical Analysis. The definition of urban clusters is mainly based on different types of variables, such as the demographic characteristics of the cities, the number of public and private sector services located in them, as well as the total length of the different types of road network in the study area. Furthermore, a comparative indicator of spatial concentration is formulated that reflects the role and the relative weight of every urban area in the study region as well as its spatial influence. Such a measurement improves the definition and analysis of urban clusters and at the same time, constitutes an alternative assessment of their overall locational perspective. Both the proposed methodological framework and the formulated indicator are applied in the region of Thessaly, Greece.

Keywords: Public and private sector services, quantitative spatial analysis, spatial concentration, Thessaly, urban clusters, urban growth.

1. Introduction

The levels of urban growth and urban concentration observed over the last two centuries defined an unprecedented process in history. As a result, more than half of the world's population currently live in towns and cities.

In the most industrialised countries, where the spatial clustering and social diffusion processes of urbanisation seem to have come to an end, the question of future evolution is still under debate. In this respect, interpreting actual trends in urban growth in a correct way is a key for predicting further tendencies.

During recent years, the role of urban centres in their regions varies, depending mainly on their location and the relations with surrounding cities and settlements, since through their service levels they affect the dependence of settlements at a specific distance from them and thus their further development and the region's sustainability. Such varying levels of influence and service have led, during recent years, to the appearance of regional inequalities and many researchers have tried to interpret them through different scientific approaches. In most cases, they focused on the application of methods and techniques as well as the formulation of models, while seeking a theoretical framework. Firstly, it was Plato's ideas (4th century BC) concerning the role of urban centres, which stated that the ideal size of cities can be calculated with mathematic models (Pangle, 1979). In the mid 1960s, Doxiadis (1964), defined "*cities-states*" according to the distances travelled from centre to borders between sunshine and sundown, on foot. From approaches that focused on economic and social criteria, Christaller (1966) formulated his Central Place Theory, which was based on the supply and demand of goods and services. In a more recent work, Portnov and Erell (2001) used a location clustering indicator as a measure of relations between cities and with respect to applied regional policies.

The aim of this paper is the definition of a methodological framework for the study of relations that are developed between settlements, the degree of influence and their interdependence, and through this the definition and evaluation of urban clusters. The emphasis is on the analysis of public and private sector concentration patterns. Since this framework is mainly based on methods and techniques of spatial analysis performed in a GIS environment, it can constitute an important tool in the interpretation of urban systems and settlements formulations.

1. Urban Growth Theory and Methods

Operations and activities that are developed in the interior of settlements and at the extension of cities, play an important role in the development of the urban environment. At the same time, they influence the relationships

between people and create various problems, while they also offer important possibilities, strengthening the cities' growth level. The monitoring of urban changes constitutes an important subject of research for a lot of scientific sectors aiming at the interpretation of developments that transpire in the cities.

Sustainable urban growth as "*the potential of urban areas to attract new residents while maintaining the existing*" is undoubtedly a complex phenomenon. However, this statement is followed by a set of analyses with regard to the indicators and the criteria, which form the bases for the interpretation of the relation between the sustainable population growth of cities and the attributes of their locality (Portnov and Erell, 2001). Furthermore, indicators that promote growth in urban and regional planning must follow three rules (Wong, 1995):

- i. Quantification of needs and opportunities that each geographic region or locality offers, for the distribution of resources.
- ii. Placement of the terms with which improvement of an area through public political intervention can exist.
- iii. Recognition of the most important opportunities and problems for each area as a basis for the determination of political objectives.

Accordingly, there are three basic categories of criteria that affect the sustainable growth of urban areas. Namely, the environment, the population and the economy, which constitute the bases for sustainability control. Sustainability over the last few years is related to a term which is used in many academic sectors, as the astronomy, the sociology, the economy, the statistics and the geography and the regional planning and is called "cluster". However, the interpretations of the causes and consequences of cluster in these sectors differ sufficiently for there to be various types of clusters, such as:

- *Clustering of galaxies*, Newton (1962).
- *Clustering of data*.
- *Clustering in social groups* (Moreno, 1953).
- *Clustering of opportunities* (Fotheringham, 1991).
- *Clustering of industries* (Weber, 1929).

In all these sectors, the term *cluster* mainly describes the same phenomenon: "*a set of neighbouring objects or entities which are connected with some concrete bond, either functional or attractive*". (Portnov and Erell, 2001). In the field of

geography and regional planning, the structure of clusters is reported and reflects in *urban clusters*. The attempt to interpret the above phenomenon began in the 4th century B.C., when Plato tried to determine the ideal city-state, considering that this should be constituted from 5,040 landowners and be checked from 37 law ephors and a council of 360 (Pangle, 1979).

Later, in contradistinction to the above opinion, Doxiadis (1964) concluded that the sizes of cities depended on movements realised between sunshine and sundown. Thus, for the median city the distance from the borders should not exceed that of a 4-hour walk; for a small city, 1-hour; and 7-hours for major cities. Three more definitions of the size of the ideal city came from Richardson (1977) and Clark (1982), Howard (1985) and Haughton and Hunter (1994). Clark and Richardson correlated the ideal size with minimal cost. According to Howard, the ideal size of cities are 32,000 residents in an area of 3,000 m². Finally, according to Haughton and Hunter, the ideal size of city is 100,000-250,000 residents, which implies significant economic growth. (see Table 1)

Table 1. Empiric Approaches for the Determination of Ideal City Size

Writer	Year	Characteristics of ideal city
Platon	4th century BC	5,040 landowners and a council of 360
Doxiadis	1964	Three kinds of cities- states, depending on the distance that can be covered between sunshine and sundown
Richardson, Clark	1977, 1982	The size depends on minimal cost
Howard	1985	Ideal size of 32,000 residents and 3,000 m ²
Haughton - Hunter	1994	Ideal size of 100,000-250,000 residents

However, while initially the only criteria for the determination and categorisation of urban clusters were population, area and distances travelled within their limits, later on economic, social, policies even psychological characteristics were also considered. The first consideration of the above parameters came with the introduction of central place theory by Christaller. According to this theory, cities attract a set of facilities from which their functions and activities stem and are distinguished in the following types:

- *General*. Executed by the city, in order to serve the neighbouring countryside.

- *Transport*. Usually executed in the nodes of transport networks.
- *Special*. Carried out in smaller or bigger areas. This type includes mining and industrial activities.

Although these categories can be considered as important factors of urbanisation, the main role of the city is to serve its hinterland. Consequently, they are two additional criteria for the definition of central place: *critical size*, which means the minimum population that is required in order to support an urban operation, and *scope*, which means the furthest distance to offer its goods or services. (Argyris, 1997)

As stated by Golany (1982), the role of urban clusters becomes important by contributing to the reduction of the spatial isolation of barren regions. In this respect, clusters of cities that are scattered in barren areas can have economic profits by decreasing infrastructure and transport costs. Another interesting formulation came from Krakover (1987), who analysed the advantages and disadvantages of urban clusters by using statistical data for Northern Carolina and the Piedmont, Philadelphia in USA. He managed to define two distinct stages of growth for the cities which constitute urban clusters:

- In the first stage, the cities are relatively small and the existing economic, technological and spatial conditions coincide with existing accumulated economies.
- In the second stage, when the cities exceed a certain population limit then a lot of businesses are moved into the suburbs. In the opposite case, such an economic diffusion is less likely to appear in a cluster of smaller cities.

An important contribution in the definition of urban clusters in the interior of regions was given by Portnov and Erell (2001), who formed an indicator which shows whether clusters exist in a greater region and how these can be described based on their distance from the central city (Equation 1):

$$IC = \frac{IS}{IR} \quad (1)$$

where:

IC = the index of clustering,

IR = the distance from the central city, and

IS = the isolation.

2. Methodological Framework

Since urban concentration assessment is critical for the interpretation of phenomena at both the urban and the rural level, methods and techniques from the quantitative spatial analysis toolbox are needed. According to the proposed approach, a thorough study and evaluation of the spatial relationships between settlements and central cities can be achieved with the application of the following methodological framework. The first step of the approach is the data collection and organisation, which eventually leads to spatial database formulation and management. Since both are essential for the definition of urban clusters, they must be corrected and updated in order to ensure the validity of the final results. The next step is the categorisation of settlements, intended to define groups in the study area. A typical way to deal with this issue is based on the population that each settlement has and the degree to which it corresponds to the term urban. In this respect, the critical problem variables which will be analysed in the framework of this study are defined. They refer to the strength of the area's urban centres in a demand, supply, and service concept. They will also contain data reflecting the number of public facilities and private sector enterprises, along with measures which reflect the overall accessibility of surrounding areas, utilising descriptive data on the existing road and railway network and the public transport system. In this stage, specific Geostatistical methods and techniques of spatial data analysis along with the technology of Geographic Information Systems (GIS) are adopted, in order to obtain a multivariate combinative exploitation of information.

The service areas calculation which follows is based on the each settlement's network accessibility cost (time or distance) and they can be defined by locating each settlement to the nearest urban centre, using the network distance or through the formulation a locational indicator. In the GIS environment and with respect to road network arcs, data should be available about their length and the category they belong to by virtue of average speed. Following the determination of service areas, spatial analysis methods and techniques are applied in order to define the urban formations and patterns that exist in the study area. To this end, point and services concentrations are assessed and thus, urban clusters evaluated. The definition of urban concentrations is realised, according to which the settlements density around each city is calculated, attributing at the same time the characteristics of urban clusters in the study region. The analysis of the resulting urban clusters is realised via *cluster analysis*. The application of this particular

method seeks urban clusters with similar characteristics, while simultaneously evaluating each cluster's importance taking into consideration every variable in the database.

Finally, a numerical indicator is formulated which reflects the clustering dynamics around each settlement in the study area. The variables utilised refer to critical infrastructural and developmental characteristics of each settlement-centre reflecting in this manner, its importance in the study area. The validity of the methods and the effectiveness of the proposed methodological framework are evaluated through their application for the definition of urban clusters in the region of Thessaly, Greece. The specific region, due to its morphology, inadequate and old road network as well as its sometimes extreme climate and weather conditions, constitutes an intriguing case study.

Each settlement, depending on its demographic size, assembles in his interior operations and services which respectively attract smaller populations from neighbouring settlements. In this respect, around each big and small urban centre, its service area is defined by a specific network radius. This task is performed in a GIS environment by the use of specific functions and routines.

Furthermore, cluster analysis refers to an extensive set of algorithms with which are grouped the lines (cases) or the columns (variables) of a data table. It is divided into two main methods. Hierarchical, which starts with groups equal in number and progressively merges similar groups until a team which includes the total number of cases is formulated, and bisectional, which starts with a set that contains the total number of cases and progressively removes the most remote cases, creating a new set and redistributing every other case, until a predetermined number of groups is formulated optimally (Maloutas, 1994).

3. Spatial Concentration Patterns in Thessaly

According to the proposed methodological framework, the settlements of Thessaly were categorised into the following groups, which in large part coincide with the groups that the National Statistical Service of Greece adopts:

- a. settlements with a population of less than 2,000 residents (922),
- b. settlements with a population of more than 2,000 and less than 10,000 residents (28), and
- c. settlements with a population of more than 10,000 residents (4).

At this level of analysis and with respect to urban clustering dynamics, only settlements with 2,000 to 10,000 residents and settlements with more than 10,000 residents will be examined. For the calculation of service areas in the GIS environment, two digital coverages will be needed. A point coverage, with additional information about each settlement's population and altitude (2001 census data), and a line coverage of the road network, with length, maximum speed data. The three types of roads that were adopted are based on the international categorisations (Gutierrez and Urbano, 2002):

- 1st category, in which the E-75 highway belongs, with an average speed of 120 Km/h,
- 2nd category, in which the E-90 motorway belongs, with an average speed of 100 Km/h, and
- 3rd category, in which the rest of the national road network belongs, with an average speed of 70 Km/h.

3.1. Service Area Definition

Using the accessibility of each settlement to the nearest mean urban centre, the service areas of each urban centre with population bigger than 10,000 residents and those with population 2,000-10,000 residents were calculated. In the determination of service areas the following indicator of interaction was used:

$$L_i = \frac{W_j}{d_{ij}^2} \quad (2)$$

where:

L_i , is the strength with which the settlement i is influenced by each urban centre j ,

W_j , is the weight of each urban centre j , and

d_{ij} , is the distance between the settlement i and the urban centre j .

Figures 1, 2 and 3, which follow, contain service areas with respect to serviced settlements for each urban centre of with more than 10,000 population (primary), with the indicator's weight formulated through the number of the public facilities or the number of the private enterprises, for each urban centre. Respectively, Figures 4, 5 and 6 exhibit the resulting spatial assignments for the urban centres with population sizes between 2,000-10,000 residents (secondary).

Figure 1. Population Weighted Service Areas of Settlements with Population of More than 10,000 Residents

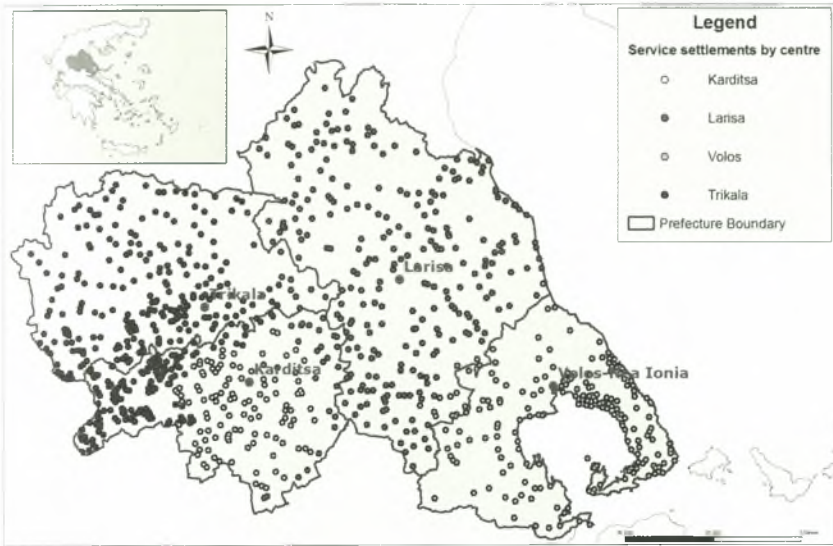


Figure 2. Public Sector Weighted Service Areas of Settlements with Population of More than 10,000 Residents

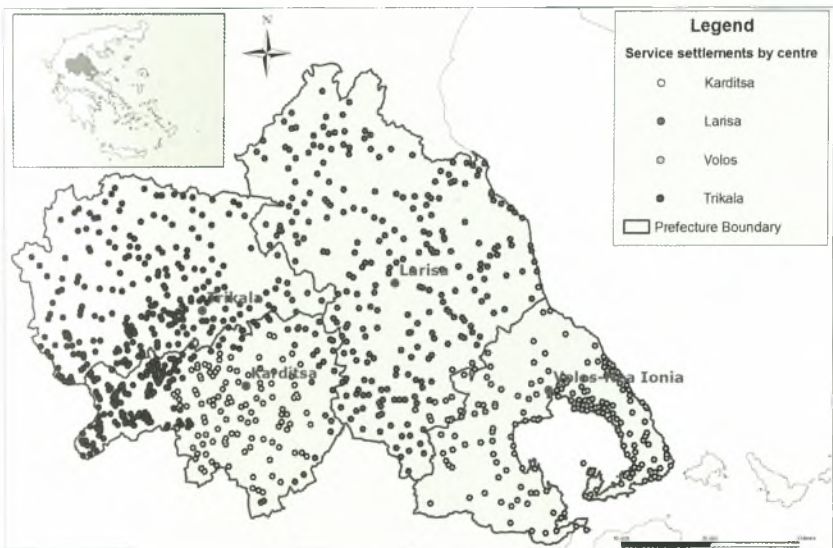


Figure 3. Private Sector Weighted Service Areas of Settlements with Population of More than 10,000 Residents

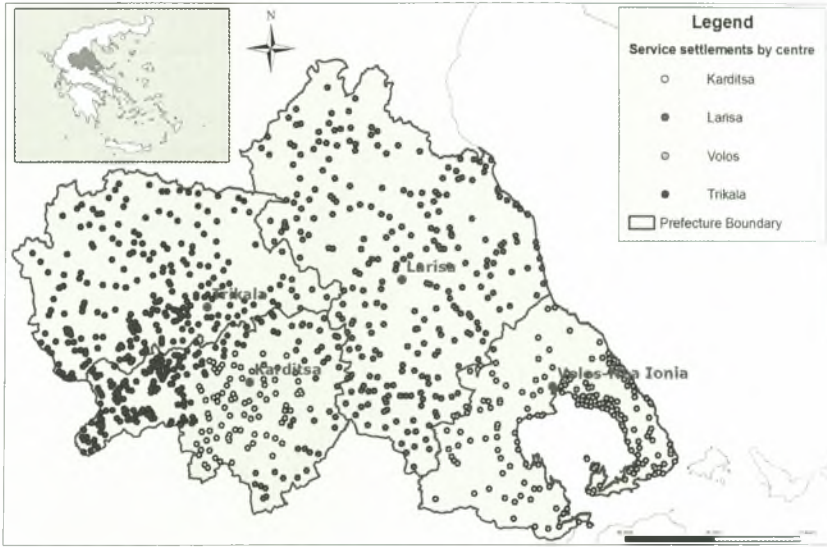


Figure 4. Population Weighted Service Areas of Settlements with Population of between 2,000–10,000 Residents



Figure 5. Public Sector Weighted Service Areas of Settlements with Population of between 2,000-10,000 Residents

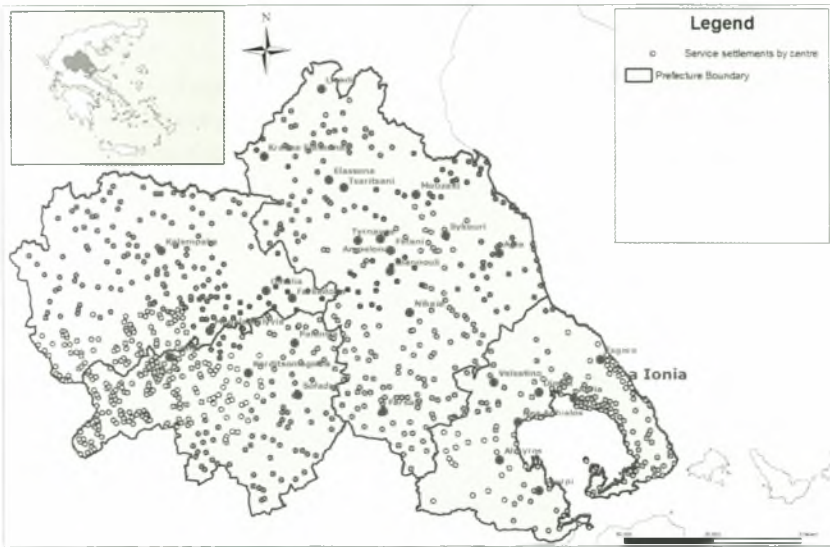


Figure 6. Private Sector Weighted Service Areas of Settlements with Population of between 2,000-10,000 Residents



With the determination of service areas for each settlement–centre, additional data are created and added to the database regarding the number of settlements covered, the total population served, the percentages of road network per category and the size of the coverage area. It is evident that for the settlements with populations of more than 10,000 residents, in the prefectures of Trikala and Larisa the number of served settlements is more than 200, while in the counties of Karditsa and Magnisia this number is smaller and reaches to the 100 settlements. In Figure 6, the picture largely changes for centres with population 2,000-10,000 residents.

Higher concentrations, exceeding 30 served settlements on average, are observed in the western parts of the Karditsa and Trikala prefectures, as well as in the southern part of the prefecture of Larissa, while in the prefecture of Magnesia the higher concentration is observed in its centre. On the other hand, lower concentrations, with less than 20 served settlements, are observed in the northern part of the prefecture of Larissa.

3.2. Analysis of Settlements Concentrations

Of increased interest in our case, are urban centres of 2,000-10,000 residents, since in most instances they represent and define both the spatial distribution and concentrations of settlements inside the study region's boundaries. According to the proposed methodological framework, and in order to assign settlements to this category of centres, K-means analysis was adopted. The method of K-means cluster analysis was applied through the utilisation of SPSS 13.0. Settlements were grouped into three categories with respect to a set of variables. Tables 2 and 3, show the groups which were formulated when the variables referring to the number of public services were processed. Respectively, Tables 4 and 5, show the groups which were formulated when the variables reflecting the number of private enterprises were processed.

On examining the following two tables (*see* Tables 2 and 3), it is apparent that Groups 1 and 3 contain settlements that constitute the Major Service centres of Thessaly. Respectively, they share common characteristics, while Group 2 exhibits different, and in most cases lower, service levels. In this respect the resulting settlement–centre hierarchy is Group 3 – Group 1 – Group 2.

Table 2. K-means Public Sector Clusters of Settlements with 2,000-10,000 Residents

Group 1	Group2			Group 3
Ampelonas	Agia	Karditsomagoula	Oihalia	Almyros
Elassona	Agria	Kranea Elassonas	Sourpi	Kalampaka
Palamas	Velestino	Livadi	Sykouri	Sofades
	Giannouli	Megala Kalyvia	Tsaritsani	Tyrnavos
	Gonoi	Mouzaki	Falani	Farsala
	Dimini	Nea Aghialos	Farkadona	
	Zagora	Nikaia		

Table 3. Public Sector Cluster Characteristics for Settlements with 2,000-10,000 Residents

	Group 1	Group 2	Group 3
% of Population	0.079900	0.038400	0.106000
% of Education	0.049155	0.024424	0.072811
% of Emergency	0.037736	0.033019	0.045283
% of Culture	0.043860	0.032237	0.044737
% of Sports	0.090909	0.026515	0.039394

In the same manner, if we examine the following two tables (*see* Tables 4 and 5) it appears that Groups 1 and 3 also contain settlements that constitute the Major Service centres of Thessaly. Respectively, they share common characteristics, while Group 2 exhibits different and in most cases lower service levels. Only this time, the resulting settlement-centre hierarchy is Group 1 – Group 3 – Group 2. A first conclusion derived from the application of K-means analysis is that the resulting groups successfully reflect the notion of urban clusters, in terms of their centre's degree of diachronic development.

Table 4. K-means Private Sector Clusters of Settlements with 2,000-10,000 Residents

Group 1	Group2			Group 3
Kalampaka	Agia	Karditsomagoula	Nikaia	Almyros
	Agria	Kranea Elassonas	Oihalia	Velestino
	Ampelonas	Farkadona	Sourpi	Elassona
	Sofades	Livadi	Sykouri	Tyrnavos
	Gonoi	Megala Kalyvia	Tsaritsani	Farsala
	Dimini	Mouzaki	Falani	Giannouli
	Zagora	Nea Aghialos	Palamas	

Table 5. Private Sector Cluster Characteristics for Settlements with 2,000-10,000 Residents

	Group 1	Group 2	Group 3
% of Population	0.0935	0.0417	0.0947
% of Industry businesses	0.1984	0.0299	0.1733
% of Commercial businesses	0.1684	0.0356	0.1456
% of Private Services businesses	0.4043	0.0324	0.0532

3.3. Urban Concentration Indicator (UCI)

The applied methodological approach can form the basis for the creation of an indicator which will compare settlements in terms of clustering status and potential, taking into consideration their critical service characteristics and determining at the same time their dominance and importance in the region. The mathematical formulation of the Urban Concentration Indicator (UCI) is:

$$D_j = \frac{\left(\frac{\sum_{i=1}^N a_{ji} + 1}{N + 1} \right) * \left(\frac{P_j + \sum_{i=1}^N P_i a_{ji}}{P_j + \sum_{i=1}^N P_i} \right)}{\left(\frac{m'_j * m_j}{m'_j} \right)} * \left(\frac{S_j}{\sum_{j=1}^M (S_j)} \right) * 1000 \quad (3)$$

where:

$j = 1, \dots, M$ service centres

$i = 1, \dots, N$ settlements served (inside region I)

P = population of each settlement or centre of service

S = number of services

m_j = average distance travelled, $m_j = \frac{\sum d_{ij}}{N}$

where:

d_{ij} the distance between i and j

$$\begin{cases} 1 & \text{if } d_{ij} < m_i \\ \text{and } a_{ij} = & \\ 0 & \text{if } d_{ij} > m_i \end{cases}$$

m'_i is the medium distance of settlements with $d_{ij} > m$

The indicator that is presented above constitutes a combination of variables and it aims to analyse and evaluate the dynamics of settlements-centres and the urban concentrations around them, based on two main parameters, the cluster of serviced settlements and the settlement-centre. Consequently the general form of the above indicator is the following:

$$D = CLUSTER * SERVICE CENTRE * 1000$$

The first term of the equation examines the serviced settlements cluster based on the number of settlements, the population served and their average distance, and reflects its clustering status and perspective. The second term examines the capacity of the settlement-centre in association with the number of public services, as cultural, educational and emergency, or the private businesses services as industry, commercial and private services, that it offers. Based on the UCI, the settlements with populations of 2,000-10,000 residents were ranked and the results appear in Tables 6 and 7.

Table 6. Public Sector Urban Concentration Indicator for Settlements with Population of 2,000-10,000 Residents

Settlement - Centre of service	Indicator of urban concentration	Settlement - Centre of service	Indicator of urban concentration
1 Tyrnavos	369.7837	14 Agria	159.1259
2 Farsala	366.2827	15 Agia	156.2878
3 Almyros	311.0211	16 Moyzaki	153.4448
4 Nea Aghialos	301.2717	17 Farkadona	141.2366
5 Elassona	295.2091	18 Sykourio	132.565
6 Kalampaka	253.3141	19 Nikaia	128.6869
7 Palamas	251.3871	20 Oihalia	128.3622
8 Sofades	226.9316	21 Sourpi	114.9073
9 Giannouli	184.1596	22 Livadi	110.3783
10 Ampelonas	168.7334	23 Megala Kalyvia	97.91365
11 Kranea Elassonas	164.1392	24 Karditsomagoula	96.80786
12 Zagora	163.0302	25 Gonoï	92.21739
13 Velestino	159.1302	26 Dimini	88.56842

Table 7. Private Sector Urban Concentration Indicator for Settlements with Population of 2,000-10,000 Residents

Settlement - Centre of service	Indicator of urban concentration	Settlement - Centre of service	Indicator of urban concentration
1 Farsala	512.3282	14 Megala Kalyvia	96.10815
2 Kalampaka	508.5882	15 Ampelonas	95.55118
3 Tyrnavos	479.1138	16 Farkadona	95.30963
4 Ellassona	458.7954	17 Moyzaki	94.13456
5 Almyros	447.0259	18 Agria	92.04151
6 Velestino	419.7764	19 Sykourio	88.71854
7 Giannouli	338.9321	20 Nikaia	59.20964
8 Nea Aghialos	221.7873	21 Oihalia	47.24823
9 Agia	201.3452	22 Sourpi	42.29568
10 Karditsomagoula	166.2898	23 Gonoi	33.94385
11 Sofades	158.2677	24 Zagora	32.73217
12 Dimini	130.4029	25 Kranea Ellassonas	24.16688
13 Palamas	115.6648	26 Livadi	18.05716

In order to compare the resulting ordering for both the public and private sector indicators, Table 8 was formulated, which presents the fluctuation of each settlement-centre of service positioning, for the value of public and private sector indicators respectively. According to this, the first seven cities (green cells) are centres that achieved higher values for the private than the public sector indicator, while the reverse holds for the last six cities (yellow cells), which obtained higher values for the public sector indicator. The other settlements constitute the group with similar levels of development in terms of both indicators.

