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CRISIS AND PROSPECTS FOR SUSTAINABLE DEVELOPMENT OF THE METROPOLITAN AREA OF ATTIKI AT INTERNATIONAL/NATIONAL AND LOCAL LEVEL

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Abstract

Objective of the paper is to investigate the impact of the recent crisis on the development model of the Metropolitan Area (MA) of Attiki as well as the prospects of the latter to overcome the crisis.

The first sections discuss the deterioration of territorial cohesion of the cities themselves and their wider regions as impact of the crisis as well as their "resilience" to crises and the policies to be adopted in order to make the cities more "resilient".

Next we discuss the impact of the crisis in Attiki. As it is the main engine of growth of the Greek economy and the strongest Greek pole within the European network of cities, it was necessary to compare it with selected MAs of EU "North", "South" and "East". Changes of Attiki during the crisis, similar to some degree with those of EU “South” MAs, are very negative. Attiki lagged behind before the crisis in the technological readiness and innovation field which has the greatest importance for competitiveness. The implementation of spatial policy for Attiki did not reduce this lag.

Last sections explore the considerable growth potentials of the MA and the strategy of their smart exploitation to support the exit of Attiki and Greece of the crisis.

Keywords Athens, Attiki, crisis, European cities, metropolitan regions, European Union

Introduction

The Metropolitan Area (MA) of Attiki is the main pole-engine of growth of the Greek economy and the strongest pole available in Greece within the network of European metropolises. Therefore It is worthwhile to investigate the impact of the recent crisis on Attiki' "sustainable development" (the paper title), meaning competitiveness, social cohesion and environmental sustainability. Our purpose is to formulate evidence-based alternative prospects for Attiki in the future and appropriate development proposals leading to overcome its crisis and contribute overcoming the crisis of the entire country. As we will try to demonstrate, overcome the crisis of Attiki requires not only the enhancement of the competitiveness of the MA but, even more, the consolidation of a "resilient" type of development, not needing significant external lending.

Since the recent EU crisis has created a new framework for spatial development in the EU, we felt as particularly important to consider in depth the impact of the crisis on the Attiki case compared with the effects in other metropolises (see, inter alia, in: EU / URBACT, 2010 and ESPON ECR2, 2014). Finally, we will try discussing how the implementation of spatial development policy for Attiki before the crisis decreased the MA "resilience" and which spatial policy changes are therefore necessary.

Certain parts of the paper are based on the research contribution of M. Angelidis in the ESPON programme GROSEE, 2014 as well as on publications of M. Angelidis in which the ESPON GROSEE data have been updated and the scope of the research has been considerably enlarged (Angelidis 2013, 2016). In this paper, the above entire approach has been extended (with the collaboration of E. Tsigkas) with analyses and proposals on the spatial policy implementation to Attiki and analyses of the competitiveness of Attiki in the frame of the EC work on Regional Competitiveness Index.

1 The crisis limits territorial cohesion of the cities themselves and their wider regions of influence.

The crisis limits territorial cohesion of the cities themselves and their wider regions of influence.

Firstly we should refer briefly to the main problems of cities during the crisis at international and European level. The crisis may have taken in Greece an extremely intense and long-lasting form, but we should not forget that the 2008 crisis had a very important impact on all European cities as well as those in North America and, hence, has greatly intensified reflection on the resilience of cities in times of crisis and the policies that cities must take to become more "resilient" to economic crises (see, inter alia, in: ESPON 2013 Program / TPG ECR2, 2014 and EU / URBACT, 2010).

In the period of the crisis, major urban and regional problems are created both economically, socially and environmentally: problems of overall economic shrinkage, poverty and general social degradation, as well as the widening of economic and social disparities between different areas of the city, i.e. problems of territorial cohesion. The closure of a large number of businesses creates an image of abandonment in connection with a significant fall in property prices. It leads in some way "spontaneously" to considering environmental issues and, in general, quality of life issues by local authorities as well as by residents as secondary (see, inter alia, Angelidis, 2016).