Comparing the results of the two approaches, and with regard to settlements ranking and grouping, a more detailed conclusion is that Almyros, Kalampaka, Tyrnavos and Farsala constitute the four major service centres of the area, with Velestino, Sofades and Ellassona steadily defining the second-best group.

Table 8. Hierarchy Placement Comparison

Settlement - Centre of service	Difference in hierarchy public vs private	Settlement - Centre of service	Difference in hierarchy public vs private
Kranea Elassonas	-14	Oihalia	-1
Zagora	-12	Sourpi	-1
Palamas	-6	Farsala	1
Ampelonas	-5	Elassona	1
Nea Aghialos	-4	Farkadona	1
Agria	-4	Giannouli	2
Livadi	-4	Gonoi	2
Sofades	-3	Kalampaka	4
Tyrnavos	-2	Agia	6
Almyros	-2	Velestino	7
Moyzaki	-1	Megala Kalyvia	9
Sykourio	-1	Karditsomagoula	14
Nikaia	-1	Dimini	14

4. Conclusions

The role of urban centres is crucial in the configuration of any urban system, such as in the case of Greece. This comes as a result of relationships created between centres, cities and the neighbouring settlements that they serve, formulating urban clusters which strengthen the overall developmental process. In order to better define and manage urban concentrations, new methods, techniques, models and indicators of spatial analysis are needed in a robust decision to support a methodological framework, which could be applied to different scales of urban and regional planning. Furthermore, there is no doubt that the geographical location of urban centres and their relations with neighbouring settlements constitute two of the most important parameters influencing their diachronic development. Such direct or indirect relations acquire greater importance with respect to the size of both the urban centre and the neighbouring settlements which they serve. In this paper, a methodological framework for the analysis and comparative evaluation of service areas of urban centres was determined, mainly based on their topological and institutional characteristics and applied to the region of Thessaly, Greece. Moreover, the proposed methodological approach is strengthened by the formation of a comparative indicator of

urban concentration (UCI) which, while assisting the analysis of urban clusters, constitutes an alternative estimator of their role.

The overall effectiveness of the approach is dependent on the type and the volume of initial information and the quality of the variables taken into consideration. Furthermore, by examining the phenomenon of urban clusters, it can be stated that their diachronic development and degree of growth are influenced, and in most cases are determined, by the number of facilities and services located in any settlement. In this manner, a major city with significant population size, number of services and an efficient road network attracts settlements with a critical distance, while in the opposite case isolation can be observed. The resolution of such problems although not in the objectives of this study, can stem from the reformation of performed regional policies and the redefinition of various political and developmental objectives from the corresponding agencies and institutions.

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Mega Projects and Sustainable Transport Infrastructure: The Case of Rion-Antirion Bridge in Greece

Evanthia Athanasopoulou

Abstract

The Rion-Antirion Bridge is a fixed link across the Gulf of Patras in western Greece, and part of the Trans-European transport network. This mega project was combined with enormous development advantages for the whole regions. Internationally, however, there has already been considerable doubt expressed about the development role and utilization of such mega projects. This paper¹ examines on the one hand if these advantages became real and, on the other hand, argues for critical consideration of new mega transport projects in future.

Keywords: Rion-Antirion Bridge, mega transport projects, trans-European transport network.

1. Introduction

Over the last 15 years, major projects have been implemented or are currently under construction in Greece, mainly in terms of transportation infrastructures, which are part of the Trans-European transport network. These projects are considered to be development projects, making a substantial contribution to the growth of accessibility and competitiveness for the whole region. Internationally, however, there has already been considerable doubt expressed about the development role and utilisation of such mega projects. This paper looks at the case of the Rion-Antirion Bridge, examining the real economical, environmental and spatial impact of this

¹ This paper is an improved version of "Mega projects, environment and sustainability. The case of Rion-Antirion in Greece", the paper presented by the author at the 2nd World Planning Schools Congress, which was held in Mexico City between the 12th and 16th July, 2006.

project and proving its consistency with the principles of sustainability and the kind of development that it serves. Furthermore, this paper argues for critical consideration of new mega transport projects in future and the “blind” adoption of European transport policy in general, which appears to be quite controversial.

2. The Rion-Antirion Bridge in Greece: Project Profile

The Rion-Antirion Bridge is a fixed link across the Gulf of Patras in western Greece, between the Peloponnese and central Greece. It was opened in August, 2004, after seven years of construction work. The bridge was built about 8km from Patras, the third largest city in Greece, on the Peloponnese side, and about 10km from Nafpaktos on the central-Greece side. The two ends of the bridge are located near the Venetian fortifications at Rion and Antirion, which date back to 1499 and which constitute important archaeological sites.

With a continuous deck of 2,252m, it is the longest² cable-stayed bridge in the world. At a width of 20m, and a height of 52m above sea level (so that ships can easily pass under it), it is supported by four concrete columns erected at 560m intervals. The construction was very complicated given the great distance between the columns and the fact that the columns are embedded in an extremely unstable sea bed. For these reasons, and because of the extreme technical challenges³ it posed, it has become a global reference point.

The bridge provides a permanent link by:

- reducing crossing time to 5mins (compared to a current average of 45 mins)
- improving crossing comfort to high standards
- remaining in operation whatever the weather conditions. Previously, there were ferry-boats traversing the strait, but these had difficulties in accommodating the ever-increasing volume of traffic.

The Rion-Antirion Bridge is also part of the Trans-European transport network system and was planned to be located at the intersection of two

² The Tatara Bridge in Japan and the Normandy Bridge in France are considered to be the cable-stayed bridges with the longest spans in the world (890m and 856m, respectively). With a reference span of 560m, the Rion-Antirion Bridge is in the top 10 longest span cable-stayed bridges in the world. However, with its 4 pylons (compared to the usual set of 2), it is the cable-stayed bridge with the longest suspended deck (2,252 m) in the world.

³ The foundations were dug to a substantial depth below sea level (60m)

major transport axes: a) the so called P.A.THE. motorway, which links the three most important cities of Greece – the Athens – Thessaloniki – Larissa axis and the Kalamata – Patras – Igoumenitsa western axis. That means that the bridge facilitates the flow of domestic Greek traffic by acting as a kind of “turnable”. This explains both its significant regional and environmental impact and its outstanding national importance.

The Rion-Antirion – or Charilaos Trikoupis – Bridge had been the aspiration of many earlier generations of Greeks. It was the vision of Charilaos Trikoupis, the Greek Prime Minister in 1880, and thus its name. Furthermore, this project was combined with enormous development advantages for both the Peloponnese and the regions of central Greece and, over the decades, became the subject of broad political agreement. This is clearly illustrated by the fact that the bridge has been a priority in policy terms since the 1960s. The project was actually ready to start construction in the mid-1980s but, as a result of lengthy delays, a number of interests attempted to exert political pressure to bring forward the start of the building works via the PEAZERA⁴ committee, set up in 1989.

The Greek state was the developer of the Rion-Antirion Bridge, through the Environment Ministry, the Secretary General for Technical Works and the Road Construction Department (for infrastructure). The building contractor was Gefyra Ltd., a consortium of seven companies (including a French construction company), which agreed to implement the project on the basis of securing a share in the revenue until the end of December, 2039. The cost of the bridge was around €800 million and the project was co-financed by EU structural funds.

According to the campaigners, as well as most of the parties involved and many individual citizens before construction began, the bridge was to aid the development of Epirus (north-west Greece) and western-central Greece through this permanent traffic route, as the project would be able to attract regional investment which had not been secured in the past due to the poor transport links. The project itself was also expected to generate hundreds of jobs.

The Rion-Antirion Bridge was in general associated with development because of the following advantages:

⁴ Pan-Hellenic Committee for the Rion-Antirion Link

- reducing the travel time for passengers and freight, thus leading to growth of accessibility and competitiveness;
- increasing employment (directly and indirectly);
- creating new jobs;
- improving the technical skills and know-how of the employees of the bridge during construction time;
- mobilising the endogenous potential of the region (especially local tourism);
- attracting investors from other regions;
- reducing the economical and social gap between the richer south (western-central Greece) and poorer north (Epirus).

By way of contrast, many experts were against the project on the grounds of the high costs involved and its dubious importance for regional development. Their criticism mainly concerned the question of whether or not more sensible projects could have been undertaken with this level of financial investment. In addition, the fact that no rail link was proposed for the bridge was also criticised. Another objection was based on the fact that, in spite of the major regional impact of the project, there were no zoning plans for the affected areas (Athanasopoulou 2001).

3. The Rion-Antirion Bridge as a Mega Project

Major transport infrastructure projects with high budgets of billions of dollars are mega projects (Flyvbjerg *et al.*, 2003). A mega project is usually defined by its cost, and the criterion is set at a minimum of 1 billion dollars. However, most authors argue for a relative rather than absolute definition.

In Greece, the expression mega projects “Megala Erga” is used for big, high-budget infrastructure projects which also have (expected) huge development effects. In addition to the Rion-Antirion Bridge, mega projects in Greece also include the Eleftherios Venizelos Airport in Spata and the Attica Road, etc.

The Rion-Antirion Bridge is a mega project because, apart from its overall investment cost of €800 million, it combines certain big decisions and technical practices which are typical characteristics of these so-called mega projects:

- a. It was the first time in the history of infrastructure constructions in Greece that the Hellenic Republic made an agreement with a private

body – the company Gefyra Ltd. – for a concession contract, in this case the design, construction, financing, maintenance and operation of the Rion-Antirion Bridge.

- b. It took a long time – more than three years – to find sponsors for the financing of the project, which came from the following sources:
 - i. 10% share capital,
 - ii. 45% state financial contribution, and
 - iii. 45% loan from the European Investment Bank, guaranteed by a pool of commercial banks.
- c. The project was considered to be a great technical challenge because of strong local seismic activity and the tectonic movements of the strait.
- d. Last but not least, this link became the new and very impressive landmark for the region, a symbol of Greece in the 21st century.

Among existing research, the work of Flyvbjerg *et al.* (2003) is probably the most comprehensive about the problems and risks of mega projects⁵. Apart from their own research⁶, the authors took into consideration the results of other sources dealing with this issue⁷ and found remarkably similar problem patterns across different types of mega projects, such as:

- cost overruns
- time lag;
- inflated viability;
- low impacts of regional and economic growth effects;
- deficient environmental impact;
- lower than expected revenues, produced by overestimation/inaccuracy of vehicle traffic forecasting;
- citizens being kept at a substantial distance from mega project decision making.

In the case of the Rion-Antirion Bridge, not all the above-mentioned problems could be posited. No cost overruns and time lag were noticed. The estimation of costs, for example, was very precise, which can probably

⁵ “Useful not only for scientists but also for policy makers, administrators, planners, consultants, auditors and other practitioners working with mega project development”, as the authors themselves mention.

⁶ Including the projects of the Trans-European Transport Network channel tunnel connecting England and France, the Oresund Bridge between Denmark and Sweden and the Great Belt link, which connects east Denmark with continental Europe.

⁷ They review data from two hundred large transport sector projects (Flyvbjerg *et al.* 2003, pp.11).

be explained by the very detailed technical and cost documentation in view of, on the one hand, the long negotiation period between developer and constructor and, on the other hand, the various financial institutes involved. During the implementation of the project, no accidents happened and no expensive additional environmental protection measures had to be undertaken. Similarly, the construction works were completed 4 months earlier than scheduled. The bridge was inaugurated with a spectacular firework show, which opened on the 8th of August, 2004, in an attempt both to boost the positive image of Greece abroad and to attract more visitors to the Olympic Games, held that year in Greece.

Nevertheless, all the other problems referred to above were affirmed in this case – problems related to the broader negative economical, spatial and environmental impact of the bridge and its sustainability – and are to be analysed in depth below.

4. The Rion-Antirion link and Its Economical and Spatial Growth

In attempting to understand just how typical the problems faced in the case of the Rion-Antirion link are for transport infrastructure projects, we turn to the experience as reported in the corresponding literature.

4.1. Transport Infrastructure and Its Impact

The role of the transport infrastructure in the territorial structure of growth, and particularly in surpassing regional inequalities of economy, is supported by numerous studies (e.g. Rietveld, 1989; Vickerman, 1989). The infrastructures function as catalysts-facilitators of growth. The improvement, upgrade or completion of transport infrastructures is necessary, but not a sufficient treaty on the growth of the region (Hurdle, 1992; Gillespie, 1997).

The accessibility of a region functions bidirectionally. It simultaneously strengthens the existing activities while also facilitating the competitive activities outside the region to enable better access to the local market. The final result is associated with the capacity of the local economic base and the interaction between the cost of transport and economies of scale in production (European Commission, 1995). In sectors with increasing economies of scale, the reduction in transport costs is likely to lead to the sovereignty of big enterprises that are usually located in powerful urban

centres, destabilising the local production found in unfavourable areas and unable to develop economies of scale. In addition, the developmental repercussions of the road transport infrastructure are neither territorial nor isomeric. Along the length and at the ends of their axes, the repercussions are positive (the “corridor” syndrome). On the contrary, at the fringes of the direct area of influence, the repercussions are potentially negative (the “shade” syndrome).

Regarding spatial growth, this is associated with:

- a. local factors, such as land availability, the segmentation of properties, the morphology of the ground and the distance from economic poles and urban centres,
- b. more general factors, such as those social demographic and economic factors that characterise the wider region, and
- c. factors related to the infrastructure, such as volume and periodicity of movement and planning characteristics of nodes and connections (Moon, 1988).

Due to changes in land use and the associated built environment caused by traffic growth or the traffic dynamic, particular attention has to be given to the phenomenon of urban sprawl as the dominant form of urban growth (Southworth, 2001).

The form of land-use allocation around the axes differs according to the activities attracted. Certain activities have the tendency to develop in corridors along the length of the axes (e.g. industries) while others (e.g. shops) prefer territorial concentrations (clusters) around nodes (Baerwald, 1982).

Consequently:

- The infrastructures function as catalysts of growth.
- The completion of transport axes is necessary, but not a sufficient treaty on the growth of a region.
- The travel dynamic is often responsible for the urban sprawl effect.
- Land availability, the segmentation of properties, the morphology of the ground, the distance from economic poles and urban centres and the planning characteristics of nodes and connections all have an influence on spatial growth.

4.2. *The Economic and Spatial Growth in the Area Directly Affected by the Rion-Antirion Bridge*

As already mentioned, the Rion-Antirion Bridge met with broad political and social consensus. The economical (positive or negative) effects of the project were never forecast.

Only later (2001), almost four years after beginning of construction works for the bridge, was the study “Integrated interventions of land policy and spatial development of the areas affected by the Rion-Antirion Bridge” drawn up, undertaken by the Greek Ministry of Environment⁹. It was an *ex-ante* analysis of the regional and spatial impact of this link, in which benefits and drawbacks for the whole region were mentioned and analysed prior to developing policies and proposing measures for the utilisation of the opportunities and the limitation of the negative impact resulting from the project. In the period (1986-87), before construction works for the Rion-Antirion Bridge commenced, a research project undertaken by the Department of Civil Engineering at the University of Patras also came up with some interesting findings concerning the potential impact of this mega project on the wider area, such as the tendencies of the Antirion-Nafpaktos axis towards suburbanisation influenced by the urban centre of Patras.

The bridge link was a great success for the construction sector in general. Construction companies were most likely preferred as an interest group; what other explanation can there be for the fact that, although seven different alternatives for a fixed link were presented, not a single one included a modernised ferry connection? During the construction period of seven years, more than 2,000 people worked for the project, most of them coming from towns and villages in the region. At present, the number is closer to 50 employees. In addition, the technical skills and know-how of the employees were vastly improved and most are happy to admit it.

The economic and spatial growth in the area directly affected by the Rion-Antirion Bridge was estimated on the basis of primary data-analysis.¹⁰

⁸ According to empirical estimates, areas affected directly by the link are the Antirion-Nafpaktos and Rio-Ag. Vasileios axes and the coastal towns/ports of Rio, Antirion and Nafpaktos. The wider area includes the land between Chalkeia and Galaxidi in Central Greece and that between Patras and Psathopyrgos on the Peloponnesian side.

⁹ Corresponding studies were also conducted for other mega projects (e.g. the Egnatia Motorway, Eleftherios Venizelos Airport, etc).

¹⁰ Data was collected from three different doctoral surveys, supervised by the author (in part still ongoing). These are supposed to be interim reports.

The factors analysed were:

- a. land use development according to the building licences issued between 1990 and 2004,
- b. nominative and commercial land prices before and after the opening of the bridge,
- c. issues of regional and spatial growth based on interviews with experts (academics and authorities) and the Mayors of Rion, Antirrion and Nafpaktos about the regional impact of the project, and
- d. intensity of traffic per vehicle type and direction of travel supplied by¹¹ the ports of Rion and Antirrion.

The economical, spatial and land-use effects (based on the results of the above-mentioned surveys) are summarised as follows:

- A high density of mixed land use, such as commercial and residential, along the length of the existing axes connecting the big urban centres of Patras and Nafpaktos (sprawl effect). The tendencies to suburbanisation along the Antirrion-Nafpaktos axis influenced by the urban centres of Patras and Nafpaktos are huge.
- Negative alteration of the views of the landscape at the coastal towns/ports and along the length of the main road axes. In particular, the previous rural land strip along the Antirrio-Nafpaktos axis and the pleasant view of the sea have now changed to a dull, linear concrete aesthetic.
- No significant investment and location of new enterprises at non-traditional locations have been noticed. The business activities doing well are supermarkets and commercial centres. There is, therefore, job creation in the consumer sector, but not in that of production. This creation of new jobs does not necessarily mean a net increase in employment.
- The increase in the total amount of building licenses issued has been rising 10% year-by-year over the past 14 years, not only in Nafpaktos, but also along the whole Antirrion-Nafpaktos axis. The construction activities along the Antirrion-Nafpaktos axis are very intensive.
- Although land prices now are 500% higher in Nafpaktos and 300% higher along the whole length of the Antirrion-Nafpaktos axis than

¹¹ Gefyra Ltd. refused to give data. Data was collected from Ministry of the Environment.

they were before the construction of the link, significant land purchases have been observed since 1985.

- Use-Segregation and vacant land (at the construction work sites) in the coastal towns/ports. For the port of Antirrion, which is located away from the bridge's nodes and connections, an economic decline is already noticeable, expressed in the reduction of jobs. Land prices remain the same, whereas along the rest of the axis they are increasing all the time, which is of greater benefit for this area in the near future.

4.3. Feasibility Study and Environmental Impact Assessment Study

As stressed above, the Rion-Antirrion Bridge mega project was a major technical challenge. In addition to the technical studies and reports, feasibility and environmental studies for the financing and licensing of the project were commissioned. For instance, a public discussion about the Rion-Antirrion project took place in 1993, within the framework of the Environmental Impact Assessment (EIA) Procedure. But, to some extent, it was not possible to estimate the regional, spatial and environmental impact of the bridge link in precise terms, as preconditions during the project planning period (1990) were different from those now standing. In concrete terms:

- The ferry-boat connection was to be suspended, with certain exceptions in cases of special weather conditions, etc. Yet today ferry-boats still service the crossing, charging a lower fare than they used to (per vehicle, this amounts to half of the cost of the bridge tolls).
- The completion of the western traffic axis was, at that time, taken for granted but, in reality, is still to be effected.

4.3.1. Traffic Forecasts and Reality

In 1995, the traffic crossing the strait using the current ferry services totalled an average of 7,000 vehicles per day for both directions. It was forecast that, on opening in 2004, the bridge would attract an average of 10,000 vehicles per day for both directions, which proved to be a rather pessimistic estimate as this figure eventually reached 15,500 vehicles per day for both directions in real terms. In terms of vehicle traffic forecasting, this is, notwithstanding the ferry-boat traffic, a significant inaccuracy. The traffic of ferry-boats is now on average about 300 vehicles per day for both directions. What is more important is the inaccuracy regarding the sort of

vehicles that cross the bridge and their destination. Studies showed that, in addition to the likely overall increase in traffic from 1995, the opening of the bridge should have generated a significant amount of local traffic, which has indeed been validated. But the percentage of local traffic is much higher than that estimated for regional traffic. Small vehicles make up a much higher percentage than that estimated for trucks¹². These results imply a more limited use of the bridge link for long distance destinations than had once been hoped.

In this context, it should be noted that, since 2004, the bridge toll has been raised three times¹³, which may imply that revenues were lower than expected, possibly due to overestimation/inaccuracy in vehicle traffic forecasting.

4.3.2. Environmental Impact of the Bridge (The EIA-Procedure)

The EIA procedure began with provisional site planning approval in July, 1993, and was completed in mid-September upon the issue of the final approval. The four volume EIA report included a cross-media review and evaluation of the environmental impact. Economic, social and environmental impact was also examined. The different options were considered, in terms of their economic impact, where the shortest link as the cheapest alternative was given top weighting. In terms of the regional impact of the project, the likelihood of urban sprawl along the Antirrhion-Nafpaktos coastline was included. The proposed measures to counter urban sprawl were general in their nature, such as the recommendation to draw up urban development plans. Finally, the EIA study calculated the noise nuisance within a radius of 200m and recommended erecting soundproofing walls as a countermeasure.

During the public discussion, there was no wide-scale participation, and NGOs were not included. All interested groups supported the project, despite the objections raised. Even those who were against the technical solution of how the bridge should be constructed¹⁴ were in favour of the project in general. Ultimately, no huge environmental impact was noticed. A central point was the potential noise pollution, for which additional protection measures were decided upon.

¹² The traffic of ferry-boats consists of trucks and cars, in the ratio of 80%:20%.

¹³ Each crossing costs 10.90 Euro (in 2007) for a private car.

¹⁴ The Rion community and an environmental group submitted recommendations for modifying the bridge approach on the Rion side.

4.4. *Spatial Planning Regulations and the Rion-Antirion Bridge*

According to the OECD (1994), the coordination and timing between transport infrastructure planning and spatial planning are the basis for the restriction of both negative environmental repercussions and the extent of development. In Europe, three different approaches for the coordination of transport and regional planning have been developed:

- In certain cases, the complete incorporation of transport planning with land-use planning has been promoted, in regions where intense friction has developed between the two.
- In some cases, a parallel process of land-use planning and transport planning is promoted for the protection of regions.
- In other cases, the imposition of regulations (zoning plans) along the length of the road axes is promoted for the control of growth.

As already shown, the spatial growth along the Antirrio-Nafpaktos axis is no longer controllable. In the case of the Rion-Antirion Bridge, there is a total lack of coordination between transport and spatial policy; indeed, spatial planning regulations of any type are non-existent.

5. Conclusion

The Rion-Antirion Bridge is unquestionably a major technical project, a new landmark and the pride of the whole western Greece region. At the same time, after its opening, for the general public crossing the strait became either more expensive or slower (the public transport service over the bridge is poor). There is no real evidence that the bridge link is fulfilling its development role.

As shown, despite predicted problems, the Rion-Antirion Bridge project met with broad political and social consensus. With the exception of a few disorganised intellectuals, nobody ever raised serious objections to this project. Today, however, some grumbles are beginning to emerge (especially from Antirion).

Mega projects have always been built and will most likely continue to be built. Discussions linking mega projects with mega mistakes and searching for answers are underway in numerous American and European countries, but not in Greece, where “big is beautiful” is more often the policy than “small is beautiful”¹⁵.

¹⁵ “Our Common Future 1987”

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PART IV

Real Estate Market

Property Market Purpose Efficiency: A New Concept from an Institutional Economics Perspective¹

Paschalis A. Arvanitidis

Abstract

Over the last few years the issue of property market efficiency has attracted increasing attention in both academic and professional research, yet, the concept of property market efficiency is poorly developed and inadequately theorised. The conventional approaches of allocative and informational efficiency provide problematic and ambiguous judgements, whereas institutionalist conceptualisations remain incomplete or methodologically underdeveloped. Building on the latter approaches, the current paper explores a possible way to evaluate the effectiveness of the property market in delivering a combination of outcomes that will generate and/or sustain urban economic potential. This provides the basis for the development of the idea of a “purpose efficient property market”. To achieve this, two theoretical devices are developed: “institutional uncertainty”, and “institutionalised variety”. Institutional uncertainty assesses the quality of the wider (urban) institutional arrangements and reflects how effectively the urban socioeconomy adapts to pressures. Institutionalised variety evaluates particular institutions, in this case the property market, in terms of diversity in institutions and products provided. Putting the arguments together, property market purpose efficiency is understood with reference to the market’s ability to match “institutionalised variety” to the level of “institutional uncertainty” exhibited by the wider urban institutional environment. In this sense, a purpose efficient property market *allocates* optimal resources to institutionalised variety, given the level of uncertainty the wider institutional environment carries, and thereby delivers the property products that the economy requires at the prevailing price.

Keywords: *Property market, efficiency, institutional economics, uncertainty, variety.*

¹ I am grateful to Geoff Keogh for helpful comments and discussions. Nevertheless, the usual disclaimer applies.

1. Introduction

In the attempt to evaluate the quality of market mechanisms conventional economics have put forward notions of efficiency. Yet, the concept of property market efficiency is poorly developed and inadequately theorised in the literature, as “...many researchers and most participants in real estate markets would consider the idea of an efficient real estate market to be a paradox – a statement that is seemingly contradictory and opposed to common sense”, due to the number of peculiarities and imperfections that the market exhibits (Gau, 1987: 1-2; Evans, 1995). However, over the last few years the issue of property market efficiency has attracted increasing attention in both academic and professional research, generating a growing body of empirical research (e.g. Guntermann and Norrbin, 1991; Darrat and Glascock, 1993; Graff and Webb, 1997; Clayton, 1998; Keogh and D’Arcy, 1999; Anderson *et al.*, 2000; Meen, 2000; Wang, 2000; for a review see Gatzlaff and Tirtiroglu, 1995).

The current paper reassesses the debate around property market efficiency and draws on institutional economics to introduce a new perspective. In particular, it explores a possible way to evaluate the effectiveness of the property market in delivering a combination of outcomes that will generate and/or sustain urban economic potential. This provides the basis for the development of the notion of “property market purpose efficiency”.

The argument of the paper is developed in three further sections. Sections 2 and 3 provide a critical review of the conventional and institutionalist approaches to property market efficiency. Section 4 lays the grounds on which the concept of property market purpose efficiency is fully developed in section 5. Finally, section 6 summarises the key arguments to conclude the paper.

2. Conventional Approaches to Property Market Efficiency

The mainstream economics and property literature approaches the issue of market efficiency from two distinct perspectives: allocative efficiency and informational efficiency. Allocative or Pareto efficiency is about making the best use of resources to produce the maximum amount of output. A market is efficient when it is not possible to reallocate available resources so as to achieve more of one objective without accepting less of another (or to make at least one person better off without making anyone else worse off). Such a

conception presupposes a perfectly competitive market in equilibrium; that is a market characterised by a large number of rational actors, homogeneous products, freedom of entry and exit, and perfect information. However, the property market is subject to structural imperfections. Standard property literature (e.g. Fraser, 1993; Harvey, 1996; Ball *et al.*, 1998; Evans, 2004) and other studies on the subject (Keogh and D'Arcy, 1999) make such a case in terms of heterogeneity, indivisibility and illiquidity of real property, the externalities associated with land and property markets, as well as the transaction costs and information deficiencies associated with trade in property. On this basis it is asserted that the property market should at best be seen as a ninety percent efficient market (Evans, 1995).

One particular market failure that had special attention in the literature is related to information. This is because information is costly, asymmetrically distributed and, generally, it is not possible to assess its full value before its acquisition (Keogh and D'Arcy, 1999). The consequence is that information is always imperfect and participants enter the market with only some part of the potentially available market knowledge. To take this situation into account, a more realistic conception of market efficiency has been put forward, where optimality is envisaged even when perfect information is missing. Thus, an organised market can be considered as efficient as long as relevant information is effectively capitalised into market prices (Jensen, 1978; Grossman and Stiglitz, 1980). Moreover, such informational efficiency is regarded necessary to achieve allocative efficiency, as prices which reflect fully the available information provide meaningful representation of values and thus are accurate signals for the efficient allocation of resources (Fama, 1970).

This concept of informational efficiency, which is generally known as the efficient market hypothesis (EMH), was originally developed by Fama (1970) to examine efficiency in financial markets, and is categorised into three forms (Ball *et al.*, 1998; Evans, 2004). "Weak form" efficiency requires all information to be capitalised into the price of the asset immediately and without any time lag. Accordingly, a market that does not exhibit significant correlation between price movements in one period and price movements in a preceding period is regarded as weak-form efficient. "Semi-strong" efficiency concerns the way in which the market anticipates future events and capitalises all publicly available information, such as company accounts and reports, agent's reports and economic forecasts. Evidence in this case rests on the smooth path of price movements as they absorb relevant market

signals. “Strong form” efficiency requires that prices reflect all information whether publicly available or not, including insider information. Evidence here rests on the inability of insiders to yield above-normal risk-adjusted returns. The EMH has been extensively tested in stock markets. Empirical studies in the 1970s have provided supporting results, although more recent evidence has questioned these findings, disputing the conventional use of EMH (Ball *et al.*, 1998). Some researchers (e.g. Shiller, 1990; Evans, 1995) have argued that behavioural aspects, such as participants’ sentiments, psychology and negotiating ability, rather than economic rationality, play an important role in pricing, and should be taken into account for more realistic results to be obtained.

With particular focus on the property market, two main approaches to informational efficiency have been adopted (Evans, 1995; Ball *et al.*, 1998). The forecasting approach asserts that evidence for the support of EMH lies in the inability to predict future prices. Alternatively, other studies focus on the existence of discernible rules or strategies for trading property. In this case the ability to outperform the market, once transaction costs are taken into account, is regarded as evidence rejecting market efficiency. However, studies are fewer and results are less conclusive (if not contradictory) compared to those dealing with the financial markets (Ball *et al.*, 1998). On these grounds, it is impossible to make a clear judgement whether the EMH constitutes a robust approach in considering property market efficiency.

Criticism of the application of both conventional measurements of efficiency to the property market has come from a number of sources (e.g. Gau, 1987; Evans, 1995; Gatzlaff and Tirtiroglu, 1995; Keogh and D’Arcy, 1999). Pareto efficiency is considered ambiguous because of the multiple optima which it implies. Further, the costs involved in shifting the market towards a more “efficient” situation are substantially downplayed, if not totally ignored. As regards the EMH, it focuses on informational efficiency to the exclusion of an explicit treatment of the operational and allocative aspects. In addition, substantial objections refer to the intrinsic characteristics of the property market as well as the overall methodology of the EMH. With reference to the former, it is argued that the approach is rather inconclusive, as it does not take into appropriate consideration the transaction costs and information deficiencies² which are the norm in the market.

² In regard to the information deficiencies, for instance, Keogh and D’Arcy (1999) outline the situation where evidence to support EMH could reflect a false consensus in the market where participants share the same, but nevertheless inaccurate, information.

The latter criticism focuses on the fact that any test of EMH is a joint test with market equilibrium. This creates a number of problems in terms of interpretation of the results and the inability to provide definite measures of the degree of market efficiency, even in the context of financial markets. The situation becomes much more severe in the property market where the assumption of equilibrium is undermined due to decentralised trade, costly information, and long time lags in the production of property. Last, but not least, two general shortcomings present in both traditional notions of efficiency could be added. These refer to the use of naive and ideal benchmarks to judge market efficiency and to the failure to address properly the issue of property market process (Keogh and D'Arcy, 1999). As a result of the latter the essential characteristics of property as a physical, legal and social entity are substantially disregarded.

3. Institutional Approaches to Property Market Efficiency

Discontented with the conventional understanding and superficial treatment of market efficiency described above, the institutionalist literature attempts to provide a more refined and pragmatic conceptualisation of property market efficiency taking into account the process through which the market operates. Generally three notions are put forward. The first is that of bounded efficiency developed by Keogh and D'Arcy (1994 and 1996). This is actually a static assessment, where the degree of efficiency of the market in question is evaluated in comparison to a feasible frontier, which represents its best potential outcome (i.e. optimum in a sense) in the inevitable presence of the idiosyncratic property market characteristics and its institutional and organisational aspects. A significant achievement of this concept is that it elaborates the idea of an institutional environment, with all the constraints that it imposes on the efficient operation of the market. However, specific methodological directions, in terms, for example, of what empirical forms such an institutionalist judgement of market efficiency would take, are not given, something that renders the approach incomplete and ambiguous. Moreover, efficiency is primarily defined in economic terms while social, cultural and political institutions are regarded only as constraining attributes of market operation.

It is important to highlight at this point that bounded efficiency is a contingent notion of efficiency. It asserts that, instead of seeking a judgement

on whether the “property market” as an entity is efficient, the assessment of market efficiency should be constructed with reference to “efficiency for a purpose”, or “efficiency for a person”. However an explicit value, welfare or focus criterion to support this judgement is missing from the approach.

Van der Krabben (1995) on the other hand, attempts to provide such a criterion in his study of the property development process in the Netherlands. A dual assessment of property market operation is envisaged comprising two interrelated but distinguishable concepts of market efficiency. The first, which is called “allocative efficacy”, assesses the outcomes of the development process on the basis of a value criterion set up by the public policy to reflect social considerations. On these grounds optimality is attained both when there is sufficient supply at relatively stable property prices and when property rights are socially acceptable and equally distributed. The second, called “productive efficiency”, concerns the way these outcomes are provided and is judged on the basis of profitability from the property producers’ point of view. Issues of their organisational structure, behaviour and strategies are taken into account in such an assessment. Evidently, these notions, although they elaborate on the idea of “efficiency for a person” or “efficiency for a purpose” and introduce an explicit value criterion, remain too close to the traditional perception of efficiency. They are basically static in nature and practically neglect the institutional character of the property market. Moreover, van der Krabben (1995) acknowledges that problems appear in the empirical application of this twofold assessment, as the criteria that are proposed are open to various interpretations and are often contradictory.

The third institutionalist approach to market efficiency confronts the issue from a dynamic point of view considering the process of institutional change and the ability of the market system to cope with and meet the challenges that the evolving socioeconomy places on it. In these terms the notion of adaptive efficiency is introduced asserting that a (property) market can be seen as efficient if it displays tendencies to eliminate transaction costs and generally provides an environment hospitable to economic growth (Keogh and D’Arcy, 1999). The initial development of this conceptualisation is attributed to North (1990: 80) who, in a wider context, views adaptive efficiency as concerned with the willingness of the system “...to acquire knowledge and learning, to include innovation, to undertake risks and creative activity of all sorts, as well as to resolve problems and bottlenecks of the society through time”. In these terms an adaptive efficient

economy is defined as the one which, over time, supports and is based upon an institutional framework which provides a wide menu of alternative choices for organisational innovation so that smooth adaptation to changing economic and social circumstances is achieved (North, 1993). This quite general concept, despite introducing a dynamic assessment of institutional (and market) qualities, remains largely underdeveloped and presents operational difficulties.

4. Property Market Operation and Efficiency Considerations

The discussion up to now has brought forward a number of important points with regard to property market efficiency. Starting with the conventional approaches, judgements of market efficiency are deemed flawed and ambiguous. This is because, first, efficiency is assessed with reference to idealised benchmarks, second, the intrinsic characteristics³ and dynamic process of the property market are not taken into account, third, there is an artificial dissociation from important operational issues.

In turn, institutionalist attempts to articulate more refined and pragmatic conceptualisations of property market efficiency, though remaining methodologically underdeveloped and incomplete, have provided useful insights. First, as the property market structure emerges out of dominant economic and social interests, an appropriate response to market efficiency requires reference to an explicit value or focus criterion. Thus, instead of trying to seek a judgement on whether the property market as a whole is efficient, the assessment of market efficiency should be constructed with reference to “efficiency for a purpose”, or “efficiency for a person”. Second, emphasis is shifted towards consideration of the property market process, while the central question becomes how well that process works in terms of a specific objective or from the viewpoint of a particular group of actors. Third, a dynamic aspect of the market is emphasised suggesting the need to assess the adaptability of property market process as economic, political, legal, and social conditions change.

Expanding upon these arguments, the efficiency of the property market is perceived here with reference to the accomplishment of a particular

³ Such a case is made in terms of heterogeneity, indivisibility and illiquidity of the property product, the externalities associated with land and property markets, as well as the transaction costs and information deficiencies associated with trade in property (Fraser, 1993; Harvey, 1996).

purpose: the achievement and maintenance of urban economic potential. This addresses the *purpose efficiency* of the property market as the “service-ability”, “credible commitment” or “effectiveness” of the market to generate or sustain economic development and to promote urban competitiveness by providing those property outcomes that the urban economy requires. An efficient property market is expected to deliver a sufficient supply of property to meet requirements at the prevailing price level. In that sense, substantial time-lags in property development, erratic market behaviour, or lack of the information base necessary to support comprehensive market choice, which give rise to mismatch and volatility of land and property values, could be interpreted as indicators of market inability to respond to economic imperatives, and so as “stylised facts” of purpose inefficiency.

For clarity it is important to point out a number of general qualifications to the notion of purpose efficiency and to emphasise its contingent nature. First, property market purpose efficiency is a necessary but not sufficient condition for the realisation of economic potential. Other factors besides the property market can affect, although to a different degree and in a different direction, the course of the urban economy. Second, property market institutional mechanisms mediate between the economic requirements for property and the actual products provided. On these grounds the concept of purpose efficiency shifts emphasis from property products to the property market process, while the central question becomes how well that process works in providing what the economy requires. Third, the notion of property market purpose efficiency does not prescribe a specific institutional configuration. It proposes, however, a conceptual point of reference to determine whether “problematic” property market institutions exist, and if so, directions for their revision. Any proposed institutional transformation will of course advance some interests and disadvantage others. In that sense, the purpose efficiency might not coincide with the perceptions of efficiency held by different actors in the property market⁴ (called “person efficiency”), as the latter is specified by their own objectives and needs. Finally, regarding property market institutions as part and product of the wider institutional environment implies that property market purpose efficiency should be seen in relation to the overall urban institutional framework. On the basis of all these considerations purpose efficiency is conceptualised in terms of the ability of the market institutional structure to respond appropriately to

⁴ The property market actors are defined as the main organisations involved in use, development, investment and service provision related to property.

the wider institutional conditions. An appropriate response refers to provision of such quantity and quality of institutions and products that the overall institutional environment allows and requires.

In examining the essential implications of the last qualification and developing further the approach, two interrelated notions prove helpful. These are the concepts of “uncertainty” and “flexibility”.

4.1. *Uncertainty*

Questions of uncertainty are central to economic theorising, as uncertainty is a pervasive fact of economic reality and life as a whole (Keynes, 1921; Knight, 1921; Lawson, 1985; Schmidt, 1996). Uncertainty refers not only to lack of information regarding the parameters of a problem, but also to lack of knowledge about the fundamental nature of a problem and the type of outcomes that are possible. The former is called “parametric uncertainty” or risk, and pertains to a situation where the determination of the likelihood of an event is possible, though costly, either through calculation *a priori* (i.e. based on purely general principles), or from statistics of past experience. The latter, which is called “structural”, “true uncertainty”, or plainly “uncertainty *per se*”, refers to the case where there is no scientific basis to form any calculable probabilities. This is because these are numerically indeterminate, or, simply, do not exist, or because agents lack the ability to decipher all of the complexity of the environment and thus to account for each and every future contingency.

As such, uncertainty refers not only to ignorance of what can be known with study of collected data, but also to ignorance tied to the unknowable. “It is a world of change in which we live, and a world of uncertainty. We live only by knowing *something* about the future; while the problems of life, or of conduct at least, arise from the fact that we know so little” (Knight, 1921: 199, emphasis in the original). The reasons for this are manifold. To start with, it is the open-ended, dynamic and contingent nature of the socio-economic reality – on account of the instability, multiplicity, and complexity of both external conditions and internal elements – that precludes the predictability of events and aspects of reality (Lawson, 1985). Moreover, the situation becomes more complicated when the human element is taken into account. Agents’ behaviour is not only constrained by the limited computational, cognitive or perceptual abilities of the human mind (Simon, 1982),

but also by the unacknowledged and unintended consequences of the actions of other purposeful (and perhaps “irrational”) agents (Schmidt, 1996).

From this perspective, where uncertainty is seen as ubiquitous as well as inherent and structural to the system, it becomes clear that the future can never be fully anticipated or known. Certainly, this has significant implications regarding our confidence in the future, the formation of expectations, and the overall course and working of the socioeconomy, something which is evident in the appearance of “irrational” instances of optimism or pessimism even in cases where there are no solid, formal reasons for such views (Hodgson, 1988). On these grounds it can be asserted that uncertainty reflects the conditions under which economic dynamics are understood, appreciated, expressed and, thus, developed, and, in that sense, mirrors the overall climate of the socioeconomy. To put it in simple words, it is argued here that the level of uncertainty reflects the degree of agents’ confidence with regard to the conditions and processes of the socioeconomic system.

In this world of uncertainty, wherein agents have nevertheless to act, “conventions”, “norms” and “rules of thumb” are used as substitutes for the knowledge that cannot be attained (Heiner, 1983; Lawson, 1985; Hodgson, 1998). “Without these “rigidities”, without social routine and habit to reproduce them, and without institutionally conditioned conceptual frameworks, an uncertain world would present a chaos of sense data...” in which it would be practically impossible for agents to make decisions, act and interact with each other (Hodgson, 1988: 205). On that basis, it is argued that institutional structures play a functional role in the reduction of uncertainty by providing a basis for belief, perception, expectation and decision-making, and thus a degree of stability and predictability in human affairs (Hamilton, 1932; Ayres, 1962; Lawson, 1985; Hodgson, 1988, 1998a; North, 1990; Searle, 2005).

Some qualifications on the above conceptualisation should however be underlined. Although any institutional configuration reduces uncertainty to a degree, different institutional structures reduce uncertainty with different degrees of success. As a rule, uncertainty can never be totally eliminated. This is due to three reasons. First, institutional structure can never be “perfect”, partly because institutions are the result of human limited mental ability and power relations, and partly because they are products of processes and circumstances of the past and subject to institutional lock-in and path dependence (North, 1990). Second, because of the complexity

and dynamic character of the socioeconomic reality and the unpredictable nature of human behaviour, fortuitous changes (external or internal) are always possible. Third, uncertainty (and especially other people's uncertainty) may be beneficial for some groups as it can generate opportunities for profits. Finally, it is important to keep two further things in mind. First, institutions generally reduce uncertainty, but they probably do so for some groups and not for others. This, of course, is related to the power relations between agents. Second, sometimes the cost of reducing uncertainty may be higher than the value of reducing uncertainty.

The degree of uncertainty that exists in an institutional environment is determined by both external and internal conditions. In particular three dimensions can be considered. One is the conformity between the exogenous changes-conditions (e.g. technological changes, wars, economic upheavals, etc.) and the associated institutional-organisational adjustment. Important parameters here are the complexity and degree of volatility of the external conditions and the ability of the institutional structures to adjust to these conditions. Another is the harmony between the institutional structures (e.g. between political, economic, social, etc.). This refers to the situation where institutional changes in one level necessitate changes in another (or others). Last is the harmony within institutional structures (e.g. the economic or political or social, etc.). This refers to congruity between the institutions of the structure as for example between formal and informal institutions.

On this basis it is argued that the degree of uncertainty in a socioeconomic system reflects the quality of its institutional structures and, in particular, (a) the degree of institutional adaptability to the external conditions and pressures (in short their potential to adapt), and (b) the degree of congruity between and within the institutional structures and dynamics (or how well institutions adjust). To put it plainly, the degree of adaptability and congruity of the institutional structures determines the level of uncertainty within the socioeconomic system.

4.2. Flexibility

Economies are generally in a state of flux, buffeted constantly by developments in the rest of the world, shifts in the composition of demand, technological and institutional changes, or by other external and/or internal shocks. This complexity and constant volatility of external conditions generates

uncertainty in the institutional environment and justifies the necessity for institutional adaptability (Hamilton, 1932; North, 1990; Killick, 1995). The qualities necessary for the successful adjustment of institutions to the changing conditions and opportunities are institutional diversity. In other words, it is argued that an appropriate degree of institutional “variety” is essential to cope with the external and internal volatility and complexity and thus to reduce uncertainty (Heiner, 1983; Nelson and Sampat, 2001; Hodgson, 1988⁵, 1996).

Variety here refers to the “widening” of institutions in response to change. This is the case where the need for adaptability is achieved not only by the creation of a new institution, or by replacing an old by a new one, but also by broadening the existing institutional structure in such a way that it can serve new interests without upsetting the ones that have so far made use of it.

Generally, institutional variety is positively associated with economic development (Dosi, 1988; Killick, 1995; Gibson and Lizieri, 2001); however, it should not be taken as desirable without reservations. Certainly it has a cost, since resources are required to achieve and maintain it. Moreover, although variety is always desirable when volatility of the environment increases, excessive variety produces increased complexity, undermining institutional stability and inducing uncertainty. Undue lack of variety, on the other hand, is also detrimental because it fosters inertia and encourages long-term rigidities hampering necessary flexibility. However, it must be acknowledged that rigidities are not always detrimental and certain rigidities are necessary for the existence and running of complex systems such as the urban socioeconomy. In that sense, desirable institutions are those creating sufficient stability for growth while not obstructing change. To achieve this very delicate and friable situation, it can be argued that a system (such as the property market) should exhibit the degree of variety sufficient to deal with all the potential variation (uncertainty) in its environment. In that sense, macroeconomic order and relative stability are reinforced alongside, and arise from, variety and diversity at the micro-level (Langlois 1986; Hodgson, 1988). In addition, such heterogeneity at a micro-level is deemed necessary both for the system to renew itself through time and for macro

⁵ Hodgson's (1988: 168, 256-8) “law of requisite variety” state that if a stable outcome is to be attained, then the variety of a system must be at least equal to that of the activity which it is directing. Consequently, to minimise the chances of disruption, an open system has to contain sufficient variety to deal with all the potential variation in its environment.

dynamics to be successfully sustained. On that basis, stability is related more closely to the general levels of institutional structure, whereas variety and flexibility pertain to more narrow and specific contexts, such as the property market itself.

In these terms the role of market (including property market) institutions in relation to urban economic development should be seen as an attempt to manage and buffer the effects of uncertainty at the urban level, by providing a sound, flexible and secure framework that enables easy adjustment to the contingencies and exigencies of economic processes. A prospective way to accomplish this is through the development of “institutionalised variety”. This refers to plurality in property market institutions⁶ and provides the necessary flexibility and diversity for the property market to manoeuvre successfully, both exploiting and contributing to overall institutional certainty and stability. The same caveat applies as with the concept of variety, institutionalised variety comes at a cost, and thus its appropriate degree is defined on the basis of the uncertainty that it faces.

5. Institutionalised Variety and Purpose Efficiency of the Property Market

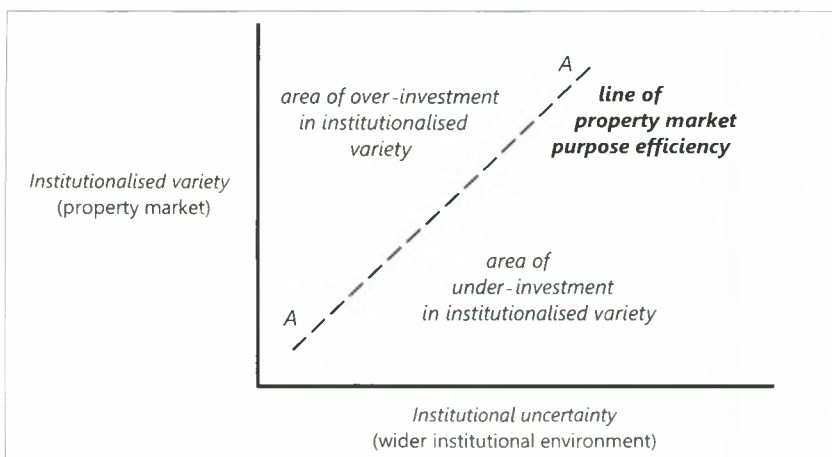
On the basis of the arguments developed in the previous section, it is possible to evaluate the institutional structure of the property market in terms of how efficiently it operates in providing the right quality and quantity of institutions and outcomes, so that urban economic potential can be generated, sustained or even enhanced. It is argued that a property market is purpose efficient when it allocates optimal resources to develop an institutional structure that maximises the productivity of the market in delivering property outcomes. However, this institution-building should be seen with reference to the wider institutional structures and dynamics. Thus, based on the assumption that each urban economy, subject to its institutional volatility and incongruity, exhibits a certain amount of institutional uncertainty, the purpose efficiency of the property market is conceptualised in terms of the market’s ability to respond appropriately to these wider institutional conditions by providing whatever degree of institutionalised variety the overall institutional environment allows and requires. The ability to explore

⁶ It is quite difficult (almost impossible in some cases) to dissociate institutions from organisations, as organisations can be perceived as institutions in a different context (Menard, 1995). On that basis, the notion of property market institution(s) as it is used here incorporates the concepts of property market organisations and the property market products that are produced by them.

the efficient allocation of resources to property market institution-building with reference to the wider institutional conditions and dynamics constitutes the main strength and novelty of the concept.

Figure 1 illustrates diagrammatically the notion of property market purpose efficiency. A purpose efficient property market delivers the property products that the economy requires at the prevailing price, by allocating optimal resources to institutionalised variety given the level of uncertainty which the wider institutional environment carries. This is represented conceptually by the line *AA*. In particular, for a specified level of institutional uncertainty, the line indicates the respective level of institutionalised variety that is most appropriate in supporting economic potential. Less institutionalised variety (area of under-investment in Figure 1) creates undesirable rigidity in the operation of the property market. This means that the market cannot respond effectively to economic circumstances and institutional changes by providing the property products that are required. This weakens urban economic potential. Examples of such urban property markets can be found in countries which have recently open up their economies (e.g. eastern European cities) and on that basis exhibit considerable institutional uncertainty, while their property markets have not yet developed the appropriate institutional framework which is required to facilitate economic adjustment (e.g. because property rights are not clearly defined).

Figure 1. Purpose Efficiency of the Property Market



Source: Own construction

From a similar perspective, the achievement and maintenance of excess property market institutionalised variety, i.e. more than is required by the overall institutional conditions (area of over-investment in Figure 1), can be seen as a misuse of resources. Such excessive variety impairs urban economic potential by causing needless costs and expenditure of society's resources, and also by creating unnecessary complexity potentially detrimental to the requisite level of certainty and flexibility. Examples of such urban property markets could be found in mature economies which have developed market structures that are highly sophisticated but rigid and resistant to adjustment or reformation in response to changing socio-economic conditions (for example due to powerful vested interests established).

The graphical representation in Figure 1 should be seen as a conceptual device demonstrating the intrinsic relation between the property market as an institution and its wider institutional environment, where the notional balance of their qualities is hypothesised to be a necessary condition for purpose efficient property markets. Theory suggests that there is a positive relationship between institutional uncertainty and institutionalised variety: i.e. that greater institutional uncertainty demands greater institutionalised variety to achieve purpose efficiency in the property market. Clearly the detailed characteristics of the line *AA* (e.g. form, position, slope, etc.) will depend on the specific features of the market in question.