Therefore, the recent crisis of several regional centres in EU countries, particularly those most affected, intensifies (in most cases) the crisis in the respective regions. As is reasonable, the crisis of MAs has far more significant implications. In addition, the crisis maintains if it does not further exacerbate the imbalances in the system of regional centres in the respective countries. Since regional centres provide key services and stimulate the development of their respective wider regions of influence, the balance of services and development between the different regions of a country is reduced. In other words, regional disparities are intensifying..

As can be seen (see, among other, in the program EU / URBACT, 2017), European cities are important drivers for improving economic efficiency and innovation within the Community Lisbon Strategy and the policy of “Europe 2020” (EC, 2010) for a smart, socially coherent and environmentally sustainable development of the EU Member States. We are referring specifically to the declarations included in the “Europe 2020” text, because the actual implementation of specific EU policies in countries most affected by the recent crisis was very different from the aforementioned declarations.

In summary, all this leads to the conclusion that the crisis in cities as well as in particular in the metropolitan areas has strong spatial / local aspects; therefore, overcoming the crisis should also be based on the implementation of spatial (regional and urban) planning: policies, action plans and specific urban regeneration interventions.

2 Need for new but sustainable responses to city problems by national / regional / local / authorities

According to the relevant Community documents, the sustainable development of European regional centres is linked to the achievement of balanced competitiveness, social cohesion and sustainability in the whole of Europe, but also to polycentric development at all levels: Community, transnational / national, regional / local (EU / URBACT, 2015a). As many people have argued, European cities can be drivers of their country's recovery from the crisis, because they can better promote production and innovation. They can, however, achieve this only if they act in this direction. As pointed out, cities with low levels of organization and planning are unable to derive economic potential.

In short, regional centres should give priority to the development of new economic activities, building on, inter alia, their inherent potential, emphasizing bottom-up development and, above all, supporting the “new Economies" (or "new economy ") (EU / URBACT, 2015b and Moloney, 2015).

The development of the urban digital economy is of primary importance in this direction. The digital economy is linked to the spread of a wide range of information and telecommunications technologies (IT / Information Telecommunication) throughout the economy and society (De Carvalho - Van Winden, 2015). Over the last decade, digital technology has transformed entire sectors such as transport, health, the media, retail and construction, as well as working and living modes (see more in: Angelidis 2016). Digital technology is also found to be resilient to the crisis in most countries. An important role in the development of the digital economy and in the innovation of urban poles in general is played by the existence of relevant businesses and universities as well as their support by local authorities (Angelidis, 2017).

3 Attiki in the Greek urban system and its potential contribution for overcoming the crisis

The Greek urban system includes, very schematically:

(a) The MAs of Attiki and Thessaloniki which have much greater development and population potential than the other centres. (b) Three centres with very large regional influence and population potential: 130,000 - 210,000 (size class): Patras, Volos - Larissa and Heraklion. c. Regional centres with lower population potential and less regional influence.

Regarding the evolution of the system of regional centres over time: (a) In the 1960s we have polarisation, with a strong expansion of metropolitan and certain regional centres (b) In the period from 1971 to 2008, i.e. before the crisis, the main changes were the enlargement / restructuring of non-metropolitan areas and the "selective" development of the urban system. In other words, some urban centres / "urban poles" developed much more strongly than the others (Angelidis, 2016, 2013, 2005) (c) During the crisis, the potential of metropolitan and other regional centres is shrinking, to varying degrees for each. In general, the Greek urban system has previously presented and continues to present a significant deficit of strength, coherence and balance (Angelidis, 2016 and Angelidis - Karka, 2001).

In order to overcome the crisis in the country, a stage of rapid economic growth is urgently required. Therefore, the development of the Greek urban system should be strengthened and it is appropriate to act as a catalyst for the development of the respective regions and the country as a whole. Among other things, to strengthen the potential of the largest regional centres: Attiki and Thessaloniki MAs and the three other important centres. However, given that Attiki has much greater potential for fast and strong economic growth with a catalytic impact on the country's overall recovery, priority should be given in its development for a short first stage- even if this does not restricts the gap between Attiki and the whole country.