The characteristics of institutional balance may change with time, circumstances and location. This is because each socioeconomy has its own culture, institutions, organisational networks and power relations that are temporally and spatially defined and require time-specific, locally determined explanations and solutions. This means that the optimal degree of institutionalised variety for a given level of institutional uncertainty may be different across time and space owing to the quality of the available institutional base (i.e. the institutionalised variety already built), and the costs associated (and benefits foregone) with this particular institutional configuration. For example, emerging markets might lack some fundamental property market institutions (e.g. related to property rights definition or information provision) and so even "small" changes in institutional uncertainty will necessitate substantial developments in institutionalised variety in order for required property products to be provided. As the markets become more mature, they develop a substantial institutional base which makes it possible to compensate changes in institutional uncertainty with relatively smaller changes in institutionalised variety. On that basis, property markets which are at

the initial stages of institution-building or those characterised as “emergent” in cross-sectional analysis, might be represented conceptually by a steeper purpose efficiency relationship (steeper line *AA* in Figure 1) than the same markets in the long-run and to “mature” markets respectively.

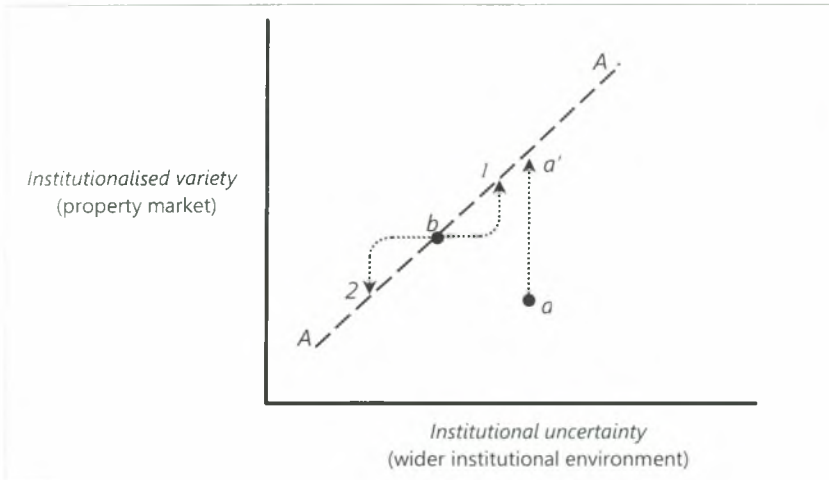
The notion of purpose efficiency also provides a conceptual basis for the consideration of the evolutionary dynamics of the property market. Here emphasis is placed on the market’s ability to continuously readjust its institutional structures in response to changing conditions in the wider institutional environment. A truly purpose efficient property market should be allocating optimal resources to a degree of institutionalised variety that matches its wider institutional uncertainty. However, even in the case of a market which is purpose efficient (i.e. on the line *AA*) at a point in time, conditions might change requiring a movement to a new position. In particular, it is argued that overall institutional changes which increase uncertainty in the urban environment should be accompanied by such changes in the property market that deliver greater degrees of diversity of institutions, in order for market productivity to be maximised and economic potential to be supported (case *b1* in Figure 2). An example here might be a property market that, in response to internationalisation and the increased institutional uncertainty it bears, develops a robust framework of property rights that accommodates a wide variety of objectives in property use, investment, and development.

Likewise, where overall institutional changes reduce uncertainty, surplus property market institutionalised variety generates unnecessary complexity, waste of resources and excessive opportunity costs, and thus an appropriate response should be to decrease institutionalised variety (case *b2* in Figure 2). An example in this case is a property market that, in response to falling institutional uncertainty as a flexible but reliable legal framework develops, manages to restrain certain institutional aspects of the property market (e.g. the informal, non-professional networks that affect the market process) impairing its ability to effectively deliver the required property products.

Questions arise regarding the institutional adjustment process as conditions change. If the market is initially purpose efficient (e.g. at *b* in Figure 2) and there is a change in the degree of uncertainty in the wider institutional environment, we should be interested in the speed and path of institutional adjustment, and whether or not it is capable of restoring the market to

purpose efficiency. If the market is initially purpose inefficient (e.g. at *a* in Figure 2), and this is the more likely case, we might again ask whether this is a temporary phenomenon and whether there is likely to be an institutional adjustment process that will secure purpose efficiency.

Figure 2. The Relative Conception of Property Market Purpose Efficiency



Source: Own construction

Various factors may restrict the efficient allocation of resources to institutionalised variety in the short-run. For instance, the property market as an institution carries a strong path dependency (that is a tendency towards “lock-in”), where the scope for change is constrained by the existing institutional structure. The situation becomes more complicated when power relations and vested interests are taken into account. In a sense, as property market institutions crystallise into reputable usages, they create in their defence “...vested interest, vested habit and vested ideas and claim allegiance in [their] own right” (Hamilton, 1932: 87), making them difficult to change. This also suggests that developed property market institutions (actual institutionalised variety) and market possibilities (purpose efficiency) become contextualised, necessitating solutions that are political and policy oriented in nature, and lie in the hands of politicians and other power brokers.

However, apart from the speed (or the time-lag) with which property market institutions may adjust in response to changes in institutional uncertainty, one should also take into account the nature of decisions associated

with institution-building. Since the costs and benefits of institutional change cannot be known in advance⁷ any investment in institutionalised variety must always be “speculative”. This implies that the appropriate mix of institutions maximising property market productivity might not be delivered simply because the actors have a distorted perception of what its actual costs and benefits would be.

Undeniably, history and dynamic processes cannot conform to any simple graphical representation. In that sense the notional balance between institutionalised variety and institutional uncertainty is not teleological, and so it should not be supposed that any suggested movement would or is “bound” to occur. The dynamic process of institutional change might not, therefore, result in purpose efficiency. Institutionalised variety might fall short of, or overshoot, the efficient uncertainty-variety balance (lying above or below *AA*), while the range of purpose efficient solutions might itself change (i.e. a shift in *AA*).

The overall progress and positioning of the market is affected by various, contingent, conditions. This has certain implications in terms of policy directions. It has been argued that the conceptual device of purpose efficiency can shed light on the nature of the property market institutions and their intrinsic relation with the overall institutional environment, as well as on the market’s ability to efficiently (re)allocate resources to institutionalised variety in response to changing conditions. This helps to clarify thinking in terms of what policy decisions can be made to shift the market towards a desired position. With reference to public policy, two sets of choices are available. The first, targets directly the property market institutional structure attempting to bring its institutionalised variety in line with the prevailing level of institutional uncertainty (in Figure 2 operating to move from a point like *a* towards the line *AA*). Such policies could include, for example, setting up agencies to facilitate property-related information provision, or the redefinition of legal interests in property use, investment and development. The second set of choices targets the overall institutional environment within which property market institutions operate. Here policies focus on the reconfiguration and realignment of institutional structures, paying attention to the implications these would have on the operation of the property market (indirect effects, represented by a shift in the purpose

⁷ A similar case is investment in information, where it is not possible to know its actual value before the information itself is acquired (Keogh and D’Arcy, 1999).

efficiency relationship *AA* in Figure 2). Such policies may be designed, for instance, to strengthen legal efficiency and enforceability, to encourage international economic activity, or to infuse flexibility alongside security in the financial and investment sectors. Obviously the latter set of policies has a very wide scope and far-reaching implications not only for the property market but also for other areas of economic significance.

In conclusion it must be emphasised that the notion of property market purpose efficiency is an important conceptual device which enables the consideration of efficient resource allocation to property market institution-building with reference to the wider institutional conditions and dynamics. The operationalisation of the concept, however, faces substantial problems. This is because it is difficult to observe directly what a purpose efficient property market would look like in reality and so to identify criteria that give an objective fix to the concept. However, purpose efficiency might be indirectly measured through indicators that reflect the mismatch between property requirements and property delivered, like the degree of property market volatility in otherwise matched property market institutional structures, compared across markets or across time. Yet lack of long runs of reliable data (even for the most mature markets), or consistent data across markets, makes it difficult to empirically verify the conditions of purpose efficiency in the current state of knowledge. Moreover, the place and time dependent nature of the balance between institutionalised variety and institutional uncertainty creates an additional complication for any attempt to explore their relation through comparative, cross-sectional research.

On these grounds it is appropriate to focus attention on analytical indicators of the concepts of institutionalised variety and institutional uncertainty that would enable a concise description of the property market as an institution and the wider institutional environment within which it operates, facilitating analysis, further exploration and understanding of their intrinsic relation. Such indicators can provide a basis for the evaluation of the quality of the property market process with reference to the wider institutional structures at various points in time, as well as for comparative assessment between different markets. However, when they are used as comparable analytical devices they should mindfully, thoroughly and sensitively take notice of the local circumstances. This is because the same external forces and institutional conditions could, in different urban contexts, lead to different types of institutional uncertainty giving rise to different property market configurations in terms of the mix of institutions developed.

6. Overview and Conclusions

The paper has challenged the available notions of property market efficiency to put forward a new concept, called “property market purpose efficiency”.

The argument started with a critical review of the conventional measures of market efficiency. It has been argued that both allocative efficiency across the property market as a whole, and the narrower treatment of informational efficiency in the investment market, provide flawed and ambiguous judgements of market efficiency. This is because, first, they assess efficiency with reference to idealised benchmarks (Pareto optimality and full information, respectively), second, they do not take into account the intrinsic characteristics and dynamic process of the property market and, third, they are artificially dissociated from important operational issues. Institutional attempts to articulate more refined and pragmatic conceptualisations of property market efficiency, while they have provided useful insights, are found to be incomplete or methodologically underdeveloped.

However, institutional analysis offers three important conclusions. First, instead of trying to seek a judgement on whether the property market as a whole is efficient, the assessment of market efficiency should be constructed with reference to “efficiency for a purpose”, or “efficiency for a person”. Second, emphasis should be placed not only on property market outcomes but also on the property market process⁸. Third, the dynamic dimension of the property market should be given due consideration, in terms of its adaptability to changing economic, political, legal and social conditions. Expanding upon these arguments, the efficiency of the property market has been approached with reference to the accomplishment of a particular purpose, which is the achievement and maintenance of urban economic potential. This addresses the purpose efficiency of the property market as the “effectiveness” or “credible commitment” of the property market to support economic potential and promote urban competitiveness, by providing those property outcomes that the economy requires. In plain terms, an efficient property market is expected to deliver a sufficient supply of property to meet requirements at the prevailing price level.

⁸ This is the process which, amongst other things, specifies property values, generates information, defines legal interests, allocates uses, stimulates development and redevelopment, and generally determines the effectiveness of the urban system to provide these spatial structures (real property) and legal interests (property rights) that are required for economic development.

In an attempt to avoid possible misconceptions, a number of general qualifications were formulated. First, property market purpose efficiency is a necessary but not sufficient condition for the realisation of economic potential. Other factors alongside the property market can intervene in or affect, in various degrees and directions, the course of the urban economy. Second, the notion of property market purpose efficiency does not prescribe a specific institutional configuration. It provides, however, a conceptual point of reference to determine whether “problematic” property market institutions exist, and if so, directions for their revision. However, it is inevitable that any subsequent institutional transformation will of course advance some interests and disadvantage others. Third, the concept of property market purpose efficiency takes into appropriate consideration the structural peculiarities and idiosyncratic imperfections that the market exhibits and puts forward a conceptual benchmark for efficiency that is realistic, pragmatic and feasible. In that sense, a property market can be purpose efficient, even in the inevitable presence of high transaction costs and information deficiencies, which are conventionally seen as classic causes of market failure. Finally, conceptualising the property market as part and product of the wider institutional environment suggests that property market purpose efficiency be seen holistically. Thus, the purpose efficiency of the property market is conceptualised in terms of the ability of the market to develop such institutional mechanisms and qualities as the overall urban institutional environment allows and requires.

Development of the notion of purpose efficiency required reflection on the purpose, function and qualities of the institutional structures. It is argued that economic potential is generated when a micro-system exhibits such degree of institutional variety sufficient to cope with all the potential variation and uncertainty of its wider environment. In these terms, macroeconomic order, stability and adaptability are reinforced alongside, and arise from, variety and diversity at the micro level. Applying this conceptualisation to the subject-matter of this study, two theoretical devices have been developed: “institutional uncertainty” and “institutionalised variety”. Institutional uncertainty assesses the quality of the wider (urban) institutional arrangements⁹ and reflects how effectively the urban socioeconomy adapts to the external pressures, resolves internal incongruities, and provides a secure economic environment. Institutionalised variety evaluates

⁹ As has been argued, institutions’ functional role is to reduce uncertainty. On these grounds, the level of remaining uncertainty becomes the yardstick to evaluate their quality.

particular institutions, in this case the property market, in terms of diversity and plurality in institutions, organisations, and products provided. Putting the arguments together, the property market purpose efficiency is understood with reference to the market's ability to match "institutionalised variety" to the level of "institutional uncertainty" exhibited by the wider urban institutional environment. It was argued that this affords the market the necessary flexibility, diversity, and manoeuvrability without compromising overall institutional certainty and stability.

A purpose efficient property market allocates optimal resources to institutionalised variety, given the level of uncertainty the wider institutional environment carries, and thereby delivers the property products that the economy requires at the prevailing price. Less institutionalised variety creates undesirable rigidity in the property market process, constraining its ability to provide the required property outcomes and thus weakening urban economic potential. Similarly, the achievement and maintenance of excess institutionalised variety in the property market can be seen as a misuse of resources to the detriment of the economy. Such excessive variety impairs urban economic potential by incurring needless costs and expenditure, and creating unnecessary complexity potentially damaging to the requisite level of certainty and flexibility.

The strength and novelty of the concept of purpose efficiency reside on its ability to view property market efficiency in both holistic and dynamic terms. The former highlights property market institutions as part and product of the overall institutional environment implying any comprehensive discussion on efficiency takes these issues into account. The latter introduces a time dimension, arguing that changing external or internal conditions shifts the level of uncertainty that the institutional environment embodies, prejudicing the prevailing degree of institutionalised variety in the property market, and thus influencing its quality as an institution as well as its evolutionary dynamics. A truly purpose efficient property market through time is able to effectively re-allocate resources to maintain optimal institutionalised variety in line with changes in wider institutional uncertainty. Yet the property market as an institution carries a strong path dependency, a tendency towards "lock-in", where existing institutional complexity limits the scope for change. This situation becomes more complicated when power relations, vested interests, and the "bounded" rationality (due to limited information on the costs and benefits of choices, as well as to the incapability of human mind) of various market players are taken into account. This

leaves a number of important questions unanswered: will market adjustment take place, if so, how quickly, and what must happen to allow it to occur? A fundamental position here is that, market possibilities (purpose efficiency) and current institutional aspects of the market (realised institutionalised variety) become contextualised, necessitating solutions that are political in nature and lie in the hands of politicians or other power brokers.

In conclusion it must be stressed that the current approach sheds light on the institutional mechanisms and processes of the property market and clarifies thinking in terms of the nature of choices available to shift the market towards a desired position. These have certain implications in terms of policy directions. In particular, the conceptual device of property market purpose efficiency provides a theoretical basis for considering enhancement of urban competitiveness through intervention in the property market, providing a more efficient allocation of resources to institutionalised variety. However, as the relationship between the property market and the urban socioeconomy is not a simple or straightforward one, it can be argued that such a policy should be particularly sensitive to local conditions and institutional peculiarities.

The arguments developed in this paper for application to the property market can be generalised to efficiency debates around other markets. At its simplest it can be stated that even in markets where high levels of efficiency, as conventionally understood, are expected (e.g. the equity market), an institutional approach substantially changes the meaning attached to efficiency. It adds valuable insights into the relative nature of efficiency judgments and the whole process that accounts for the provision of observed market outcomes.

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Family Landed Property Relations Regarded as a Source of Social Capital

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Abstract

Putting in parallel the major theoretical approaches of social capital, and focusing on two structural elements of space, family and land property, this paper aims at identifying ways to link exclusive forms of indigenous social capital such as land property, to more inclusive forms of social capital that integrate networks of families and communities. More precisely, it explores how cultural and social values inherited from the past, as they are expressed by non-market transfer practices of family land, produce a form of social capital that plays an important role in the local development process and the socially integrated tourism activities, within the geographical context of a Rhodian community. The conclusion of this study is that, rather than viewing family businesses as rational decision-makers, the social capital approach suggests that family businesses and local development are embedded in social relations that influence their activities. Social capital may be the “missing link” in development, as a complement and catalyst of the other, better-known species of capital.

Keywords: Social capital, family, land property, tourism, Greece.

1. Introduction

Over last decade, the role of institutional context in economic development has attracted growing interest. One way of dealing with local institutional contexts seems to have arisen by focusing on the role of social capital. Social capital is one of the most successful notions exported from sociology to other social sciences and it is used to explain phenomena ranging from the performance of purely sociological inquiries to the success of housing

programmes in some communities, though not in others, and the economic development and government efficiency of cities or nations.

In line with recent considerations, social capital comprises institutions, formal and informal relationships, attitudes and values governing interactions amongst people, contributing to economic and social development (Iyer, 2005), as well as playing a major role in explaining individual behaviour at the microeconomic level (Dasgupta, 2000). Social capital is alleged to have beneficial effects on both individuals and communities, generally by the stimulation of economic development, which makes certain resources available that would otherwise be lacking (Mohan and Mohan, 2002).

Harriss and De Renzio (1997) state, referring to social capital, that “the generation of norms and values remains a central, difficult area in the social sciences”, while Portes (1998) and Bucolo (2004) underline that the ways social capital is produced is not sufficiently explored. The aim of this paper is to explore whether family land ownership and landed property relations, inherited from previous stages and modes of production, is a source of social capital that plays an important role in the local development process, within a definite geographical context, by focusing on the study of non-market intra-generational property transfers. In some way, it is trying to answer the question set by Furstenberg (2005) about how families generate, accumulate, manage and deploy social capital for the welfare of both families as a whole and their individual members, within the context of a rural community in the transition towards becoming a major tourist destination.

2. Theoretical Background

The concept of social capital first appeared in the work of the French Sociologist Pierre Bourdieu, and then it came into wider use and was linked to problems of development with the studies of the American Sociologist, James Coleman. Undoubtedly, it is due to Putnam’s works that social capital moved from being a specialty for network sociologists into a major research topic for economists and political scientists.

Pierre Bourdieu (1986) assumes that social capital is “*the product of investment strategies, individual or collective, consciously or unconsciously aimed at establishing or reproducing social relationships that are directly useable in the short or long term*” and “*the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalised relationships of mutual acquaintance and recognition [...] which provides each of its members with*

the backing of the collectivity-owned capital, a “credential” which entitles them to credit, in the various senses of the word”. Bourdieu’s particular application of the concept relates to understanding how individuals draw upon social capital to improve their economic standing in capitalist societies. In such societies, Bourdieu claims, economic capital is the fundamental resource and his concern is with how social capital and cultural capital may be instrumental in increasing an individual’s economic capital.

Coleman (1988 and 1990) is sensitive to the micro-foundation of macro-phenomena, and to the need for a sociological explanation to lend analytical support to both the concrete situations in which actors act and to the effects of their interaction. For Coleman, social capital is “*not completely fungible but may be specific to certain activities*”, “*inheres in the structure of relations between actors and among actors*” and “*identifies certain aspects of the social structure by their functions*”. Coleman also emphasises the “public good aspect” of social capital; the kinds of social structures that enable social norms and the sanctions that enforce them do not primarily benefit the person or persons whose efforts are required initially to bring them about, but benefit all those who are part of such a structure. Coleman’s social capital approach is a conceptual element which allows for the merging of two important theories of action in social sciences: the model of the rational actor utilised in economics, and the sociological model of the actor as a socialised being, who is influenced in his actions by the norms, rules and obligations of society.

According to Putnam, social capital is the “*features of social organisation, such as trust, norms and networks that can improve the efficiency of society by facilitating coordinated actions.*” (Putnam *et al.*, 1993). Putnam shifts the emphasis from family to community and from individual to collective social capital. To explain different forms of social capital and their impact on individual and social life, Putnam employs the concepts of “bonding” and “bridging” (Putnam, 1995). Bonding social capital is based around family, close friends and near kin. Bridging social capital exists in some tension with bonding social capital. It is inclusive and links people to more distant networks, tending to generate broader identities and wider reciprocity. The concepts of bonding and bridging capture potential processes of integration, both within and between communities.

The World Bank, which traditionally promoted a neo-classical approach to achieving development and growth, now acknowledges social capital as a useful tool for poverty reduction (Grootaert, 1998), while since the 1990s

it has been running a working programme on social capital, aimed at promoting specific policies in many countries. In its approach, social capital attempts to capture the “intangible” or non-economic aspects of society that promote economic growth or broader positive development. In this sense, social capital is seen as a vital policy ingredient for ensuring the effectiveness of various interventions.

The popularity of social capital can be seen as part of a wider recognition of the fact that economic development models have failed to explain why some areas appear to have been able to develop while others have not (Lee *et al.*, 2005). Social economists are likely to be more receptive to certain sociological interpretations of social capital as a context-dependent and policy-responsive phenomenon (Wallis *et al.*, 2004). The complex set of relations and motivations that comprise the concept of social capital are highly contextual, but – to the best of our knowledge – have not yet been integrated into the analyses of geographers.

All diverse applications of the concept have been accompanied by much confusion concerning the meaning of social capital, together with some controversy about its alleged effects (Portes, 2000). The proliferation of approaches regarding social capital has also led to compartmentalisation, with each theoretical tradition claiming a monopoly on the truth and busily building impregnable barriers (methodological, epistemological, ontological) to inter-paradigmatic, open-ended communication. Portes (1998) claims the social capital concept does not embody any ideas that are really new to sociologists, while the set of processes encompassed in it are not new and have been studied at other levels in the past. Most of the approaches, especially those of Putnam and the World Bank, were thoroughly criticised (Portes, 1998; Portes and Landolt, 2000; Sobel, 2002; Ponthieux, 2004), but it is not within the confines of this paper to refer to these criticisms. Although many economists also remain critical of the concept of social capital as an economic phenomenon, and as reflected by a broader agreement in the literature, more about what social capital does than what it is (Portes, 1998), one cannot deny that it contributes to the understanding of the way in which a society’s institutions and shared attitudes interact with the way the economy works; this is what mainstream economics has tended to shy away from (Solow, 2000).

Social capital literature tends to emphasise the role of families in constructing social capital, be this within family networks or, more widely,

within community networks. For Bourdieu (1979, 1980, 1993), parental support of children's development is a source of cultural capital, while social capital refers to assets gained through memberships in networks. He sees the family as the main site of the accumulation and transfer of social capital. Coleman (1988, 1990) examines the importance of social capital within the informal, intense and durable, face-to-face connections of the household. The approach of the above researchers is mainly focused on the importance of social capital within the family *vis-à-vis* children's education and the transfer of human capital from parents to children. Putnam (1995) states that "*the most fundamental form of social capital is the family*", while Newton (1997) argues that "*the family may also be the most fundamental source of social capital.*"

3. Study Area and Methodology

In order to study social capital formation, we have focused our attention on the limited area of Faliraki, which is one of the most important tourism agglomerations of the island of Rhodes. Rhodes is one of the oldest and most prominent tourist destinations in Greece. According to Greek National Tourism Organisation (GNTO) data, international tourist arrivals on the island were about 214,000 people in 1970, rising to 800,000 in 1990, and reaching 1.3 million by the year 2004, when the island had a total accommodation capacity of approximately 75,000 hotel beds, and more than 35,000 beds in rented rooms, apartments and studios. Faliraki is a case study of an unplanned tourist resort, with less than 300 permanent inhabitants. According to data provided by the Hotel Owners Association of Rhodes and the estimations of the Municipality, in 2004, Faliraki had an accommodation capacity of 13,700 hotel beds and more than 9,000 beds in rented rooms. This study refers to the development of small and medium enterprises, owned by the locals.

Information and data about land property structures and family relations were provided by the cadastre of Rhodes, a legacy of the Italian rulers of the island. Cadastral archives are available in hard copy, as at the time of the constitution of the Cadastre in the late 1920s. Thus, collecting the necessary primary data was an arduous task, requiring time-consuming research into the registries in the cadastral volumes. The cadastral survey provided absolute, credible and reliable primary data on land tenure, physical features and location of each land plot. Primary data available refers to a 393-plot sample, and covers the critical 30-year period, from 1965 to 1995,

by which time the transition from the rural area to an area established as a tourist resort in the international market had taken place. A total of 1,036 property transfer acts have been studied, 353 of which are non-market acts (inheritances, donations and dowries).

4. The Social Dispersion of Land Property

The island came under Ottoman rule in 1522 and remained under its domination until 1912, when it was transferred to the Italians. In 1949, the island was integrated into Greece. The leaders of the island, both Ottomans and Italians, had always had a strategy identical to all rulers or colonisers, their main objective being the economic exploitation of the land to their benefit (Madjarian, 1991). In order to bring about land exploitation, they instituted a legal land property regime, through the introduction of the cadastral registration system. The cadastral regime established by the Italians aimed at securing the credibility of the holder's ownership rights, but also at legitimising the take over by the Italian Government of all unclaimed, ownerless or even uncultivated land. Land had to be cultivated, so as to generate considerable fiscal revenue, which was collected by the Italian Government (Konstandinides, 1972).

Large private rural estates are generally scarce in Greece and the Dodecanese islands (Rokos, 1988). During the period of Ottoman rule in Rhodes, the Sultan ceded the fertile agricultural land to the Ottoman inhabitants of the island. They had fragmented land into small parcels, which were leased for a share rent to villagers of Greek origin (Billiot and abbé Kottré, 1881). Italian occupiers ceded the ownership of the small land plots they used to rent from the Ottomans to the former sharecroppers. When the Dodecanese islands were ceded to Greece in 1949, the previous distribution of small land plots to the population was respected, while no radical incident modified agrarian structure (i.e. agrarian reform) or social structure. Consequently, from the Ottoman Age until today, rural land remains extremely fragmented in small land properties. In 1965, more than half of the existing land plots had a surface area of less than 0.5 ha. Almost all large plots, especially those exceeding 10,000 m², were state-owned.