In Attiki, industry has been shrinking over the past thirty years - much more intense in the wake of the recent crisis. Even before the crisis, while in the primary sector, employment is shrinking, it is rising sharply in services and Condtruction. During the crisis, almost all economic sectors are shrinking, while the construction sector is shrinking more strongly.

4 Competitiveness of Attiki

4.1 European "North" and European “South"

In the analysis of the Community area are often used two general spatial patterns (types) of the 28 Member States of the EU (some of the analyses that follow refer to the EU27 – prior to the accession of Croatia).

(1) The 28 EU countries can be divided into three main types on the basis of economic performance, as expressed by the size of per capita Gross Domestic Product (GDP): countries with high growth, moderate growth and low growth. See, for example, the use of this classification into the 5th cohesion report (EC, 2010). See for a detailed discussion of this typology in ESPON INTERCO (2012). We point out that Greece ranks the countries of "moderate growth".

(2) Greater interest presents a “spatial”' typology that distinguishes all 28 EU Member States (plus Norway and Switzerland) into three groups according to their geographical location, as follows: (a) "North countries"- EU "North" (Luxembourg, Norway, Switzerland, Denmark, Ireland, Netherlands, Sweden, Finland, Austria, Belgium, Germany, France and United Kingdom) (b) "Southern countries" - EU "South" (Italy, Spain , Cyprus, Greece, Portugal and Malta) (c) “East” – EUy "East" (Slovenia, Czech Republic, Estonia, Slovakia, Hungary, Latvia, Lithuania, Poland, Croatia, Romania and Bulgaria). The three “spatial” groups correspond to a very large extent on the three previous groups of countries: the "North" with the “high growth” countries, the “South” with “moderate development” countries and the “East”' with “low growth".

Obviously, this "spatial" distribution doesn't follow fully the size range of the above GDP index. However, It is worth noting that the three "territorial groups" have a strong" internal homogeneity" based on the statistical analysis of the above index values as for the coefficient of variation (x 100), which is equal to the quotient of standard deviation (stdev) by the mean. See relative analysis on: ESPON INTERCO, 2012 and Angelidis, 2013.

It should be emphasized that, during the crisis, the distance of the EU South from the EU North was considerably enlarged. See, among other, in the below Figure 1 - which shows the change in per capita GDP as % of EU average (= 100) in period of crisis 2008-2015 in Southern countries and in some of the countries of the North and East. Indicatively, Greece "descended" from 94 to 71, Germany "ascended" from 118 to 125 and Italy "descended" from 105 to 95.

4.2 The crisis in Greece and Attiki – the general context

Before the crisis, from 2000 to 2008, Greece presented high annual economic growth. The country has followed in the last twenty years, before and after the crisis fairly specific characteristics of the development model of EU "South".

The beginning of the economic crisis (2008) marked a particularly strong reversal of the previous trend – Figure 1 – and had very strong negative impact in the country.