Markets have never been the only mechanism through which to transfer goods and services, nor have they gone normatively unchallenged. Property exchanges within the family are based on the principle of reciprocity, or may even be altruistic gifts. The justifications for these deviations from

the market principle are either normative or functional (Steiner, 2005). Inheritances and bequests of property are not contractual relationships. They are justified by the donation itself and by interests other than those of the market, but at the same time they are economic transactions in the sense that economic means “transferred from one person to another”. There is no quid pro quo in them, and their allocation is based on ascription. Like in any other Aegean island during Ottoman rule, our investigation of the cadastral registration archives revealed that in our area of study, patrimony transfers had been taking place for a long time, with no testate successions (Visvitsis, 1953; Saulnier-Thiercelin, 1985). All descendants are proclaimed heirs to the estate of the decedent, on an equal footing, thus inter-generational property transfer practices exclude no one from land ownership. Even in those rare cases where a will has been drafted, land is transferred in equal parts *ab indiviso* to all heirs. Additionally, property donations *inter vivo* of parents to their children make up 89% of the total number of transfers. Beneficiaries are all the children, indiscriminately, who acquire equal parts of the parental patrimony *ab indiviso*. Moreover, according to data available, about 70% of the total number of non-market acts between 1965 and 1995 concerned only a part of the property rights of the plots transferred. These existing inter-generational transfer practices reveal the existence of fixed customary succession rules, persisting through time and rigorously egalitarian, since family property is bequeathed in roughly equal shares to the siblings. The consequence of these transfer practices was that, as time went by, the land property subdivision phenomenon was further exacerbated, whilst the average number of co-owners per land plot in the study area increased from 2.49 in 1965 to 4.3 in 1995.

5. Social Capital and Local Development

The widespread phenomenon of land property partition and co-ownership through equality in family inter-generational property transfers ensures a great diffusion of land property amongst a great number of individuals and families. Thus, small land ownership currently plays an important part in family property and this has a considerable impact on social formations in Rhodes. This is a normative reference point as the wide dispersion of wealth ensures equality in the polity and allows for equal opportunities. Before the development of tourism, agriculture was the principal source of the modest income earned by the rural population. Fragmented land ownership favoured the distribution of agricultural income among a large number of

households. Due to the lack of large family estates, the formation of social classes based on revenue received by land exploitation was not possible. Rural societies were socially homogeneous, mainly consisting of small-scale farmers. The diffusion of agricultural land among a large number of households has been an advantage for the widespread development of tourism among local populations. Socially-dispersed tourism development requires a minimum of economic investment from local populations, but also requires sufficiently numbered and structured local societies, so as to be able to self-invest and reap the benefits of tourism. The land ownership pattern in Rhodes is a major factor that encouraged the involvement of the local population in tourism.

The dominance of the principle of equality in customary rules of succession indicates the prolongation of affective relations through material transfers and favours the formation of strong ties between family members. By the extreme social dispersion of land property and the existence of family ties, family property favours the spontaneous creation of social networks at different levels, thus the family in its broader sense takes the attributes of social capital, in the sense of Bourdieu's and Coleman's social capital approaches. Relations between families through marriage also play an important part in the establishment of strong and coherent social networks, widely expressed in territorial terms. Cadastral registrations of dowries reveal that in the past, 72% of marriages in the study area were arranged between the members of the small and closed societies of the same or neighbouring villages. Thus, through marriage families are connected and enlarged, in the sense that social networks become denser within the community and also expand outside it, and are the result of a combination of strong and weak ties (Granovetter, 1973, 1983 and 1985), widely expressed in territorial terms.

The extreme social dispersion of land property and the gradual development of tourism activities after the first important hotel investments in the area, have generated incomes for broad population strata, through the direct investment in land by the creation of small tourism and leisure units, or through the sale of land, as its value has increased due to the intense development of tourism activities in the area. Rented rooms or leisure enterprises proliferated during the period of study in analogy with the number of new hotels. Their creation requires a relatively small capital investment. Working in family tourism businesses in Portugal, Mendosa (cited in Getz and Carlsen, 2000) concluded that those with capital could benefit from tourism, but others in the community could not. Socially-diffused small

estates in Rhodes provided the initial capital necessary for the indigenous investment in tourism. The modest family revenues of farmers were primarily invested in small tourism and leisure businesses. Once those initial small investments generated profits, new investments soon followed. In this way, a middle class or *petite bourgeoisie* was formed in the tourist areas of Rhodes, based on small- and medium-scale tourism entrepreneurship, and with advanced levels of consumption and dynamism in investment, as Tsartas (2003) has also observed regarding other Greek tourist destinations.

Land property appears as the means *par excellence* for “territorial expression” of family ties in a rural context. Kinship relations also play a prevailing role in the establishment of broad, strong and coherent social networks. Studies on labour and property in Greek island communities show the complex family and kinship role in the socio-economic development process (Galani-Moutafi, 1993). Family relationships made the mobilisation of capital and human energy possible. Quantitative data are not available but, as was revealed from our on-site survey, common management of family resources safeguards the feasibility of joint investment projects and therefore, the creation of family enterprises. Practices of *ab indiviso* property transfers *inter vivo* and *mortis causa* persisting over time may be legitimated by concerns for the role of the family rather than by the principle of individual freedom. Frequently, siblings set up small-scale hotel units and catering enterprises, as well as retail outlets, or cousins invested in family-owned plots inherited via co-ownership *ab indiviso*, as proved by our cadastral research and our on-site inspection of 73 randomly selected developed land plots that were under co-ownership. In 62 of them, the enterprises operating therein were family business, while in 11 land plots under co-ownership, the existing building was rented to a third person. Capital invested in equipment is meagre. The cost of initiatives is reduced to the cost of used materials, because it is usually possible to build on their own land, sometimes without any building license. Opaque, informal production practices appear, regarding both the creation and operation of tourism enterprises (CCID, 1994). Quite often, small and medium-size enterprises, and illegally-rented rooms become legitimate, or they are transformed into small hotels, frequently properly managed. According to GNT0 data, in 1995, only 20% of the total hotel bed capacity in the study area was distributed in 63% of the hotels, which had an average capacity of less than 80 beds; almost all these hotels were family owned and managed. Next to large hotel units, complementary services and para-hotel units proliferate, recording large profits in comparison

to the capital invested. Solidarity, kinship and family ties are essential elements in the development of these small enterprises.

Putting in parallel Granovetter's and Putnam's approaches, bonding social capital emerges from strong social ties, which are based on the family. Bridging social capital emerges from weak social ties of kinship and economic interest across societies, in which individuals and organisational behaviour are embedded, but which are nevertheless held together by the sharing of some common values about family, social and economic roles – as expressed by the inter-generational land transfers – and which lead to local development in tourism activities. The practices of non-market transfers find both economic and non-economic reference points that provide legitimacy for social regulations and guide the behaviour of the actors. The non-economic reference points are rooted in socially-accepted principles, expanding the notion of interest from its narrow economic focus. Economic reference meets the needs for property development with the aid of family and social networks based on family relationships. What characterises non-market family property transfers is the integration of the actors' decisions into a network of social relations which facilitate the integration of tourism development within the community.

6. Concluding Discussion

This paper is an exploratory work, suggesting that one of the foundations of social capital is family land property management, which in turn leads to local development within its particular social and geographical contexts.

Since allocation and exploitation modes of land property were family-orientated to a high degree, regarding the family as a social capital seems to be a core element in explaining socially-integrated tourism development, within our area and period of study. While social networks may enable individuals to gain access to other resources of a material or non-material kind (Mohan and Mohan, 2002), land shared by families is characterised as a good, to which almost all people of the community have access, in contrast to simple social networks, which often rely on exclusion.

Formal institutions are only one factor in the explanation of social regularities, and they do not determine only social outcomes *per se*. Actors have multiple interests, the effects of formal institutional regulations are complex and often incomprehensible to the actors, and contradictory demands derive from equally applicable informal institutional prescriptions. There is

a process of translation of institutional rules into social action and regularities. The relationship between practices and macro-social outcomes seems to be more complicated than assumed by most institutional theories, who see institutions simply as restrictions of the choice-set of rational actors or the “rules of the game” (North, 1990). Rather than viewing actors of economic development as solely rational decision-makers, the social capital approach of this paper suggests that land property and business development are embedded in concrete, ongoing systems of social relations. By disassembling the cultural and social frames determining non-market property transfers through which individual and family investment strategies on land evolve, one can better understand the development process.

Paying particular attention to local customary rules of family land transfers with regard to the origins of social capital does not have to mean slipping into a culturalist explanation of local development. A historically-oriented analysis can help clarify how variables of a cultural and economic type – and the interaction between them – not only foster or obstruct social capital, but also regulate the consequences which its use can have on local development. Social capital is not the only factor influencing development; State policies and other factors certainly played a predominant role in the development process (Bagnasco, 2003). The consequences of social capital for local development are not always positive; there is a “good” and a “bad” social capital (Narayan, 1999). The overall evaluation of policies generally makes it more difficult to distinguish under which conditions social capital can have a favourable impact for local development.

The supply of social capital at aggregate level in a particular territory seems to be important in local development. The overall availability of networks of social relations spread between individual subjects and collective actors can in fact condition the paths of development. It is precisely this characteristic, which is associated with a good supply of social capital at aggregate level – usually the by-product of non-economic relations in a territory – which also explains why several studies, such as those by Putnam (1993) identify social capital with a co-operative culture and highlight its path-dependent character – the fact that it is rooted in the past history of a territory.

Family and kinship relationships, largely furthered by land interests, endowed the community under study with social capital, which promoted local development. In this sense, the structural elements of development,

such as family and land property, do not lead to a deterministic vision of development. On the contrary, they prove how development is specifically interpreted and assimilated by a local society, within a specific context. However, as Mohan and Mohan (2002) mention, “It is a truism of contemporary geographical thought that place makes a difference to the outcome of social processes. Social capital might thus have much to contribute to contextual explanations of geographical phenomena.” In this sense, social capital formation as explored here, may be the “missing link” in the local development, being complementary to and catalytic for the other, better-known forms of direct capitalist investments.

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PART V

Urban Social Aspects: Segregation, Housing and Migration

Housing the Refugees: The Greek Experience and Its Political Pitfalls

Konstantinos Lalenis and Elias Beriatos

Abstract

Greece has traditionally been a source of outgoing migration until the early 1990s, when the collapse of the neighbouring communist regimes and the destabilisation of the Middle East made it a destination for migration, mainly entering through its northern and eastern borders. According to the Greek legislation, immigrants who have arrived and resided in Greece since the late 1980s and after the collapse of the socialist states in Europe can be separated into two categories: those of Greek descent and those not. And one can see a clear difference between policies aimed at accommodating the “repatriating Greeks” in their new environment, and the ones targeted at the other immigrants, the former having a wider variety, being both more elaborate and better financed than the latter.

This paper will examine the policies and projects related to providing immediate and intermediate shelter and permanent housing for the refugees, the outcomes hitherto of these policies, and their repercussions for the human rights of immigrants. This will be presented within a general framework describing the characteristics of the refugees from the former Soviet Union and other Eastern European countries, the conditions of their “repatriation”, and the policies and means adopted for their assimilation into Greek society. In the context of the above, the establishment of EIYAPOE (National Foundation for the Reception and Rehabilitation of Repatriating Expatriate Greeks) – which was the main vehicle for the execution of housing policies for refugees – will be analysed, together with its function for approximately one decade, and then, its dissolution due to ineffectiveness, mismanagement and excessive money consumption. The aim of the paper is to relate these policies to the current urban planning and governance framework – and hence to the dominant ideological and political currents and their repercussions for human rights –, to evaluate the outcomes of these policies and their effects on

the well-being of immigrants, and to attempt recommendations for a reassessment of the Greek urban planning system as it relates to immigration, seen in a broader theoretical framework covering southern Europe and the MENA countries.

Keywords: Greece, housing policies for refugees, immigrants, rehabilitation, urban planning system.

1. Immigration and Economic Immigrants

In the 20th century, the mass movements of population (arising mainly from geographic mobility for economic reasons) acquired great importance, and influenced national and international policies.

One result of the strong immigratory currents of the 20th century was the uprooting of approximately 400 million people from their homes and their relocation in foreign homelands, with the hope of a better future. Within these immigratory currents, the majority were economic immigrants, but there were also, in much smaller percentages, all types of refugees (political, religious, etc.).

It is most important to remember that this human “river” has grown continuously (with a dramatic increase in rate) as time has passed: from 1.5 million immigrants annually in the beginning of the century to 10 million immigrants annually in the last decade (1990-2000).

Thus, as this phenomenon extends into the 21st century, we become witnesses of a new immigratory “opening” in the USA and Europe as a way of confronting the ageing population and the need to maintain a balance between the economically active and pensioners (the current proportion is 4.5:1). According to certain estimates (The Guardian, 18-6-2002), the European Union accepts 1.2 million legal and illegal immigrants each year.

It is obvious that globalisation encourages and strengthens these developments. Based on this logic, in Germany, France and Austria immigration is considered as useful (Alain Morice - CNRS, *Le Monde Diplomatique* No.153, Jan. 2001). Indeed, there has been a change of mentality; from the Meeting of Nice, the designated commissioner of the European Union called upon the country members to recognise that the policy of “zero immigration” applied for the last 25 years is not functional any more and that they should follow a more open policy.

However, the new attitude towards immigration does not automatically and obviously ensure the social support of immigrants, nor of their various

human rights. The conditions of residence, work, education, recreation, and other aspects of their life are problematic. Thus, the freedom of movement of people (as a workforce) that is encouraged by the ongoing and increasing world economic completion, is circumvented by the restrictions and the conditions that are imposed by national policies.

2. The Situation in Greece

With regard to economic immigration, at the end of the 20th century, from a country of despatch Greece changed into a country of reception. The same occurred in other Mediterranean countries, such as Spain, Portugal and Italy. This change happened mainly during the 70s and 80s, because of the economic growth that was taking place at that time. The flows to Europe, North America and Australia (that had occurred during the period between the two World Wars at the beginning of the 20th century and the period immediately after the Second World War) stopped and the flows from Central and Eastern Europe, and the Middle East begun. Henceforth, the migratory balance has been positive.

Thus, from the beginning of the 1990s – after the fall of the Central and Eastern Europe communistic regimes and the political realignments in the Near and Middle East – Greece began to accept large numbers of immigrants from its northern and eastern borders, most of which were almost certainly illegal. Both the Greek authorities and Greek society as a whole were unprepared and surprised by this event, with unfavourable results for both the immigrants and the Greek citizens alike. It is evident that, with the 1991 legislation (Law 1975/1991), immigration (under the pretext of illegal immigration) was placed “under persecution” in all fields of daily life (municipalities, schools, insurance and finance institutions, etc). Regarding illegal immigration, Greece is the country with a comparatively smaller number of legal immigrants in every 100 of them, among the EU countries; consequently, it has the biggest problem of illegal immigration!

3. The Institutional Framework

The migratory legislation of the Greek state in the modern era began with Law 1975/91 (which replaced the initial Law 4310/1929, after sixty two years in existence), and its specialised application was fine-tuned by a series of Presidential Decrees and Ministerial decisions. This law determines the

legal framework for the control of frontier crossings, the entry or exit of individuals, the length of stay, work, and the deportation of foreigners.

In 1996, Law 2452/1996 came into force, which modified the previous law and placed immigration policy on a new footing. Specifically, the presidential decrees authorized by this law (PD 358/1997 and PD 359/1997) regulate the processes of the legalisation of immigrants (provisional and limited stay immigration cards, etc).

After a roughly five-year period Law 2452/1996 was replaced by Law 2910/2001 (*“Entry and stay of foreigners in the Greek territory. Possession of Greek citizenship and other provisions.”*), which was also modified by another recent law (3013/2002).

More specifically, with this law the following matter (amongst others) are determined:

- *“In each regional administration of foreigners and immigration, a three-member Immigration Committee is recommended, which is constituted by two employees from the service for foreigners and immigration, of which one is the head, and one is representative of the police force. The Regional General Secretary appoints the members of the Committee, regular and reserve, and the secretary with his/her assistant ... The Regional General Secretary’s ruling could, moreover, also recommend up to two three-member Immigration Committees in each regional administration of foreigners and immigration, provided that they are needed to ensure a more speedy completion of their work.” “The Immigration Committee’s job is the formulation of opinion for the issuing or the renewal of permission to stay for immigrants ...” (article 9).*
- *“Entry of a foreigner into Greece in order to study in Higher Education Institutions (A.E.I.), Technological Educational Institutions (T.E.I.), in “Higher Religious Faculties and Religious School Units”, in the Higher Faculty of Teachers of Mechanical Engineers of the Faculty of Educational Functional Professional and Technical Education, in the Higher Faculty of Tourist Professions of E.O.T., in Technical Professional Schools (T.E.E.), in the Greek language school of the Universities of Athens or Thessaloniki or in the Centre of Greek Language in Thessaloniki, is allowed, provided that the foreigner has already received permission of entry for this reason. Included in the list of studies are first degrees and postgraduate degrees, as well as possession of a speciality, as in the case of medical studies” (article 10).*
- *“Entry of a foreigner into Greece for training in public or private educational centres (I.E.K.) is allowed, provided that the foreigner is accepted by them and is granted relevant study approval by the Institution of Professional Education and Training”. “Entry of a foreigner into Greece for the study of ... programmes*

in laboratories of free study is allowed, provided that the foreigner has been accepted by them and that the relevant laboratory certification stating that the foreigner is accepted for the duration of the relevant programme is approved by the relevant service of that Prefectoral Authority” (article 14).

From the above continuous changes in the legislation, the speed of developments in the immigratory movement is apparent on the one hand, and, on the other hand, the inexperience, improvisation and haphazard treatment by the Greek state is apparent. Thus, for example, the severity of provisions, in the initial laws at least, contributed to the persistence of illegal immigration. It appears that the legislators did not comprehend that Greece had been changed de facto into a country of reception of immigrants, given that the emphasis was initially placed on policing and deportation. And that was the case despite the explicit constitutional arrangements for the protection of the rights of all who live and work in the country. Following on from the above, some positive measures were taken, such as the legalisation of immigrants and the shifting of the administration of immigratory policy to the Ministry of Internal Affairs and Public Administration, as well as the completion of the first business programme for immigrants and the formation of the Immigratory Policy Institute, although this is still in its very early stages.

4. Quantitative and Statistical Data

The fundamental pieces of information for the observation of the phenomenon are statistics on the development over time of the total flow of immigrants, and their geographic distribution in the Greek geographic and administrative units (Regions, prefectures), both as a percentage of the total of immigrants nationally and as a percentage of the population for each administrative unit. In addition, there is certain basic information from the profile of the immigrants (country of origin, education, profession, age, sex, etc.).

Data regarding immigration into Greece are presented in the census at the beginning of the 80s. More specifically, the 1991 and 2001 census recorded the following:

- 1991: 167,276 foreigners
- 2001: 797,093 foreigners

Various estimates based on data from OAED (Organization for the Employment of the Workforce) and on the “application for residence” set

the number of immigrants higher, at approximately 1,000,000 – of which a large number are illegal. It should be reported that according to the UN, the population of Greece in 2015 is forecast at 14.2 million, of which 3-3.5 million will be foreigners - immigrants coming from countries other than the European Union (IAPAD's Study for the immigrants).

According to the report of the National Observatory for employment and the recent census of the National Statistical Service, we have the following information:

- Regarding the country of origin of immigrants, Albania (with roughly 65%) is at the top of the list. The rest of the immigrants come from various Balkan countries and the Middle East (Bulgaria, Romania, Pakistan, etc).
- Regarding the age of immigrants, there is a relatively large concentration between 30 and 35 years of age, while the overwhelming majority are concentrated in the productive age range.
- As for the educative level, 50% are graduates of secondary education while 9% also attended higher education.

Based on the recent 2001 census, the distribution of foreigners at regional level is presented in Table 1.

Table 1. Distribution of Foreigners (Immigrants) in the Greek Geographical Departments (GD)

Geographical Departments (GD)	Total Population of immigrants	Percentage (%) of Total Population of immigrants	Percentage (%) of Total Population of each GD
Greater Athens Area	376,732	47.26	10.01
Central Greece and Evoia	49,187	6.10	5.92
Peloponissos	81,679	7.07	7.07
Ionian islands	20,524	2.57	9.63
Epirus	17,067	2.14	4.82
Thessaly	33,782	4.23	4.48
Macedonia	125,973	15.80	5.19
Thrace	5,743	0.72	1.58
Aegean Islands	40,911	5.13	8.04
Crete	45,495	5.70	7.56
Total	797,093	100.00	7.24

Source: National Statistical Service of Greece, Census 2001

5. Spatial Planning and Infrastructures of Support for Immigrants: Problems and Possibilities of Guarantee of Sufficient Housing

The immigration to Greece that took place mainly in the 90s occurred in two “waves”. The first between 1991-1997 and the second after 1997. The immigrants in the first wave had come in search of direct economic profit, some of them with the hope of returning to their homelands. Their living conditions were in general very bad. They resided in old and abandoned houses without basic utility services (water, electricity, etc.) and with high occupancy density. The immigrants of the second wave were older, have much better living conditions and their expectation is that of a permanent stay and integration into Greek society.

As can be seen in the above tables, the immigrants mainly settle in the region of the capital (47%). The attraction of the urban regions for immigrants is justified not only by the need for easier access to the job market and the satisfaction of their economic needs, but is also explained through cultural and social reasons; the city offers the possibility of easier communication, transmission of experiences and socialisation amongst themselves and, therefore, preservation of their culture. There is also the possibility of better integration into the local society through the services and activities (recreational, athletic, educational, etc) that are offered in the city. Of course, that does not mean that the immigrants always take advantage of these possibilities.

However, notwithstanding the above, the fact is that urban infrastructures and services for immigrants in Greece are generally insufficient. In particular, these infrastructures are not considered to be “suitable” for immigrants (e.g. problems with the “cross-cultural” schools).

Regarding the housing situation, and in relation to the other European countries, it should be stressed that in Greece the proportion of the immigrant population not housed is very high due to lack of government care. According to research estimates, this housing deprivation concerns 2/3 of the immigrant population (IAPAD). The conditions of lack of housing are related to conditions of insecurity, such as the unregistered renting of residences, sub-letting from immigrants to other immigrants with its attendant consequences, evictions, blackmail and threats from householders - mainly against the illegal immigrants, the dependence on employers that offer

accommodation and at the same time breach the working rights of immigrants, the lack of basic standards of hygiene, the ill-treatment of minors and women, the distribution of narcotics, the lack of health care, etc.

On the other hand, upon examining Law 2910/2001 we observe that, as a criterion for the issuing of entry permits, it is statutory for the immigrant to have ensured some lodging; however, this is without reference to the conditions and type of lodging based on the international conventions ratified by Greece for the human and social rights (Statement of Human Rights, article 25, and European Social Charter, article 31). Also, there is no mention in the law of the basic constitutional rights concerning the obligation of the state to ensure sufficient housing to all legal residents of the country.

Certainly, the application of housing and other rights requires planning and the bringing together of suitable mechanisms targeting, primarily, the legal immigrants, in order to aid them in accessing safe, secure and sufficient housing.

According to IAPAD's study, the basic objective should be the planning of an institutional framework and specifications for the support of housing, as well as the creation of relevant pilot units that will basically have a preventive role. Particular care should be given to the frail and susceptible groups of immigrants through the provision of a social residence. The necessary actions for the implementation of the objectives should be undertaken by institutions that have the suitable know-how concerning built-up development and urban and social planning issues (e.g. DEPOS – the Public Enterprise of Urban Planning and Accommodation, Research Centres and Consultant researches).

Even if the region of application for the above activities is the entire Greek territory, particular emphasis should be given to the metropolitan regions of Athens and Thessaloniki, as well as the pilot application in two frontier regions. Finally, the key to the success of these activities is the creation of housing units for support and mediation in those prefectures presenting accentuated problems in accommodating immigrants.

6. Repatriating Refugees

According to the Greek legislation, immigrants who have arrived and resided in Greece since the late '80s and after the collapse of the socialist states in Europe can be separated into two categories: those of Greek

descent and those not. And one can see a clear difference between policies aimed at accommodating the “repatriating Greeks” in their new environment, and the ones targeted at the other immigrants, the former having a wider variety, being both more elaborated and better financed than the latter. Here it should be noted that the officially-used term “repatriating” is not correct, since the vast majority of these immigrants have never before lived in Greece, being the descendents of ancient Greek colonies, created in the area since the 8th century BC (Vergeti, 1993:27). The term could really apply only to a minority of first generation political exiles who expatriated in Eastern Europe and the former Soviet Union during the period 1946-1949, due to the Civil War, and have now been allowed to come back.

When talking about “repatriating refugees”, the reference is mainly made with reference to two periods of the contemporary Greek history:

- the 1922 Asia Minor disaster, when 1.3 million Greeks living in the Ottoman Empire were “exchanged” with 500,000 Turks living in Greek territory (to be precise, the “formal” characteristics for the identity of the “exchanged” – according to the Lausanne Treaty, 1923 – were not the ethnic identities but the religious affiliations i.e. Christian Orthodox *versus* Muslims), and
- the early 1990s, with the influx of populations from Eastern Europe and the former Soviet Union to Greece, after the collapse of the communist regimes and the ethnic tensions that arose there immediately after.

Quantitatively, there should be no comparison between these two periods, since the 1.3 million refugees of 1923 comprised a much more serious social problem than the 160,000 refugees of the 1990s – furthermore, the specific conditions of each period and the different capabilities due to the time span between them also has a bearing. Nevertheless, the outcomes of the assimilation strategy of the 1920s and 1930s seem to be more effective and reliable than the recent one, for reasons that will be analysed later. “Repatriation” – with a more precise meaning of the term - was also recorded in Greece during the period 1971-1986. During that period, the number of people returning back to Greece was becoming increasingly higher than the emigrating population, which had reached a total of almost 12 million since the beginning of the 20th century. During this period of 1971-1986, 625,000 Greek immigrants came back to Greece with the intention of staying permanently (NSSG, 2007). This wave, though, did not

create the panic and the urgent needs of the two afore-mentioned periods, since returning Greeks were mostly first generation immigrants abroad, with families and relatives still in Greece, and with a clear idea about Greek reality, arising from their frequent visits to the homeland. Furthermore, they were skilled, used to functioning in the same social system as existed in Greece, and financially healthy – and very often better off than the majority of the Greek population. Consequently, there was no urgent need for social and financial intervention on the part of the public sector, and this period was not characterised as one of refugee invasion.

This paper will examine the policies and projects related to providing immediate and intermediate shelter and permanent housing for refugees, the outcomes hitherto of these policies, and their repercussions for the human rights of immigrants. This will be presented within a general framework describing the characteristics of the refugees from the former Soviet Union and other Eastern European countries, the conditions of their “repatriation”, and the policies and means adopted for their assimilation into the Greek society. In the context of the above, the establishment of EIYAPOE (National Foundation for the Reception and Rehabilitation of Repatriating Expatriate Greeks) – which was the main vehicle for the execution of housing policies for the refugees – will be analysed, together with its function for approximately one decade, and then, its dissolution due to ineffectiveness, mismanagement and excessive money consumption.

The initial signs of refugee movements into Greece became evident in 1987, two years after the appointment of M. Gorbachev to the position of General Secretary of the Communist Party of the Soviet Union. During this period, ethnic tensions erupted in the then Soviet Union, following a severe economic crisis. The situation deteriorated and populations of different ethnic origins were trapped in wars in several then Soviet republics. Appeals for help from populations of Greek origin in 1989 were followed by visits from the then Greek Minister of External Affairs, A. Samaras, to the troubled territories, during which he issued an open and quite promising invitation for the “repatriation” of local people of Greek origin to their motherland – and, even more promising, to the European Union. The motives of this invitation have since been criticised as being somewhat premature, as promises were made without any previous preparation which would have guaranteed their materialisation. Furthermore, it has also been interpreted as a move to gain useful political support from the refugees, having as an example the equivalent support that Prime Minister E. Venizelos gained from

the 1923 refugees, especially with the prospect of forthcoming national elections. The official Ministerial invitations, combined with the lifting of restrictions of the movement of Soviet citizens out of the Soviet Union, provoked an increasingly large movement of refugees into Greece. The number of “repatriating” refugees from the Soviet Republics reached 155,000 up to the year 2000, and they came from Georgia (52%), Kazakhstan (20%), Russia (15%) and Armenia (6%) (GGAE, 2000a: 50). The peak of arrivals was recorded in the period 1992-1993, and the majority of the immigrants resided in Northern Greece (mainly in Thessalonica) and in the wider area around Athens (Attica). Their geographic distribution in Greece and the number of arrivals per year can be seen in the Table 2 and 3.

The criteria for choosing their new residence were the existence of relatives and friends in the same area, the possibility of employment, living in a city rather than a rural area, and a general impression of a relatively better quality of life in the chosen location (GGAE, 2000a: 44).

Table 2. Geographic Distribution of the Repatriating Refugees from the Former Soviet Union in the Greek Regions

Region	Families	Individuals	Percentage (%) of the total
Thrace	6,583	22,984	14.8
Macedonia	29,265	91,673	59.0
<i>Prefecture of Thessalonica</i>	16,174	51,139	33.0
<i>Rest of Macedonia</i>	13,091	40,534	26.0
Epirus	35	112	0.1
Thessaly	397	1354	0.9
Stereia Ellas	10,972	33,837	21.8
<i>Prefecture of Attica (Athens)</i>	10,779	33,204	21.4
<i>Rest of Stereia Ellas</i>	193	633	0.4
Peloponnese	321	943	0.6
Crete	1,231	3,893	2.5
Ionian islands	19	57	-
Aegean islands	157	466	0.3
Total	48,980	155,319	100.0

Source: GGAE, 2000a: 40-41; Georgoula and Grillaki, 2002: 116)

Table 3. Arrivals of repatriating refugees from the former Soviet Union per Year, 1977-2000

Year	Individuals arrived	Percentage (%) of total arrivals
1977-1986	334	0.2
1987	169	0.1
1988	669	0.4
1989	5,195	3.3
1990	16,716	10.8
1991	17,331	11.2
1992	19,846	12.8
1993	25,720	16.6
1994	14,737	9.5
1995	14,586	9.4
1996	14,298	9.2
1997	12,381	8.0
1998	5,761	3.7
1999	4,676	3.0
2000	1,307	0.8
Not recorded	1,593	1.0
Total	155,319	100.0

Source: GGAE, 2000a: 46; Georgoula and Grillaki, 2002: 116

Having to face this phenomenon, the then national Greek Government of K. Mitsotakis went on to establish the National Foundation for the Reception and Rehabilitation of Repatriating Expatriate Greeks (EIYAPOE)]— as derived from the initials in Greek). This was supposed to be a flexible organisation belonging to the wider public sector, but autonomous from the time-consuming state bureaucracy, with its main task being the provision of shelter and housing to refugees (Voudiclaris, 1999:3). Here the exclusive aim of the foundation should be underlined: supposed to serve only the “repatriating expatriate Greeks” and excluding the other immigrants, legal or illegal, who had also entered Greece in vast numbers. It also has to be noted that the main focus of the rehabilitation programme was on “repatriating expatriates” from the republics of the Soviet Union, these either having been residents there for centuries, or a smaller number of first or second generation Greeks who fled Greece as left-wing partisans after the civil war of 1945-1949 and went to the socialist countries as political exiles.

Political exiles from other Eastern European countries were also allowed to return to Greece after the post-dictatorship official “national reconciliation policy” of the Greek State¹, but they were not part of the EIYAPOE rehabilitation programme² (Georgoula and Grillaki, 2002: 118).

EIYAPOE was established by Law 1893/1990 under the auspices of the Minister of External Affairs and its tasks and programme were then approved. Two years later, with Law 2080/1992, its focus was broadened to include refugees from Albania – who, in this period, were flocking into Greece in vast numbers – but still, only for those of Greek origin. It also undertook the responsibility of providing assistance to expatriate Greeks abroad. Thus, according to the new law, EIYAPOE had three distinct areas of responsibility:

- i. the programme for repatriating expatriates from the former Soviet Union and Eastern Europe,
- ii. the programme for Albania, and
- iii. the programme for providing assistance to expatriate Greeks still living in the territories of the former Soviet Union (EIYAPOE, 1996: 18).

The 1st programme was divided in three sub-sectors: the housing programme, which was considered to be the first priority, the education programme and the professional training programme. The 2nd programme was for planning and implementing activities in the regions of Albania with a Greek minority, mainly in the areas of education, culture, technical sub-structures, regional development, professional training, and social services. The 3rd programme was about the same activities as above, but for regions with a Greek minority in the former Soviet Union. As stated previously, the main focus of this work will be on the housing programme for the refugees from the former Soviet Union and Eastern European countries.

The establishment and function of EIYAPOE seemed to be of major importance for the Greek government, who also granted it special privileges in order to facilitate its smooth function. Thus, according to Law

¹ The military dictatorship in Greece lasted from 1967 to 1974. The post-dictatorship political climate was generally progressive, and national reconciliation between the political left and right was top on the political agenda of all political parties.

² There was no significant general national policy concerning the repatriation and rehabilitation of the political exiles and repatriation was examined on an individual basis. Furthermore, there is still a category of political exiles, the ones from the Republic of Macedonia who are not allowed to return to Greece due to old territorial disputes.

1947/1991, it was given complete tax exemption, the right to proclaim expropriation for public benefit, and to use public land without exchange.

The internal organisation of EIYAPOE was also ambitious: it consisted of a Central Branch and of “Hospitality Centres”. The Central Branch was organised in eight Directorates: personnel, finance, technical services, education and training, supplying and transportation, real estate, data processing, and internal management and control (EIYAPOE, 1996: 18-19). “Hospitality Centres” were allocated in three regional “Inspectorates”: Eastern Macedonia and Thrace, based in Komotini with sub-divisions in three other prefectures; Central Macedonia, based in Thessalonica with sub-divisions in three other prefectures; and Epirus and West Macedonia, based in Ioannina with sub-divisions in two other prefectures (*see* Figure 1). Within a few years, many of those sub-divisions seized to operate.

Table 4. EIYAPOE Finances and Sources of Finance, 1991-2001

Source of finance	Amount of financing in euro	Percentage (%) of total
<i>Ministry of External Affairs (Regular budget)</i>	116,041,086	49.9
<i>Extra subsidies</i>	15,471,753	6.9
<i>Ministry of Finance</i>	4,501,834	1.9
Partial Sum	136,014,673	57.7
Social Rehabilitation Fund of European Council (SRFEC)	31,248,716	13.4
European Union subsidies	20,446,075	8.9
Subsidies of various organisations	3,753,485	1.6
Donations	460,748	0.2
Interest from capital	38,154,072	16.4
Tax returns / interest	2,074,835	0.9
Others	334,556	0.1
Total	232,487,160	100.0

Source: EIYAPOE, 2002: 65; Georgoula and Grillaki, 2002: 124

Finances were also a strong point of the organisation, at least at the beginning of its function. Sources of finance for EIYAPOE were the Ministries of External Affairs and of Finance, the Social Rehabilitation Fund of the European Council (SRFEC), several European programmes, and

various other sources such as grants, interest from capital, donations, etc. The total amount of finances for the decade 1991-2001 is shown in Table 4, and the temporal distribution of these finances is shown in Table 5.

Table 5. Temporal Distribution of EIYAPOE Finances During the Period 1991-2001

Source of finance		1991-1993	1994-1999	2000-2001	1991-2001
Ministry of External Affairs (Regular budget)	Total	17,168,012	76,868,672	22,004,402	116,041,086
	Yearly Average	5,722,671	12,811,445	11,002,201	10,549,190
Extra subsidies	Total	15,383,712	88,041	-	15,471,753
	Yearly Average	5,127,904	14,673	-	1,406,523
Ministry of Finance	Total	-	1,027,146	3,474,688	4,501,834
	Yearly Average	-	171,191	1,737,344	409,258
Social Rehabilitation Fund of European Council	Total	22,180,484	9,071,167	-	31,248,716
	Yearly Average	7,393,495	1,511,862	-	2,840,792
European Union subsidies	Total	11,228,173	9,088,775	129,127	20,446,075
	Yearly Average	3,742,724	1,514,796	64,563	1,858,734
Subsidies of various organisations	Total	3,263,390	478,357	11,738	3,753,485
	Yearly Average	1,087,797	79,726	5,869	341,226
Donations	Total	334,556	123,258	-	460,748
	Yearly Average	111,519	20,543	-	41,886
Interest from capital	Total	22,908,290	15,031,548	214,233	38,154,072
	Yearly Average	7,636,097	2,505,258	107,116	3,468,552
Tax returns / interest	Total	-	2,074,835	-	2,074,835
	Yearly Average	-	345,806	-	188,621
Others	Total	5,869	278,797	49,890	334,556
	Yearly Average	1,956	46,466	24,945	30,414
Total	Total	92,472,486	114,130,596	25,884,078	232,487,160
	Yearly Average	30,824,162	19,021,766	12,942,039	21,135,196

Source: EIYAPOE, 2002: 62-65; Georgoula and Grillaki, 2002: 125, authors' elaboration

The above financial scheme covered all the activities of the organisation. Money from the Social Rehabilitation Fund of the European Council, in particular, was given as loans, exclusively for housing projects for the refugees and the loans covered 40% of the total budget of each housing

project, while the remaining 60% was supposed to be covered by national contribution. From Table 5, it can be seen that during the period 1994-1999, incoming money from SRFEC was drastically reduced, and in 2000-2001 it was finally stopped. It was said that this happened when European Council officials found out that the money loaned had been given to refugees as rent subsidies, instead of being used for the construction of permanent residences. It can also be observed that EIYAPOE finances followed a relatively sharp decline during this decade and the housing sector was particularly badly hit because of the interruption of SRFEC loans, among other things. As will be seen later, this affected not only the quality of EIYAPOE services but also alienated the refugees who felt insecure by virtue of the gradual abandonment of a policy so crucial to them. A clear indication of the shortage of funds for the housing programme is that while the total cost of the programme for the decade 1991-2001 was estimated at €205,429,200 (EYIAPOE, 1996: 28), from which €123,257,520 (60% of the total) should have been the national contribution, only an amount of €136,014,673 was in fact given by the Greek government to cover all EIYAPOE activities, as shown in Table 4. This means that only part of this amount went towards the programme for repatriating expatriates from the former Soviet Union and Eastern Europe, and again only part of the latter was actually spent on the housing programme.

In fact, despite the initial rhetoric about the increased effectiveness of the new organisation, there were disturbing signs, casting doubts on the reliability of the operation right from the start. Although the organisation and funding of EIYAPOE started in 1990, the housing programme was delayed for more than three years, since all planning and constructions of the first Reception Centres for the refugees were made by a special section of the Greek army (SYKEA). This section pre-existed EIYAPOE, was dealing with reconstruction projects and, according to Law 1262/1992, was supposed to be automatically dissolved after the establishment of EIYAPOE. Nevertheless, even after the establishment of EIYAPOE, the construction of the first permanent refugee settlements was also given to SYKEA by virtue of the 27/2/1992 ministerial decision made by the Ministers of National Defense and External Affairs, which went on organising the project, signing contracts and supervising works. This continued until 2/7/1993, when the permanent dissolving of SYKEA was announced, and EIYAPOE finally took over (EIYAPOE, 1996: 59). There was speculation that SYKEA was maintained for as long as it was because it was needed for some developing

companies to get contracts for the housing project. Nevertheless, even though one would have expected that even after this delay the Foundation would take over signing contracts, supervising projects, etc, it in fact went on granting its own responsibilities in running housing projects to other agencies, such as DEPOS (National Foundation of Housing and Urban Planning) or VIPETVA (the construction branch of the Bank for Industrial Development of Greece); in neither case were these bodies better suited to this type of responsibility. This made the ability of the Foundation to intervene in the phases of planning and construction too indirect and ultimately proved harmful to the project (Voudiclaris, 1999: 4-5).

7. Housing Program of EIYAPOE

7.1. Characteristics and Location

The accession of repatriating refugees in the housing and rehabilitation programme of EIYAPOE was a matter of personal choice for them. A restrictive term, though, was that individuals to be accepted onto the programme should have their passports stamped by the Greek Consulate, indicating “Repatriation”. People on tourist visas were not allowed to participate in EIYAPOE programmes.³

The first elements of the planning phase of the housing programme of EIYAPOE were to define the stages and structural parts of it, and to specify the locations of these parts. According to what was planned, the rehabilitation of repatriating expatriates in the sectors of accommodation and housing should follow four stages (EIYAPOE, 1996: 36):

- i. Initial reception in “Hospitality Centres” and a stay there of 15-30 days.⁴
- ii. Temporary stay for another period up to six months in “Reception Settlements”.
- iii. A move into rented accommodation, and
- iv. establishment in permanent residences.

³ This restriction was lifted later, initially by providing the possibility for the ones on tourist visas to get the “repatriating” status from specific civil departments in Greece, and then by extending the right to participate in EIYAPOE programmes to people who came to Greece on tourist visas before 1/1/2000 (General Secretariat of Repatriating Expatriate Greeks 2000a:25, 31 and interviews).

⁴ According to Law 1893/1990 regarding the establishment of EIYAPOE, this initial 15-30 day stay could be prolonged under special circumstances for as long as the Executive Board of EIYAPOE deemed appropriate.

During the first two stages, the refugees stay in a collective environment, completely protected and organised, in order to get basic assistance and information and start the adjustment process into the political, social, economic and cultural conditions of their new environment. The other two stages (rented accommodation and permanent residences) are under conditions of individual, independent living, and during this phase the period of adjustment on the part of the refugees to their new life style is completed.

Figure 1. Organisation and Activities of EIYAPOE in Greece



Source: Kritikos, 1996: 4

The choice of location for the housing projects was based more on political than on social criteria. Although the initial plans of EIYAPOE were to

help all refugees settle in Northern Greece⁵, ultimately the implementation of all EIYAPOE programmes was concentrated in Thrace, in north-eastern Greece. The reasons for this were that there is a Muslim minority in this area, and the Greek government wanted to counterbalance their political influence and demographic increase by directing the refugees to reside there⁶ (Kritikos, 2002). The negative aspects of this choice were that the refugees who were residing there had serious problems in finding employment, and this led many of them to avoid joining the programme and instead moving straight to Thessalonica or Athens.

For the first stage of the programme, the first three “Hospitality Centres” were created in Athens (Agios Ioannis Rentis), with a capacity of 250 persons; in Thessalonica (Lagadikia), with a capacity of 350 persons, and in Thrace (Dionysos Evros), with a capacity of 150 persons. (Georgoula and Grillaki, 2002: 133-134). The first two were gradually abandoned after a short period because of unforeseen problems, since the refugees who were accepted there refused to leave Athens and Thessalonica in order to move to Thrace for the second stage of the programme. Consequently, two new hospitality centres were provided in Thrace: in Soufli and in Dikaia, with capacity of 200 persons each. Parallel to these, temporary Hospitality Centres were also created during the peak periods of arrivals of refugees, mainly in student hostels and in hotels. Most of them were in Thrace, but a few of them were also in central Greece (in the prefectures of Larissa, Imathia, Fthiotida, etc). EIYAPOE did not provide any reasoning for the choice of their location in respect of these, thus, allowing speculation about preferential deals with some hotel owners.

In the second stage of the programme, refugees were moved from hospitality centres to “Reception Settlements”. Their creation was financed by national funds and loans from the Social Rehabilitation Fund of the European Council. EIYAPOE was the official proprietor of the settlements and their function was in co-operation with the local municipalities and prefectures. During their stay there, the refugees could attend language and training programmes; there was child care and education, medical care,

5 This was reflected in the locations of the first Hospitality Centres and Reception Settlements which were spread in all Central and Northern Greece (map 1). Some of them continued operating even after the exclusive implementation of all EIYAPOE programmes in Thrace and became permanent settlements.

6 Another characteristic of this area was, then, the low level of development. Ten years later, the pace of development has been accelerated but Thrace still is among the poorest areas in the European Union.

etc. There were five reception centres (EIYAPOE, 1996: 42) which were created between 1991 and 1993:

- Zigos, Kavala, with a capacity of 1,000 persons.
- Sapes, Rodopi, with a capacity of 750 persons.
- Palagia, Evros, with a capacity of 800 persons.
- Farkadona, Trikala, with a capacity of 500 persons and
- Evmiro, Xanthi, with a capacity of 450 persons.

In the third stage, the refugees were moved from reception settlements to individual residences, mostly rented, in order to gradually get used to how to manage their own lives on an everyday basis. Their rent, bills for electricity, water, etc, were subsidised, but they were responsible for making the payments themselves. It was intended that subsidisation would cease as soon as the financial situation of the refugee families allowed it.

The final stage was the establishment of the refugee families in permanent residences which would become available to them in various ways: by financing their purchase in the free market through low interest loans from EIYAPOE, by partly financing their construction in permanent settlements in EIYAPOE sites, or by buying previously-built houses which were constructed by EIYAPOE in local municipalities.

7.2. Policy Phases of the Programme

The implementation period of the housing programme of EIYAPOE 1991-2001 can be divided into three phases, which signify different policy orientations, different financing schedules and different impacts on repatriating refugees.

- The first period was from 1991 to 1993 and emphasis was given to the reception of the refugees as well as to the organisation of EIYAPOE and planning of its activities.
- The second period was from 1994 to 1999. The focus of activities was on creating permanent housing settlements, and providing permanent residences to refugees.
- Finally, the last period was from 2000 to 2001 and the activities of the Foundation were restricted to complementary actions in support of the policy of “aftostegasi”, according to which refugees were expected to get actively involved in completing the construction of their residence. This was also the last period of EIYAPOE, which

ceased to exist after December 2002, and legislation was introduced to arrange for the transfer of its property, responsibilities, pendencies, etc. to other public sector agencies. The dismantling of the Foundation marked the conclusion of a severe financial crisis, which provoked criticisms of ineffectiveness and mismanagement.

A more detailed description of these phases will follow, in order to give a better insight into the development of the housing project and the way that it affected the repatriating refugees.

The first period, 1991-1993, started with the creation of the “Hospitality Centres”, the temporary “Hospitality Centres” (*see* section 6: 236) and the “Reception Settlements”. The Foundation had a limited say in these, since it was SYKEA who instigated most of them. The Hospitality Centres of all kinds played a very important role in the reception of the refugees but they proved to be very costly, so much so that they put the next phases of the programme in jeopardy. During this first period of the operation of the Foundation, the total cost of Hospitality Centres came to 1,814,000,000 drachmas at 1991 values (EIYAPOE, 2002) (or €12,320,525 at current values), and the annual cost per person fluctuated between 572,000 and 940,000 drachmas in 1991⁷ (€3,886 and €6,385 respectively at current values). The high difference in variations was due to the occasional use of hotels as temporary Hospitality Centres (*see* section 6: 236). Furthermore, the annual “hospitality” cost per person increased by 65% in 1992 and by 49% in 1993, and the number of refugees increased by 150% between 1992 and 1993 (Georgoula and Grillaki, 2002: 134). The Reception Settlements – which were the second stage of the rehabilitation/housing process for the refugees – were less costly than the Hospitality Centres: they were made of prefabricated houses, which had previously been used as temporary accommodation for the local population after earthquakes. Their total operating cost⁸ amounted to 1,989,000,000 drachmas (€13,509,110 at current values) – which is slightly higher than the equivalent of Hospitality Centres, but the annual cost per person fluctuated between 164,000 and 279,000 drachmas in 1991 (€1,109 and €1,895 at current values respectively), and was further reduced up until 1993 (Georgoula and Grillaki, 2002: 135).

⁷ The above amounts of money in drachmas reflect a reality at the beginning of '90s, when inflation was running at a rate of more than 20%. Today's inflation rate is around 3.5% and the conversion in euros has been done at 2004 levels by multiplying the figures with a coefficient reflecting inflation during the intervening period.

⁸ This cost does not include the cost of moving the houses on site and the total cost of technical infrastructure in the Reception Settlements of Zigos, Sapes, Palagia, Evmoiro, and Farkadona, which reached 2,989,000,000 drachmas (€8,771,827) and was paid mainly by the Ministry of Planning, the Environment, and Public Works.

During this period, besides the Hospitality Centres and the Reception Settlements, the Foundation continued renting houses for the third stage of the rehabilitation/housing of the refugees (*see* section 7.1: 239). The contracts were made between the owners of the houses and the Foundation – not the refugees themselves – since this was considered positive in terms of the credibility of the transaction for the owners. A total of 700 residences were rented in Thrace and given to refugee families during the period up to the end of 1993. (EIYAPOE, 2000: 5). The annual cost per rented house in 1993 was between 332,000 and 397,000 drachmas (€1,730 and €2,069 respectively at current values), which was much lower than the cost of Hospitality Centres, but higher than the cost of the Reception Settlements. Here it must also be noted that, according to the programme, the Foundation was subsidising the rent of the refugee families, depending on the financial situation of the refugees.⁹ One complication at this stage of the programme was that, very often, the repatriating refugees refused to pay for the other expenses relating to their property (electricity, water, maintenance, etc.), which was their formal responsibility but ended up being paid by the Foundation. (Kritikos, 2002). In this way, the rented accommodation stage became somewhat equivalent to that of the Reception Settlements, and it did not work towards the gradual transition of the refugees into their new environment, as had initially been planned.

During this period, as well as rented accommodation, the Foundation also explored the market for permanent accommodation. The steps – whether in sequence or not – taken in pursuance of that aim were:

- a. finding and acquiring land to develop,
- b. buying ready houses,
- c. constructing houses in land yielded to the Foundation, and
- d. the creation of permanent settlements (Laskarakis, 2002).

Acquisition of land, in particular, did not prove successful. Until 1993, the Foundation acquired 714ha of public land, a great percentage of which was not suitable for the construction of houses, either due to the geography of the terrain, or due to administrative restrictions (protected areas, green belts, etc.). Of the remaining land, the highest percentage was agricultural land, quite isolated from other urban centres. The reasoning that prevailed

⁹ Highly indicative of the mistrust between the Foundation and the refugees was the fact that, while according to Foundation sources the rent subsidisation reached 70,000 drachmas (364 euros at current values) per month, according to the refugees, this was never higher than 58,000 drachmas (302 euros at current values).

and led to this choice was that new permanent settlements should be relatively independent and self-sufficient (Kritikos, 2002). Most permanent settlements were built on agricultural land, while some others were built on areas adjacent to existing Reception Settlements (Evmoiro in the Prefecture of Xanthi, Sappes in Rodopi, Palagia and Giannouli in Evros, and Zigos in Kavala). The Foundation did not participate in the planning and construction of the settlements (*see* section 6: 238) and this was a negative factor with regard to the quality of the resultant outcomes – the example of Zigos is clearly indicative of this problem (Voudiclaris, 1999: 4-5). Since there was a deficit of residential land, because of the above considerations, the Foundation went ahead and bought land and houses in the housing estates of EKTENEPOL, near Xanthi and Komotini (Bakolas, 2002). In this way, the shortage of land was dealt with, but the finances of the programme started manifesting a significantly serious shortage.

Table 6. Involvement of Refugees in the EIYAPOE Housing Programme During the Period 1991-1993

Stage of housing programme	Families involved	Individuals involved
Hospitality Centres	175	609
Reception Settlements	845	3,259
Rented Residences	700	3,071
Permanent Residences	155	663
Total	1,875	7,602

Source: EIYAPOE, 2002: 17; Georgoula and Grillaki, 2002: 143

The system of granting permanent houses to refugees also became a controversial issue *per se*. Houses which were to be built in permanent settlements, as well as the ones to be bought by the Foundation, would be given to refugee families as “chrisidancio” which meant that these families would live in the house for 20 years and they would then have the right to complete ownership. This measure was supposed to discourage refugees from moving away from Thrace to the major urban centres (Athens or Thessaliniki) and persuade them to stay in the place of their residence (Kritikos, 2002). The process of choosing which families would get a house was bitterly disputed. Until 1994, the choice was made according to social criteria and by a committee with Foundation officials as members. After indignant demonstrations and a certain amount of criticism centred on the phenomena

of favoritism and deliberately opaque procedures, the system changed to a more objective evaluation using indicators and weightings, plus a ballot.

Concerning the architectural design of houses, three designs were finally approved: one for up to 5 persons (with area 95 m²); one for 7 persons (115 m²); and one for 9 persons (125 m²). It was intended that these designs would be implemented in every housing project, and this created some serious problems in at least one case, as will be seen later.