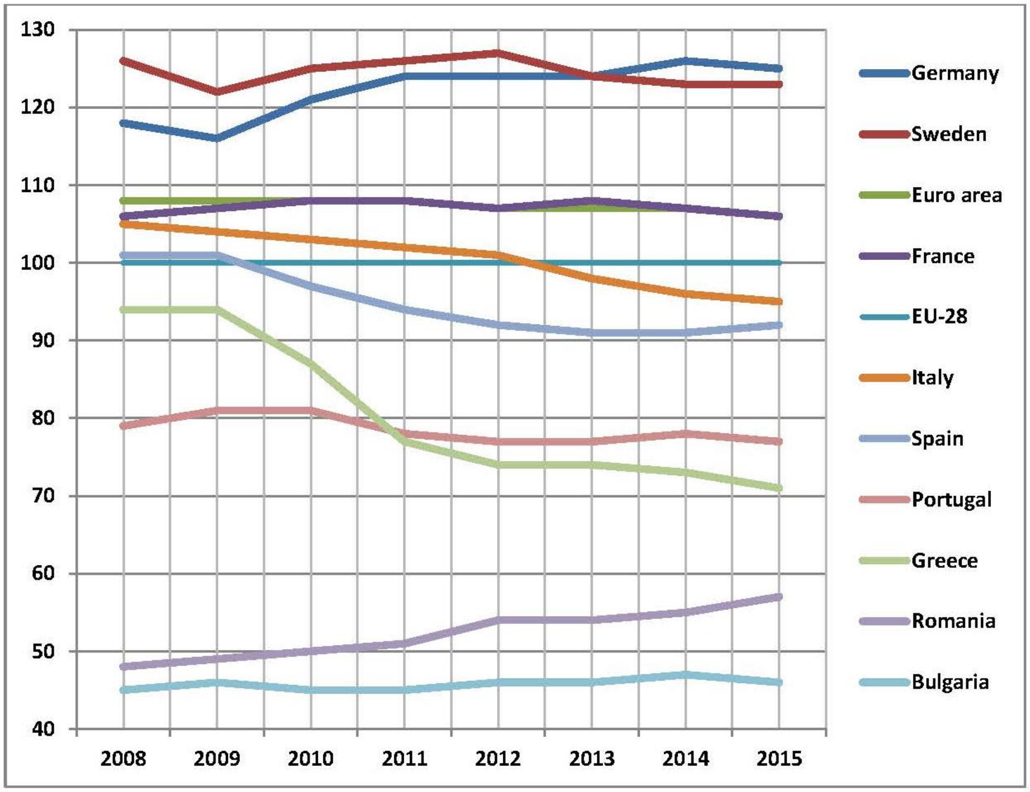

Figure 1: GDP per capita in PPS (Purchasing Power Standard) as % of EU average (= 100) in period of crisis 2008-2015, Eurozone, Greece, EU "South": Greece, Italy, Portugal and Spain, countries of EU "North": Germany, France and Sweden, and countries of South-East Europe: Bulgaria and Romania

Source: Own elaboration, based on Eurostat data

Greece suffered much more from the crisis, which, in its case, by 2010 was transformed into a "debt crisis" etc. The high level of debt and the implementation of a non-successful financial adjustment model that followed led to great difficulties in the country. In general lines, Greece tries to improve the openness and competitiveness of its economy, as well as to replace a part of imports with domestic production coupled with structural reforms.

4.3 Attiki – Economic performance, Employment and unemployment, labour productivity

Before the crisis (until 2008) GDP per capita in PPS in Attiki approached the EU average, but then recorded a significant drop.

FDI (Foreign direct investment) was clearly concentrated in the capital compared to the whole of Greece. The rates of change of Regional Gross Value Added (GVA) of Attiki in the period 2001-2008 were generally higher than the average of EU-27. The turnover of enterprises increased significantly in Greece in the period 2003-2007. The Gross Fixed Capital Formation (GFCF) in euro amounted in 2005 in Greece in 40 billion and rose to 53 billion euros in 2007. During the first year of the crisis (2008) in Greece the GFCF decreased slightly, while fell very sharply in the second year of the crisis (2009) but then.

Tourist arrivals in Attiki showed continuous growth before the crisis, slight reduction during the first years of the crisis and growth then.

Before the crisis, Attiki had lower employment rate compared to the average of EU-27. During the (initial) period of crisis 2008-2011, the employment rate decreased in Attiki.

However, the unemployment rate has a relatively greater importance. This figure was already higher before the crisis in Attiki compared with the EU average. It increased dramatically in the period of crisis in Attiki, reaching 26.7% in the first quarter of 2016, almost equal to that in Greece: 26.6%. In some periods of the crisis Athens had the highest unemployment rate among the Greek regions.

The rates of female employment in 2003 in Greece and Attiki were significantly lower than those of men. During the (initial) period of crisis 2008-2010, the decline in employment rates of women was lower than that of men. The unemployment rate of women in 2011 was higher than that of men both in Greece and in Athens. The unemployment rate of women in Greece increased significantly, reaching 30.4% in October 2012.

Great importance has also the fact that the unemployment rate of young people aged 15-24 years old has increased dramatically during the crisis in Greece.