During the second period, 1994-1999, the Foundation shifted the focus of its activities to permanent accommodation for repatriating refugees, and the creation of permanent housing settlements. The Hospitality Centres gradually had their role reduced. It is indicative that, while during the period 1991-1993 they reached a peak of 1,050 refugees being assisted, at the end of 1999 there were only 169 in the centres. The Reception Settlements were also gradually dismantled in order for the refugees to be moved into rented accommodation. The move to this stage during this period was very substantial and far exceeded previous expectations, since at 1993 there were 3,071 refugees who were in rented houses and by 1997 their number had increased to 15,000 (4,029 families). The expenses for subsidising the rents had also increased to 2,646,000,000 drachmas (€7,765,224) by 1997, and the annual cost per family was also double that of the equivalent in the first period. These uncontrollable expenses again brought criticism upon the Foundation, which began to appear increasingly problematic, corrupt and ineffective. Even worse, they provoked social tensions between the refugees and local communities, who thought that refugees were getting unacceptable privileges. Under these conditions, the Ministry of External Affairs put pressure on the Board of Directors of the Foundation who, in turn, decided to cut back the subsidies. The reaction of the refugees and their organisations was immediate, and they held demonstrations and also occupied the offices of the Foundation in the cities of Alexandroupoli, Komotini, Kavala, and Xanthi, asking for an invalidation of the decision (Alisanoglou, 1998). The outcome of the negotiations that followed was that cutbacks would have to be made in the subsidies given to refugee families who were financially secure. The categorisation would be based on criteria set after collaboration between the Foundation and the refugee organisations (Papandreou, 1998). Consequently, the expenses due to rental subsidies were reduced by up to 50% from 1999 onwards, partly due to the cutbacks and partly due to the gradual development of the fourth stage of the housing programme, which involved moving the refugees to permanent residences.

The methods used by the Foundation for advancing the permanent residence stage of the housing programme were as follows (Kritikos, 1996: 31):

- i. Purchase of developed land (mainly on housing estates) near the cities of Xanthi and Komotini.
- ii. Transformation of the Reception Settlements of Evmiro in Xanthi, Sapes in Rodopi, Palagia in Evros, and Zigos in Kavala into permanent settlements.
- iii. Preparation of urban plans and consequent creation of housing settlements / estates on land that was the property of the Foundation.
- iv. Construction of prefabricated houses in rural municipalities, at a level to not exceed 10% of the total number of houses in that municipality.
- v. Purchase of previously-built houses and flats in apartment buildings.
- vi. Purchase of houses and flats under construction, which were to be modified and finished according to the guidelines set by the Foundation.

The first housing settlements were ready to be used in 1995, in Evmiro, Sapes and Gianouli in Evros. The capacity of these settlements and their cost are given in Table 7.

Table 7. Residences and Costs of Permanent Settlements (until 1995)

Area	Number of residences	Total cost in euro
Evmiro (Xanthi)	88	2,072,660
Sapes (Rodopi)	281	7,165,520
Giannouli (Evros)	61	1,780,450
Total	430	11,018,630

Source: Kritikos, 1996: 32

The time spent on the construction of the above was considered excessive and the Foundation tried to justify this by claiming delays due to the legislative framework for public works. Consequently, it tried manoeuvring between legislation for public and private sector, often with problematic outcomes. Nevertheless, at the end of 1999, the number of residences in

permanent settlements reached 693¹⁰ and the number of purchased houses and flats that were ready to be used reached 239 (EIYAPOE, 2002: 21).

A recapitulation of the process of the housing programme at the end of the period 1994-1999 is displayed in Table 8.

Table 8. The Housing Programme of EIYAPOE at the End of the Period 1994-1999

Stage of the housing programme	Families	Individuals
Hospitality Centres	71	169
Reception Settlements	333	1,066
Rented Accommodation	3,732	14,031
Permanent residences	1,064	4,991
Total	5,200	20,257

Source: EIYAPOE, 2002: 20; Georgoula and Grillaki, 2002: 156).

The last period of EIYAPOE operation was from 2000 to 2001. This period signifies a basic change in housing policy on the part of EIYAPOE. The system of "aftostegasi" was introduced, the basic principle of which was that the repatriating refugees were financially assisted to participate in the making of their own accommodation. During the same period, there was an effort to terminate the unresolved issues of the previous periods, although without the hoped-for success (Laskarakis, 2002). The Reception Centres gradually stopped operating, but there were still 378 refugee families in the Reception Settlements at the end of 2001, living in prefabricated houses (resembling bunkers), in rather degrading conditions. Rented houses also existed, standing at a total of 3,506 at the end of the same period, but these were being gradually reduced year by year. It is indicative that, during 2001, there were 69 new contracts for rented accommodation and 403 existing contracts were discontinued. The construction of new houses, either in permanent settlements or in individual constructions during this period, stopped completely on the part of the Foundation, but purchases of ready houses and flats continued. To the total of 239 purchases of houses

¹⁰ Even though houses in these settlements were granted to refugees, many things were still in abeyance, such as: the official assignment of public spaces to the municipalities which would organise and take care of them, the complete construction of the technical infrastructure, construction works such as insulation in the houses, athletic facilities in some settlements, etc. (Laskarakis, 2002: 6)

in the period leading up to 1999, another 111 were added, so by the end of 2001 the total was 350 (EIYAPOE, 2000).

The system of “aftostegasi” was adopted at the beginning of this period and was part of a general strategy aimed at the rehabilitation of repatriating refugees. Its implementation was not aimed only at refugees participating in the EIYAPOE housing programme, but at all repatriating refugees throughout Greece. It was introduced by Law 2790/2000, which also dealt with issues regarding possession of Greek citizenship, training and education, professional restitution, etc. With regard to housing the refugees, in particular, it provided financial assistance in the shape of low- or no-interest loans, part of which (up to a limit of 30%) was given as a grant. With these loans, refugees could either buy houses or flats on the free market, build a house on land of their own, build their house on land granted to them by the Foundation, or buy and restore existing houses or flats which were either old or half-finished. In all instances, the guarantor of the loan was the Greek State, something that gave credibility to the whole transaction. This process also provided for having the architectural design either made or paid for by the Foundation, and the issuing of a construction permit was free, or, in cases where the refugees undertook the permit process themselves, insurance expenses were reduced by 50%. The amount of loan, the percentage of grant, the rate of interest – or the exemption from it – and the terms and type of assistance, in general depended on the location of the house to be obtained: according to this law, the locational distribution of refugees in Greece has to follow some rational patterns and be under legal control, so the national territory was divided into four zones, each with a different “weighting” in terms of possible assistance (Law 2790/2000). Zone A is the most favourable and contains Thrace, East Macedonia, and the North Aegean islands. At the opposite end of the country, zone D is the least favourable one, containing Athens, Thessaloniki, Pireaus, Patras, and Herakleion, which are the biggest cities in Greece and refugees are positively discouraged to go there to live. An essential condition for getting a loan is also the obligation that the applicant refugee family live in the particular house for a minimum of 15 years before they get the right to rent it to someone else, otherwise the loan has to be paid back in full. Finally, another element of the policy of “aftostegasi” that should be noted is the decentralised process of this policy, since the departments of the public sector that are involved belong to the Regions, Prefectures and Municipalities – i.e. local administration – and not to the Ministry of External Affairs

– central administration – anymore. The General Secretariat of Repatriating Expatriates also plays an important role in the dispatch process of “aftostegasi” by creating a data bank with available building plots in every prefecture, covering the expenses of building materials for zone A, and providing assistance for the bureaucratic procedures, etc. (GGAE, 2000b: 11).

Regarding the implementation of “aftostegasi” in cases where building plots were granted to refugees by the Foundation, EIYAPOE acquired land from various sources and in various places. Land was either bought on housing estates (Kritikos, 1996: 30), was transferred by Ministries and organisations of the public sector to the Foundation, granted/leased to the Foundation by local authorities, or purchased in individual plots on the free market.

In comparison to the other policies and methods used in the EIYAPOE housing programme, “aftostegasi” seemed to be much more satisfactory in operational terms. By 2002, 1,703 building plots had been transferred to refugee families in order for them to build, 1,000 building permits had been issued, and in almost half of them, construction had already started. At the same time, 2,754 applications for loans had been made by 2002 (1,655 from refugees in the EIYAPOE programme and 1,099 from refugees not participating in it); 2,069 of them were approved (1,321 for refugees in the EIYAPOE programme and 748 for others), and 1,597 had been processed (Panoilias, 2002).

“Aftostegasi” has been praised as a method which drags the refugees out of their passive role – as would be the case if they were given ready and free property – and forces them to get involved in procedures in the free market of their new society. Since they make the choices about designing and constructing their residencies, they usually get other refugees involved too, such as architects, engineers, builders, trade companies dealing in building materials, etc, and thus, create jobs for them. Furthermore, with “aftostegasi”, the process of housing the refugees has been speeded up, since there are no more bureaucratic delays affecting high numbers of houses, as was often the case when the construction companies were being contracted to build permanent settlements, and building or buying a house individually is also a much more flexible process.

“Aftostegasi” was rightfully characterised as an improvement upon the previous policies of EIYAPOE, but it still had some not-insignificant drawbacks. As has been mentioned earlier, the Foundation acquired land from

various sources in order to provide building plots to the refugees to build on. In the haste to promote the implementation of “aftostegasi”, upon the success of which the Foundation laid the justification of its own existence, loans were granted, building plots were transferred, building licences were issued and building was started, without having planned and constructed the technical infrastructure in advance. It is indicative that, in Komotini, where land was bought in an urban area and “aftostegasi” proceeded as fast as possible, many refugee houses are ready while there are no contracts with construction companies as yet to build the infrastructure (roads, water supply, drainage and electricity networks, etc). In Xanthi, similarly, even the studies for the required infrastructure networks are not ready, while in Palagía, in Evros, there are no funds for such works. (Voudiclaris, 1999: 14-15). One main reason for these inadequacies was that these tasks were assigned by the Foundation to the technical services of the local municipalities, which often were unprepared for responsibilities of this kind. So, there were delays in preparing the studies, in submitting the appropriate files to request funding from the Regional departments, and in following the procedures for contracting companies for the works, etc. The assignment of important tasks to other organisations on the part of the Foundation – although EIYAPOE was typically able and obliged to process them – seemed to be an inherent defect, right from the start of the operation (*see* section 6: 236).

Along with “aftostegasi”, some other measures were introduced to facilitate and encourage the housing rehabilitation of the refugees. Together with their controversial nature, these measures also fuelled social tensions in local communities. According to the measures, illegal constructions made by refugees would be legalised, and no fines would be imposed. The effects of this in a society where illegal construction has been a serious issue for the last thirty years can easily be imagined.

In its 12 years of operation (1990-2002), EIYAPOE could never reach the levels of efficiency, managerial ability, and social recognition for which it was established. On the contrary, criticism was escalating regarding its excessive spending, ineffective policies, delays and mis-management on the part of local societies, central government, and the refugees who participated in its programmes. Inevitably, with the last article of Law 3072/2002 (article 15), the dissolution of the Foundation was declared. An indication of its impending dissolution was given two years earlier, when immigrant and refugee issues were dealt with in a comprehensive way

by Law 2790/2000 without underlining the hitherto crucial role of the Foundation. A common ministerial decision related to Law 3072/2002 was issued by the Ministers of Finance, External Affairs, and Internal Affairs and Public Administration, defining the way that the property, liabilities, engagements, etc., of the Foundation would pass to the equivalent region. Regions, in turn, were responsible for the transfer to refugees of all parts of EIYAPOE property related to the housing of refugees. The administration of housing settlements was passed to the administrative jurisdiction of local authorities, which became responsible for maintaining their public space, infrastructure networks, etc.¹¹

A quantitative account of the housing programme of EIYAPOE, covering the whole period of its operation, can be seen below (GGAE, 2000a: 40; EIYAPOE, 2002: 61; Panoilias, 2002):

- Population of repatriating refugees accommodated in the areas of EIYAPOE activities (Thrace, East Macedonia: 8,140 families (27,700 persons).
- Population of repatriating refugees, participating in the housing programme of the Foundation: 6,225 families (20,257 persons) (72% of the total population accommodated in these areas)
- Building plots granted to refugees (until 31/12/2001): 1,438
- Unfinished residences¹² granted to refugees (up to 31/12/2001): 43 in Evmoiro, Xanthi, and 114 in Zigos, Kavala.¹³
- Residences not distributed yet (up to 31/12/2001): 5 in Xanthi and 7 in Komotini.
- Approved loans: 2,069
- Processed loans: 1,597
- Quality of refugee residences¹⁴: 46% of good quality,
50% of average quality,
4% of bad quality.

¹¹ There is also reference in the ministerial decision to sources of finance for the municipalities in order to deal with the obligations placed on their shoulders because of the matters in abeyance in almost all these settlements. The reference was, though, vague and ambiguous, so local authorities were very unenthusiastic to accept these new responsibilities.

¹² Supposed to be finished by the refugees, either by paying for the expenses, or by putting personal work into it.

¹³ Definitive certificates of houses to refugees have not been given yet in Zigos, since the ballot procedure was twice invalidated because of refugee reactions.

¹⁴ Information according to a statistical research by EIYAPOE, where 1,818 residences were inspected.

8. Evaluation of EIYAPOE Housing Programme and Its Impact on the Refugees

In an effort to estimate the problems that seriously affected the EIYAPOE housing programme and evaluate the attempted solutions, one should start from the first period of the operation (1991-1993) of the Foundation. At the end of this period, it was obvious that the selected sites for Reception Settlements and consequently, the proposed sites for housing settlements, had a major flaw: being mostly in rural and often isolated areas, they provided limited opportunity for employment, and especially so for refugees who were living and working in urban centers in the former Soviet Union. Hence, many refugee families were reluctant to establish themselves permanently in these areas and either went straight to Athens and Thessalonica, or they tried to do so at a later stage, after going through the first stages of the housing programme, thus jeopardising, or violating the regulations of the Foundation. This seemed to be an inherent problem with the policy of the Foundation, which tended to ignore the professional and cultural past of the refugees by treating all of them as unskilled workers, and did not endeavour to look at individual and particular characteristics and combine them with suitable alternatives for housing rehabilitation. It also seemed that, by exclusively implementing the EIYAPOE housing programme in Thrace, the Foundation and the Ministry of External Affairs formulated a policy which served a questionable “national need”,¹⁵ and ignored the real needs and the well-being of the refugees.

The scheduling of the various stages of the programme was completely off target, since the objective of transferring 7,000 refugees per year from Hospitality Centres and Reception Settlements to the next stages of the programme (rented accommodation and permanent residences) proved impossible. Delays due to an inability to find appropriate residential land forced refugee families to stay in Hospitality Centres for many months, instead of the planned 15-30 days, and in Reception Settlements for years, instead of the planned 6 months. These delays had very negative consequences for both the living conditions of the refugees, and the finances of the programme.¹⁶

¹⁵ In Thrace, there is a Muslim minority which has traditionally been treated by successive Greek governments with suspicion, as being a potential ally of the neighbouring Turkey in cases of tension between the two countries. Repatriating refugees settled in Thrace, according to this policy, could be used to counterbalance the Muslim influence there.

¹⁶ It is indicative that in many Reception Settlements refugees had to stay for years in prefabricated houses with no provision of heating. So, during the harsh winter months in Thrace, they were trying to warm up these houses

Even after the acquisition of housing land, huge delays were also imposed on the housing programme due to the bureaucratic procedures concerning approval of urban plans, contracting for works, etc. (Kritikos, 2002). Although this was used as an excuse, one could certainly claim that the Foundation bore part of the responsibility for these delays, since, instead of assuming these tasks with its own personnel and resources, it conveyed crucial responsibilities to other public organisations (*see* section 6: 236; section 7.2: 251), which in turn could simply not do the job properly nor on time. It is indicative that, in the case of the permanent settlement of Zigos in the Prefecture of Kavala, EIYAPOE had contracted DEPOS (National Corporation of Urban Planning and Housing) to manage and supervise the constructions of new houses. The standard architectural designs for three types of houses were given to DEPOS in order to make the necessary changes and adjust them to the physical terrain. DEPOS did not make the adjustments, the construction company went ahead with the unchanged plans, and there was mass production of houses with illegal basements, which resulted from the slope of the land. This, of course halted the whole project, because none of the involved parties was prepared to assume responsibility and pay the fines for the illegal constructions (Voudiklaris, 1999; Syropouloy, 2004).

Another problem which became very serious at the end of the second period of the housing programme (1994-1999), was the excessive escalation of the costs for rented accommodation, which was partly created because of the effort on the part of the Foundation to invert the delays of the previous stages of the programme. This not only jeopardised the financial situation of the Foundation, but also provoked severe tensions between the Foundation and the refugees (*see* section 7.2: 246).

Finally, this period was also characterised by the manoeuvring of the Foundation between legislation for the public and private sector, often with problematic outcomes (*see* section 7.2: 247).

The third – and last – period of the programme (2000-2001) was characterised by the system of “aftostegasi”, which was in general more effective than the previous systems and policies adopted. The disadvantage of the implementation of “aftostegasi” was, as mentioned earlier, (*see* section 7.2: 249) the delays in studying, financing and constructing the technical

by keeping the electric stoves and the ovens on. This, of course, did not warm the places properly, and, at the same time, meant that the electricity costs - which were paid by the Foundation - ended up being sky high.

infrastructure in permanent settlements, where refugees had already gone ahead in building their houses. “Aftostegasi” was preserved as a method – and is still used – even after EIYAPOE was dismantled.

As a general evaluation of the whole housing programme, one can say that at the end of it, there were a very limited number of refugee families with permanent accommodation (*see* section 7.2: 252), in comparison to the number of families who actually participated in the housing programme. Furthermore, the high number of families that still live in rented accommodation, especially given the present financial constraints, poses some serious questions about the possibility of ever coming close to the initial objective of the programme, i.e. to guarantee permanent accommodation for most of the refugee families.

In general, the housing programme, as it worked, was not the much-needed policy for refugee rehabilitation with long term effects and social content. It was rather an emergency measure to cover immediate needs. There was even speculation that, in the way it was set up, it sought mainly to serve political ends, such as to gain immediate political support from the repatriating refugees, to create an organisation which could attract European funds, and to accommodate political friends. The way that the Foundation was staffed is quite indicative. In 1992, there were approximately 400 employees, the great majority of whom were low-ranking personnel (secretaries, drivers, guards, etc.), while engineers, psychologists, social workers, etc. were almost non-existent – there were only 4 engineers in the Foundation at that time (Kritikos, 2002) – and administrative costs were extremely high.

During its operation, EIYAPOE was also accused of preferential treatment towards some construction companies (Voudiklaris, 1999: 6), with unjustified payments to hotel owners for renting rooms for refugees, excessive estimates in the prices of purchased houses and flats, and so on. Furthermore, there were cases where preferential treatments and peculiar transactions with private companies were made by the subcontractors to which EIYAPOE had conveyed management of its projects (Voudiklaris, 1999). Finally, from 1996 onwards, there was an interruption of the grants and loans which the Foundation was getting from the Social Rehabilitation Fund of European Council, since, whereas this money was intended to be used only for constructing houses in the new settlements, it was being used for renting and buying ready accommodation.

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Immigrant Residential Segregation in Medium-sized Greek Cities:

The Case of Volos

Paschalis A. Arvanitidis, Dimitris Skouras and Yannis Psycharis

Abstract

Over the last fifteen years or so, Greece has seen a substantial influx of immigrant population giving rise to a growing literature discussing the social, economic and spatial implications immigration has for the country. However, research has focused its analysis on the metropolitan areas of Athens and Thessaloniki, whereas other major cities have not been put under scrutiny. The current study serves to explore the intra-urban residential preferences of immigrants in one (out of four in total) medium-sized Greek city, the city of Volos, to consider whether segregation is evident and to shed light on the residential characteristics of immigrants. In contrast to previous studies, the current paper assesses immigrant segregation, utilising up-to-date data on school enrolments of both natives and immigrants. The study concludes that although immigrants show a preference for city-centre locations, they are spread in almost all areas of Volos, where older, lower-quality, lower-priced housing stock is available.

Keywords: Immigration, locational preferences, residential segregation, Volos.

1. Introduction

Greece has seen a substantial influx of immigrant population over the last twenty years or so. Currently, according to official estimates, there are about a million foreign people living in the country, compared to about fifty thousand in 1991, of which the vast majority (over 60%) are economic immigrants from Albania.

This phenomenon has attracted increasing attention in the literature, giving rise to a number of studies examining the economic, social and spatial

implications immigration has for the country. As regards its spatial impact, the general trend reported is that immigrants move primarily into the metropolitan areas, which offer substantial employment opportunities (Rovolis and Tragaki, 2006). As regards the intra-urban location pattern, studies indicate that the new-comers tend to concentrate in areas where their co-ethnics reside and where low-cost housing can be found (Arapoglou, 2006; Maloutas, 2007).

Although this literature has explored a number of key research questions with regard to the spatial distribution of immigrants, it suffers from two important limitations. Firstly, the majority of these studies (see for example, Psimmenos, 2001, 2004; Hatziprokopiou, 2003; Baldwin-Edwards, 2005; Arapoglou, 2006; Maloutas, 2007; Arvanitidis and Skouras, 2008) have focused their analysis on the metropolitan areas of Athens and Thessaloniki, whereas other major cities have not been put under scrutiny. Secondly, analysis was based on data available from the national censuses, and particularly from the most recent one, which took place eight years ago in 2001, leaving the more recent manifestations of the phenomenon unexplored.

The current paper seeks to take these two deficiencies into consideration. It explores the intra-urban locational preferences of immigrants in one medium-sized city (out of four in total throughout Greece), the city of Volos, to shed light on their residential characteristics and to consider whether segregation is evident. Moreover, instead of relying on the 2001 census data, it assumes that the residential pattern of immigrants is reflected in the school enrolments of their children and utilises such data, which are up-to-date and available on a yearly basis, to explore the intra-urban distribution of immigrants.

The paper is structured as follows. The next section outlines the theoretical models that have been developed to explain the spatial behaviour of immigrants, whereas section 3 reviews the relevant literature to delineate the international experience on the issue. Section 4 assesses the impact of immigration on, and the experience gained by, the two Greek metropolises. In turn, section 5 explores the degree of immigrant segregation and their location preferences in the city Volos. Finally, section 6 concludes the paper by summarising the key findings.

2. The Spatial Behaviour of Immigrants: Conceptual Considerations

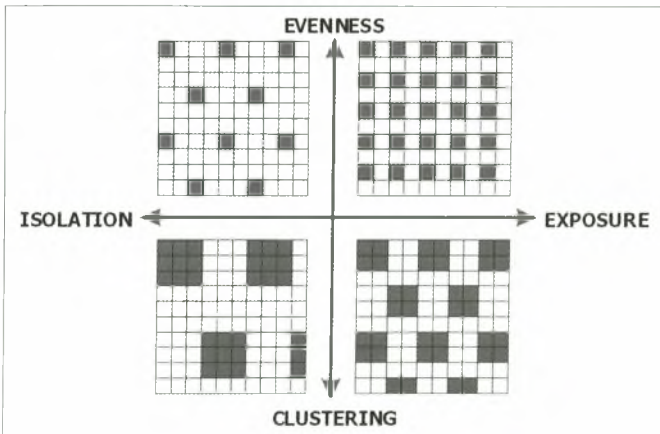
The residential preferences of immigrants and the spatial patterns that result from their location decisions have been discussed in the literature under the theme of *segregation*. Initial approaches to segregation, however, dealt with space implicitly, simply assuming that the social environment of different groups corresponds to some organisational unit that has a spatial substance (e.g. a district, a neighbourhood, etc.). These essentially “aspatial” treatments have been repeatedly criticised in the literature (see Openshaw and Taylor, 1979; White, 1983; Massey and Denton, 1988; Morrill, 1991; Wong, 1993, 1997, 2002; Reardon and O’Sullivan, 2004).

A notable attempt to infuse a spatial element into the analysis of segregation is Massey and Denton (1988). Employing notions available from economics literature, they identified five separate dimensions to the segregation of any one group: the *unevenness* of its residential distribution, its *isolation* from other groups in the area, its *clustering* into ghetto-like areas, its *concentration* into high density districts, and its relative *centralisation* within the urban fabric. In Massey and Denton’s formulation, evenness and exposure are aspatial dimensions (allowing that they are nonetheless implicitly spatial because they depend on census tract boundaries), while clustering, concentration, and centralisation are explicitly spatial dimensions of segregation.

More recently, other scholars (Reardon and O’Sullivan, 2004) have elaborated on the above approaches to develop more refined measures of spatial segregation that analyse patterning along two axes: one indicating spatial exposure (or spatial isolation) and the other indicating spatial evenness (or spatial clustering) (see Figure 1). Spatial exposure refers to the extent that people belonging to one group are mixed with people of other groups (or remain spatially isolated) in their local spatial environments. Spatial evenness assesses the distribution of a group in the residential space, specifying the extent to which its members prefer to locate close to each other (i.e. to cluster together). The combination of the two analytical concepts gives four patterns of residential location, as shown in Figure 1. The upper half of the diagram presents two patterns of evenly distributed (“green” and “white”) households, indicating low levels of spatial clustering (or high levels of spatial evenness). The difference between the two is in the degree of exposure they go through. People of the two groups in the upper-right pattern are equally mixed with each other, whereas in the upper-left

quadrant, “green” households are more isolated. In turn, both patterns at the bottom half of the Figure indicate high degrees of clustering: the right one presents a “green” community with higher exposure, whereas in the left one, higher degrees of isolation are evident.

Figure 1. Dimensions of Spatial Segregation



Source: Based on Reardon and O’Sullivan (2004)

Turning to the reasons behind the development of the various patterns of residential segregation, two sets of explanation have been put forward: cultural and economic. Cultural explanations argue that immigrants tend to locate close to each other in order to take advantage of their closely-integrated social networks and to retain valued elements of their cultural heritage, such as language and religion (Boal, 1976; Hugo, 1996; Dunn, 1998). Economic explanations draw attention to the functioning of both the labour and the housing markets, asserting that newcomers are compelled to cluster in the least expensive parts of the city due to income and information limitations (Massey, 1985; Boal 1996; Kempen and Ozuekren, 1998). These arise, firstly, because immigrants are usually low-skilled, low-paid, unemployment-prone workers (Tripier, 1990; Ulrich, 1994), and, secondly, because they are faced with both restricted access to mortgage finance and increased information deficiencies with regard to the institutional mechanisms of the host society (Kesteloot, 1995; Petsimeris, 1995; Pacione, 1996). It is important to mention that economic explanations see intra-urban low-priced housing as the cause behind the spatial clustering of immigrants, whereas for cultural explanations, low-priced houses can be a

side-effect caused by the decrease of desirability of the particular location to other groups of inhabitants.

In order to analyse the processes of spatial settlement of immigrants, three fully fledged explanatory models have been developed (Freeman, 2000). These are the *spatial assimilation* model, the *spatial stratification* model and the *residential preference* model, which are discussed next.

The spatial assimilation model, developed by the Chicago School of Human Ecology, argues for the time-progressive dispersal of initially spatial-concentrated immigrant groups (Dunn, 1998). Concentration is rooted in the cultural character of immigration but is reinforced by economic considerations that affect the immigration process. It is expected that during the initial stages of immigration, newcomers would cluster together in order to take advantage of the social and kinship networks of their co-ethnics. These networks provide social support and information as well as employment opportunities. However, as time goes by, the gradual acquisition of the language, values, and manners of the host society (a process called *acculturation*), achieved through prolonged contact with natives and through mass institutions such as schools and the media, would lead to the spatial assimilation of the immigrants (Freeman, 2000). This is because, as the degree of acculturation increases and the socioeconomic status of the immigrants rises, the social distance between natives and immigrants diminishes, leading to a decrease in the spatial distances between them (Hawley, 1950; Park, 1926). Thus, immigrants move out of the poor inner-city areas to the outer suburbs, starting to integrate spatially with the natives (Massey, 1985; Kempen and Ozuekren, 1998).

Although the spatial assimilation model describes relatively well the progress of spatial settlement for most immigrant groups, e.g. the non-English speaking populations in Sydney and Melbourne in Australia (Grimes, 1993; Hugo, 1996) and the black Caribbean people in Greater London (Peach, 1996), it encounters serious problems in explaining the spatial patterns of minorities with African heritage, namely African Americans and Puerto Ricans (Freeman, 2000). This has led to the development of the place stratification model.

The place stratification model considers urban space as a hierarchy of places ordered in terms of desirability and the quality of life they provide to urban dwellers (Logan, 1978). Natives occupy the most desirable places, keeping immigrants, and generally ethnic and racial minorities, at a distance.

This situation reflects the perception that the natives have of immigrants and their place in the society. Immigrants are attributed with a low social status and remain segregated, even if they are financially able to take up residence in areas occupied by natives (Alba and Logan, 1993; Freeman, 2000). The place hierarchy is maintained through both institutional mechanisms (red-lining, exclusionary zoning, etc.) and discriminatory acts on the part of the host society (policing, violence against minorities, etc.). In the case of hierarchy disturbance, natives are expected to depart from the “invaded” area in a progressive manner, leaving immigrants to constitute, slowly but steadily, the majority population in the area.

While the place stratification model envisages spatial segregation being imposed on immigrants (by other urban groups), the residential preference model asserts that this is in fact a decision of the immigrants themselves. That is, members of the immigrant group “prefer” to reside with their co-ethnics and to remain spatially segregated, even when they have the financial means or the social status that would enable them to move elsewhere (Freeman, 2000). There are many benefits to be gained from such spatial behaviour. To newcomers, the community’s social network would provide not only emotional, social and cultural support, but also other vital “resources”, such as housing and valuable information (on the host institutional framework and the labour market) (Hagan, 1998). To all other members, the community represents the stronghold of their own cultural identity (in a sense it constitutes a specific ethnic local public good). It enables them to sustain aspects of their pre-migration cultural practices (religion, language, etc.) while also facilitating their assimilation into wider society. This element constitutes the key difference between the residential preference model and the spatial assimilation model; that is, there is no acculturation process envisaged in the former.

3. Some International Evidence on the Spatial Behaviour of Immigrants

What becomes apparent from the above discussion is that the intra-urban location decisions of immigrants are determined by both cultural and economic factors. When cultural reasons prevail over economic ones, immigrant concentration is expected to be strong and sustained in the long-run. In contrast, dominance of economic considerations over cultural ones would lead, in the long-run, to smoother residential patterns characterised

by greater evenness. A number of studies have attempted to explore these issues in empirical research and to assess the role played by, and significance attached to, each set of determinants with regard to the developed urban residential structure.

In a study examining patterns of residential location among immigrants in Oslo, Blom (1999) supported the view that the most significant factor in determining immigrant's locational behaviour is economic resources; though cultural reasons also appear to play an important causal role. This is interpreted as an assimilation tendency where immigrants, after a certain length of stay, start to conform to local residential patterns. On these grounds, dispersal of foreign-born inhabitants is observed after an initial period of concentrated immigrant housing. Djuve and Hagen (1995) come to a similar conclusion, drawing on survey research they conducted on a sample of 329 refugees in Oslo. They found that affordability of housing was the main reason behind the latter's decision to settle in a particular residential area within the city, rather than "*preferences for living close to countrymen*". Analogous evidence has also been provided by Zang and Hassan (1996), Lan-Hung and Jung-Chung (2005) and Burnley (2005), who explored the residential preferences of immigrants in Australian metropolises. These studies indicated that, while immigrant groups may prefer to settle in close proximity to their family and kin for practical and/or emotional reasons, their locational choice depends largely on income and housing affordability, availability of neighbourhood services and closeness to work, giving rise to more assimilated residential patterns.

In a recent study investigating immigration dynamics and resulting residential patterns in the four largest Dutch cities (i.e. Amsterdam, Rotterdam, The Hague and Utrecht), Bontje and Latten (2005) observe a strong exchange of population subgroups. Natives show an ongoing outflow from certain urban neighbourhoods, where foreign-born population is increasingly settling in. These neighbourhoods have formed the basis of immigrant communities that are growing fast through family reunification and family formation. In fact, in some areas the share of foreigners has reached "... *levels above 70 per cent and even 80 per cent, in contrast to the national share of 10 per cent*" (Bontje and Latten, 2005: 450). This can be seen as an example of joint implementation of economic and cultural factors, where economic reasons account for the initial stages of immigrant concentration, and cultural reasons justify its enhancement and longevity. Similar conclusions are drawn by Bolt *et al.* (2002) who, on the basis of both income and ethnicity, predict

further strengthening of segregation and concentration of immigrants in the Dutch cities. However, there are researchers (Deurloo and Musterd, 1998; Musterd and Deurloo, 2002) who assert that the observed patterns of immigrant residential concentration tend not to be stable and therefore spatial integration is to be seen.

The situation across the Atlantic appears to be more complex. Scholars, such as Freeman (2000), Johnston *et al.* (2003) and Myers and Liu (2005), report a process of immigrant clustering in the American Metropolises similar to the one described above (i.e. fuelled by a time-lagged implementation of economic and cultural factors), but only for certain ethnic groups. Thus, it is argued that initially Asian and Latino immigrants were located in the degraded inner-city areas due to economic reasons, whereas subsequent newcomers of the same ethnic groups settled in the same neighbourhoods on the basis of cultural reasons. However, as they climb up the socioeconomic ladder they tend to move out and to assimilate into “white” neighbourhoods. In contrast to Asian and Latino groups, the form of residential patterning exhibited by African Americans is somewhat different, in both its character and intensity (Massey and Denton 1985, 1987; Denton and Massey, 1988; Harrison and Weinberg, 1992; Alba and Logan, 1993; Logan *et al.*, 1996; Clark and Ware, 1997; Freeman, 2000). This ethnic group seems to place greater emphasis on cultural factors and, on these grounds, to show more concentrated patterns of residential location.

A similar situation is seen in Lisbon. Malheiros (2000) and Malheiros and Vala (2004) distinguish between two groups of immigrants with different locational behaviour. African-origin immigrants are more “consolidated” in their residential pattern, whereas all other groups (dominated by Eastern Europeans and Brazilians) temporarily settle within their co-ethnics, only to flee out when their socio-economic conditions improve. Malheiros (2000) argues that a key factor behind this dual pattern of immigrant settlement is the housing market and the policies adopted by the local authorities (of freezing property rents, tight controls over evictions, and loose enforcement of legal procedures over illegal constructions) that have reinforced the concentration of the less-affluent African-origin immigrants.

Concluding this discussion, it becomes clear that there is no common pattern of immigrant residential location evident in the majority of places. Stated differently, economic and cultural factors influence the locational choice and the residential patterns of immigrants to a different degree, depending on the local conditions, policies and institutions, the cultural

background of immigrants and the time that immigration takes place. It is on these grounds that Musterd *et al.* (1997), having analysed immigrant residential behaviour in nine European metropolises, identifies the establishment of four spatial patterns:

- a. clustering of immigrants in inner-city locations,
- b. concentrations of immigrants outside central areas,
- c. scattered immigrants but with clustering in inner-city locations, and
- d. cattered immigrants but with concentrations in locations outside the city centre.

4. Immigration and Residential Patterning in Greek Metropolises

Over the last fifteen years or so, Greece has received a substantial influx of immigrant population coming mainly from the Republics of ex-USSR, Central-Eastern Europe, and the Balkans, especially from Albania¹. The 2001 Census recorded 797,000 people without Greek citizenship (that is 7.3% of the total population), of whom the vast majority (about 700,000) were third-country nationals without claim to Greek ethnicity. By 2003, there had been approximately 130,000 foreign children attending state schools (of which 32,000 were ethnic Greeks), comprising 11% of primary school and 8% of secondary school registrations respectively (Baldwin-Edwards, 2005).

Just under half of Greece's immigrants live in the Athens metropolis, of which about 55% (206,000 people) are Albanians (444,000 throughout Greece) (Baldwin-Edwards, 2005). This gives an immigrant/population ratio for the area of 11% as compared with 7.3% for Greece.

As regards the pattern of residential location of immigrants, researchers (Lazaridis, 1996; Psimmenos, 1995, 1998; Baldwin-Edwards, 2005; Maloutas, 2007) have reported a tendency of the former to concentrate in the old city centre and other poor areas of Athens, which are characterised by low-quality housing and lack of public facilities. This literature identifies three reasons that inform such decisions. The first reason is economic, where immigrants choose to take up residence in these areas simply because rents are low and there is housing stock available. This is supported by

¹ In fact, it is estimated that about half of the immigrants that reside in Greece today are Albanians (Lazaridis, 1996; Baldwin-Edwards, 2005).

cultural reasons. Co-ethnics already reside in these areas, and newcomers decide to settle there too, in order to take advantage of the social and kinship networks which offer social and emotional support and valuable information regarding the host institutions and opportunities.

Interestingly, however, concentration is fuelled by a third factor: the xenophobic intolerance of the natives (Baldwin-Edwards, 2005). Greece has a history of high levels of xenophobia recorded in opinion polls, although rather less visible in reality. In support of this argument Baldwin-Edwards (2005) mentions the results of a survey conducted in 2002 amongst 2,100 households living in Greater Athens: it was found that 44% of respondents believed that immigrants should live separately from Greeks, in other areas². Although high levels of racial intolerance are clearly linked with low educational and income levels, the point that clearly emerges is that Greeks would not object to the creation of ethnic ghettos, presumably with little comprehension about their long-term implications.

This tendency of immigrants (a significant number of whom were illegal) to locate in the inner-city of Athens worried the Greek government, who consequently intensified the policing of such areas. Actually, this was so intense that in June 1998, migrants held a rally for the first time in Athens demonstrating for their right to have a place to live³ (Lazaridis and Psimmenos, 2000). Under the weight of this pressure some immigrants have moved out of the inner-city, finding residence in the surrounding municipalities. Although some researchers (Lazaridis and Psimmenos, 2000) have linked this movement to the wider local-government strategy to regenerate the centre of Athens, the fact is that in spatial terms this gave rise to higher rates of integration between immigrants and natives and to a more dispersed residential pattern of the former. At present, despite some socio-spatial ethnic concentrations in certain areas, there are no “ghettos” of immigrants in Athens (Sintes, 2002; Kokkali, 2005; Arapoglou, 2006; Maloutas, 2007; Arvanitidis and Skouras, 2008), a situation which, however, could quite easily change in the future (Baldwin-Edwards, 2005).

² Other incidents that could be interpreted along this line include the continuing public advertisements and notices in Athens refusing to rent property to foreigners. As Psimmenos (2001) clearly states, few natives would be willing to rent their property to a foreigner (especially of Albanian origins) if there are chances to rent it to someone else.

³ Baldwin-Edwards (2005) argues that after intense criticism from leading academics, several state institutions and agencies dealing with immigrants on a regular basis have started to become more sensitised to issues relating to immigrants' rights and social integration. These agencies include various arms of the Ministry of Labour (OAED, IKA) and also the Greek police, to which clear instructions have been given in a circular from the Ministry of Public Order to strengthen immigrants' rights and prohibit police violence.

Thessaloniki presents a very similar picture to the case of Athens. Economic reasons on the part of the immigrants, and a hesitancy to rent property to foreigners on the part of the natives, led the immigrant population to take up residence in both the inner-city and the western suburbs where housing is cheap, constructions are old and the residential quality is low (Velentzas *et al.*, 1996; Hatziprokopiou, 2003). However, there are no visible clusters of immigrants and the resulting patterns of residence do not seem to lead to any kind of excessive concentration in which ethnic practices could be developed (Kokkali, 2005).

5. Exploring Immigrants' Residential Patterns in Volos

Although researchers have shown considerable interest in analysing the locational preferences of immigrants in the two Greek metropolises (Athens and Thessaloniki), there have been no studies exploring the residential patterns of immigrants in other Greek cities. On these grounds, this section places focus in one, of the four in total, medium-sized city, the city of Volos, to shed light on the intra-urban location preferences of immigrants and their residential characteristics.

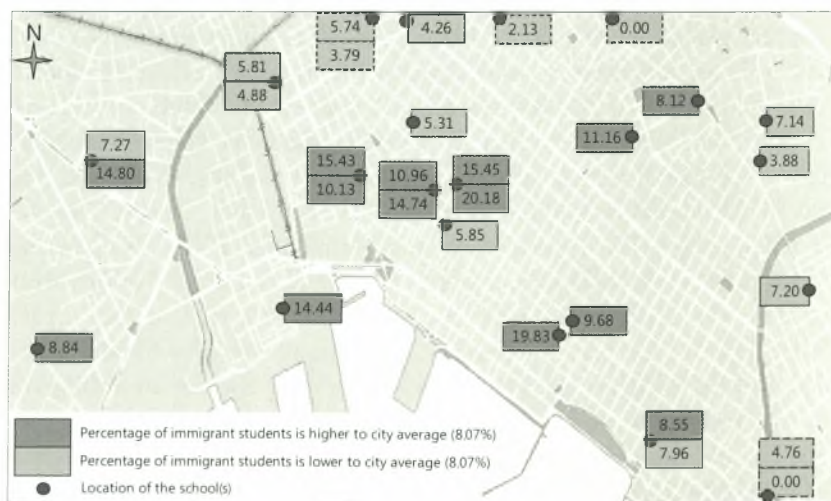
As mentioned, there are no up-to-date official statistics available, specifying the spatial distribution of immigrants at the intra-urban level. On these grounds, the current study assumes that the intra-urban location of immigrants is reflected in the school enrolments of their children and collects such data from the totality of primary schools in Volos in order to explore the spatial distribution of immigrants in the city. We argue that such an assumption is valid on the basis of three grounds. Firstly, both the spatial dispersion of schools in a city and the number of schools operating in each neighbourhood are analogous to the population density of this area. Secondly, the main criterion for the enrolment of a student into a particular school is the proximity of his/her house to the school under question. Thirdly, primary education is compulsory (by law) for all immigrant children residing in the area, independent of the legal status of their parents, and the latter are eager for their children to get this basic education (Baldwin-Edwards, 2005).

The local Directorate of Primary Education holds student enrolment data for each school under its jurisdiction on a yearly basis. The Directorate of Magnesia (the prefecture of Volos) has provided us with such data for the total of 35 primary schools operating in the city over the last academic

year (2006-2007). Overall there are about 5,232 enrolled students in these schools, of which 8.07% are the children of immigrants.

Figure 1, below, pinpoints the percentage of immigrant children at each school in Volos. As can be seen, immigrants are generally dispersed all over the urban area and there seems to be no high spatial clustering or formation of “ethnic enclaves” in the city. However, the inner-city (comprising the traditional CBD and the extended city centre) seems to attract immigrants. In fact, it records the highest residential concentration of immigrants (equal to almost 15%). High concentrations are also evident in the western districts of the city (around the *Larisis Street*⁴), which are degraded with inadequate public infrastructure and low quality housing stock, and in the north-east part of Volos, where the *Iolkos* and *Kyprou* streets pass through, connecting the city with the rural villages of Pelion (in which significant numbers of immigrants find employment in agriculture and the construction sector). The presence of immigrants in the northern suburbs of the city as well as in *Anavros* area (bottom-right corner of Figure 1), where the most affluent natives live, is relatively low (about 6%).

Figure 1. Percentage of Immigrant Students in Volos Primary Schools



Source: Directorate of Primary Education of Magnesia, own construction

⁴ This street leads to the PAThe highway (Patra-Athens-Thessaloniki) which connects Volos to Athens and Thessaloniki.

Apart from this simple cartographic representation of the locational distribution of immigrants within the city (provided in Figure 1), the study employed a widely-used measure of segregation, the Isolation Index, to identify the degree to which immigrants live apart from natives. According to Lieberson (1981) the Isolation Index of Segregation (IIS) is:

$$IIS_i = \sum_{i=1}^n \frac{x_i}{X} \cdot \frac{x_i}{t_i}$$

where:

x_i is the number of immigrants in a neighbourhood i ,

t_i is the total population of the neighbourhood i ,

X is the total population of immigrants in the city.

The index is, in fact, a measure of the probability of one member of the immigrant group encountering another member at random: the greater the concentration of immigrants into relatively exclusive residential areas, the greater the index (which can vary from 0 to 1). It therefore meets three criteria regarding the nature of residential segregation (to the extent that this is possible with a single index): the degree of *residential concentration*, or the extent to which a group dominates certain areas; the degree of *spatial assimilation*, or the extent to which residential space is shared between groups; and the degree of *encapsulation*, that is, the extent to which any one ethnic group is isolated residentially from the “host society”.

Table 1 provides the IIS calculation for each area (neighbourhood). Neighbourhoods are ranked according to the IIS in Figure 3 and results are plotted in Figure 4 (below). As can be seen, the traditional CBD area (*Ag. Nikolaos*) exhibits the highest segregation of immigrants, recording the highest IIS value, which is almost double that of the next highest. Next, in terms of immigrant segregation, come the areas of *Metamorphosi* and *Epta Platania*, which constitute the extended city-centre (Skouras and Arvanitidis, 2007). This affirms our previous assertion that immigrants show a preference for locating in the inner-city. Immigrant segregation seems to diminish with the distance from the city-centre. However, immigrants can be found in almost all areas of the city. The lowest IIS value is recorded in *Anavros*, which is regarded as the residential area for people of high socioeconomic status. Because of their relatively low earnings during their initial years in the host country, immigrants are most likely to trade housing affordability for housing quality. Actually the relevant literature provides ample evidence that

such immigrants tend to occupy old houses of lower quality (Schill *et al.*, 1998; Thave, 1999; Joint Centre for Housing Studies, 2000; Saiz, 2003a; Carter, 2005; Maloutas, 2007).

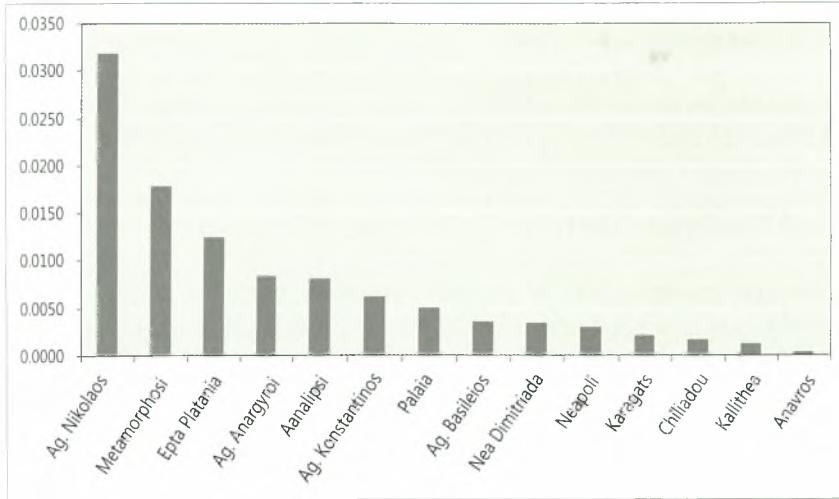
Summarising, we should highlight that immigrants are located in almost all areas of Volos and there no clear signs of “ethnic enclave” formation. However, two stylised facts are also apparent. Firstly, the inner-city areas exert an attraction to many immigrants (reflected in the higher percentages of immigrant children in these areas compared to other urban neighbourhoods), who are drawn there by virtue of the old, lower-quality, lower-priced, housing stock which is available. This relates to the second stylised fact, that the high-status, newly-constructed relatively-expensive residential suburbs, where the most advanced natives reside, do not attract many immigrants. This can be attributed partly to the high-cost of living in these areas (in terms of housing, commuting, etc.). On these grounds, we can argue that the most significant factors in determining the locational behaviour of immigrants in Volos are mainly economic.

Table 1. Calculation of the Isolation Index of Segregation (IIS)

Area	x_i	t_i	x_i/X	x_i/t_i	IIS
Ag. Nikolaos	88	653	0.237	0.135	0.0320
Metamorphosi	61	561	0.164	0.109	0.0179
Epta Platania	48	491	0.129	0.098	0.0126
Ag. Anargyroi	28	252	0.075	0.111	0.0084
Aanalipsi	27	242	0.073	0.112	0.0081
Ag. Konstantinos	28	343	0.075	0.082	0.0062
Palaia	13	90	0.035	0.144	0.0051
Ag. Basileios	22	350	0.059	0.063	0.0037
Nea Dimitriada	18	250	0.049	0.072	0.0035
Neapoli	13	147	0.035	0.088	0.0031
Karagats	16	318	0.043	0.050	0.0022
Chiliadou	14	312	0.038	0.045	0.0017
Kallithea	14	399	0.038	0.035	0.0013
Anavros	8	321	0.022	0.025	0.0005

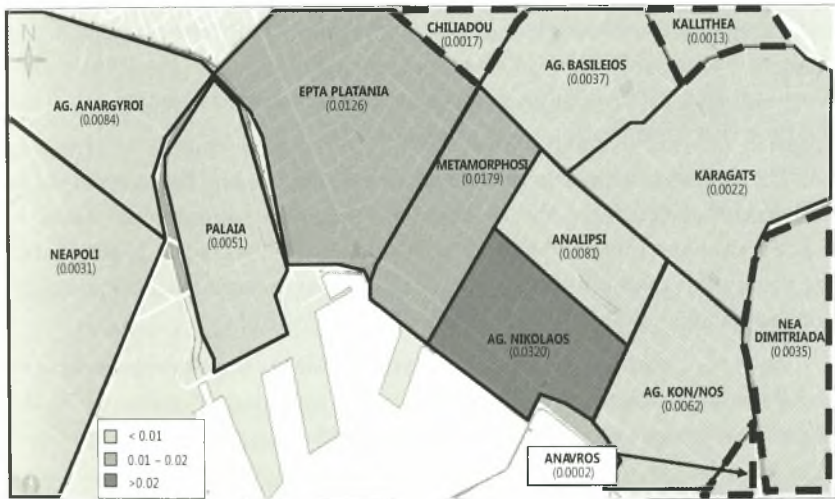
Source: Own construction

Figure 3. Rank of Neighbourhoods According to the Isolation Index of Segregation (IIS)



Source: Own construction

Figure 4. Isolation Index of Segregation (IIS) for Each Neighbourhood



Source: Own construction

6. Conclusions

This paper has investigated the present residential characteristics of immigrants in a medium-sized Greek city, the city of Volos. Analysis started by exploring the relevant literature to outline the international and national experience on the locational patterns of immigrants, and then it moved to examine the intra-urban spatial distribution of immigrants in Volos, to consider whether segregation is evident.

What became apparent from the review of the literature was that the intra-urban location decisions of immigrants are informed by cultural and economic reasons. Cultural explanations place emphasis on the ethnic-specific, socio-cultural networks that are developed within ethnic enclaves, and the various benefits (emotional, cultural, social, informational, etc.) immigrants acquire by locating in those areas. Economic explanations draw attention to the functioning of both the labour and the housing markets, asserting that newcomers are compelled to live close to each other due to the financial and information problems that they encounter. Empirical studies that examined the issue have affirmed the fact that immigrants tend to cluster close to their co-ethnics. However, they have also indicated that there is no uniformity with regard to the final pattern of immigrant residential location that each place experiences. Stated differently, economic and cultural factors influence the locational choice and the residential patterns of immigrants to a different degree, depending on the local conditions, policies and institutions, the cultural background of immigrants and the time that immigration takes place.

The findings of the empirical research conducted by the current study indicated that the intra-urban locational pattern of immigrants living in Volos is similar to those observed in Athens and Thessaloniki. In particular, the immigrant community is generally dispersed in almost all urban neighbourhoods and no clear “ethnic enclaves” are identifiable.

However, two stylised facts became evident. Firstly, the inner-city areas seem to exert an attraction to many immigrants (reflected in the higher percentages of immigrant children in these areas compared to those of other urban neighbourhoods), who are possibly drawn there by virtue of the old, lower-quality, lower-priced housing stock which is available. This relates to the second acknowledged stylised fact, which is that the high-status, newly-constructed relatively-expensive residential areas, where the most advanced natives reside, do not attract many immigrants. This can

be attributed partly to the high-cost of living in these areas (in terms of housing, commuting, etc.). On these grounds, we can argue that the most significant factors in determining the locational behaviour of immigrants in Volos, and presumably in most Greek cities today, are mainly economic, though cultural reasons might also play an important role.

In concluding this paper, we would also like to stress one more point. The methodological approach followed here should also be seen as an attempt to inform research examining the residential segregation of immigrants in Greek cities with an alternative source of data. This source of data is school enrolments for native and immigrant students, which is up-to-date and available on a year-to-year basis. Although these data do not reveal the spatial preferences of certain parts of the immigrant population (such as single people, families without children, etc.), they are adequate for the study of segregation, since the phenomenon is primarily defined by the locational preferences of immigrant families which are more stable in nature.

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ΠΑΝΕΠΙΣΤΗΜΙΟ ΘΕΣΣΑΛΙΑΣ
ΒΙΒΛΙΟΘΗΚΗ



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This volume constitutes a collection of papers which were presented to the annual conference of the European Regional Science Association that took place in Volos, Greece, from 27th August to 3rd September, 2006. This conference was organised by the Greek section of the European Regional Science Association, in cooperation with the Department of Planning and Regional Development of the University of Thessaly. The papers that are included in this volume are written by the staff of the Department of Planning and Regional Development.

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