During the (initial) period of crisis 2008-2011, the decrease in employment was more pronounced in some areas. Primarily in the construction sector which is closely associated with the domestic demand. We observe such severe reduction (13%) also in the EU, but the reduction in Athens was impressively larger (37%). A very high reduction in employment in the industrial sector in Attiki was also recorded.

The labour productivity index of Eurostat corresponding to GDP as PPP per person employed as for the EU27 average (=100) is of particular interest to our subject. The value of this index was very high for Greece in 2001- 98 against 100 for EU, In the period 2001-2008, the value of the index remained stable in Greece. During the period of crisis and in particular in the period 2008-2011, the value of the index decreased significantly in Greece.

In summary, the improvement of employment and unemployment indicators before the crisis in Greece and Attiki was followed by great aggravation, with emphasis in construction, but also in industry and certain branches of services.

4.4 Comparison of competitiveness of Attiki with other EU metros

It is useful to compare the model of competitiveness of Attiki not only with models of countries and mega-regions (EU North, South, etc.), as we did previously, but also with their respective metropolises models – with an emphasis on driving forces that create this difference in competitiveness. Attiki is not only administrative capital but also economic capital of Greece. For this it is useful to compare it not only with the capitals of other countries of the EU but also with "economic capitals" of EU regions so that the results of the comparison to be more useful for drafting policy proposals for Attiki.

In particular, we compared Attiki with:

(A) All EU metropolises, because the latter have a development model, as well as a role in spatial development closest to those of Athens. Particular reference is made to certain points in Sofia and Bucharest, the capitals of Bulgaria and Romania, which belong, together with Greece, in the region of the Eastern Balkans (South-Eastern Europe / SEE).

Eurostat and DG Regional policy of EC have characterized in 2012 253 cities situated in EU28, Norway and Switzerland as metropolises / Metropolitan Regions (MR) (or "metros"), in accordance with the criterion of population size. See for the definition of the limits of MRs in Angelidis, 2016, which refers to EC / Eurostat, 2013.

Eurostat (EC / Eurostat, 2013) has categorized European metropolises on (a) capital regions (capital city regions), (b) "Second tier metros" – see related documents of Eurostat and DG

Regional policy of EC – which are actually "regional capitals of large areas" or "regional capitals with a significant national role" and (c) smaller metropolises.

(B) The remaining EU countries capitals (capital city regions).

(C) With a limited number of selected capital cities or "second tier" metropolises which are found in other parts of the EU and have a similar population size with Attiki. With this perspective, we have selected:

– Stockholm and Amsterdam, capitals of EU "North" countries, Rome and Lisbon, capitals of EU "South" countries, and Prague, capital of an EU "East" country. The population of Amsterdam (wider region) and Rome is comparable with that of Attiki and the population in Stockholm, Lisbon and Prague less than Attiki but comparable with those of Bucharest and Sofia. In addition: Munich, Lyon and Manchester who are "second tier" metros of the EU "North", with a population smaller than that of Attiki but comparable with that of Bucharest and Sofia.

We note, first, that, in general, the EU metropolises grow faster: (a) from the other EU cities and (b) from the countries to which they belong. The same happens in the case of Attiki - Figure 2.

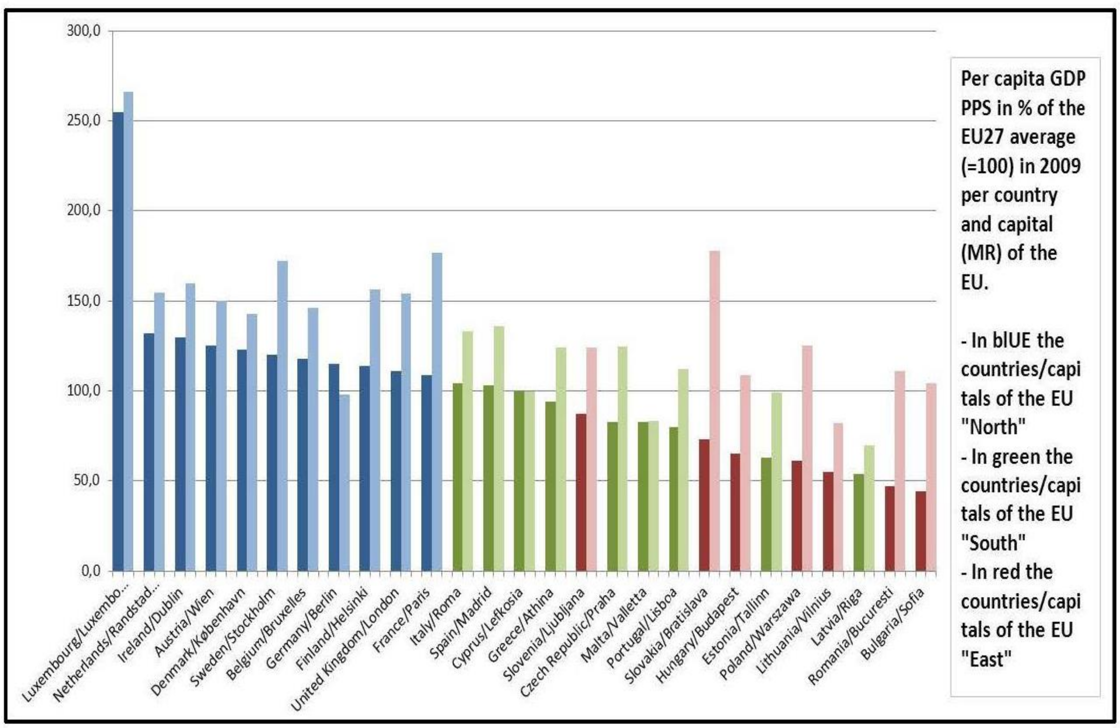

Figure 2: GDP per capita in PPS in % average of EU27 (= 100) in 2009 per capital region and country of the EU27.

Own elaboration, based on Eurostat data

Attiki had GDP in PPS (purchasing power standard) per capita in 2009 higher than the average of EU-27 = 100 (124). The corresponding index values for Bucharest and Sofia was also higher than the EU average. Higher index values corresponded to metropolises of the "Pentagon" (the Northwest, more developed, part of the EU). The metro case studies of EU "North" had clearly higher index values from Athens

We should stress that in particular, the differences in performance of Attiki compared with that of Greece was even greater. These differences were more remarkably high in cases of capitals / countries of Eastern Europe (including Bucharest/Romania and Sofia/Bulgaria). In other words, in these countries, the growth gathered gradually in the capitals – with significant economic, social and spatial effects.

In the period 2001-2008 -before the crisis- Attiki, as well as Bucharest and Sofia, had increased their GDP proportionally much more than the majority of other European metropolises. Bucharest showed, moreover, the highest increase (see in Angelidis, 2016 Figure 3)

During the crisis in 2008-2013, Athens, Lisbon and Rome (EU "South") showed a striking decline in the GDP in PPS per inhabitant (much larger in Attiki), while the metropolises of EU "North" showed stability -apart from Munich with small relative increase- and Prague (EU "East") showed considerable decrease.

The division by sector of the economy model of Attiki makes its development much less competitive and resilient in the crisis compared to the metropolises of the EU core. The most important sectors for competitiveness such as financial, scientific and technological activities have the highest shares in the capitals and the "second tier" metros of the EU "North". These shares are lower in Attiki and the "South" capitals as well as in Prague ("East") -see further analysis in: Angelidis 2013.

Inversely, Attiki has highest rate in construction (of buildings and infrastructures) and in real estate activities, as well as in trade and restaurants, which is comparatively less important for competitiveness compared to the metros of the "North".

The highest "competitiveness distance" of Attiki (and, even more, of Sofia and Bucharest) from the metropolises of the EU core concerns technology and innovation. The proportion of expenditure on research and development (R&D) in relation to the GDP in 2009 remained extremely smaller than the EU27 average (in Sofia and Bucharest were even more small) - Figure 3. It was still lower compared with the capitals and the "second tier metros» of EU "North". The performance of Attiki was remaining significantly lower compared even with capitals of "South" (Lisbon) and “East” (Prague).

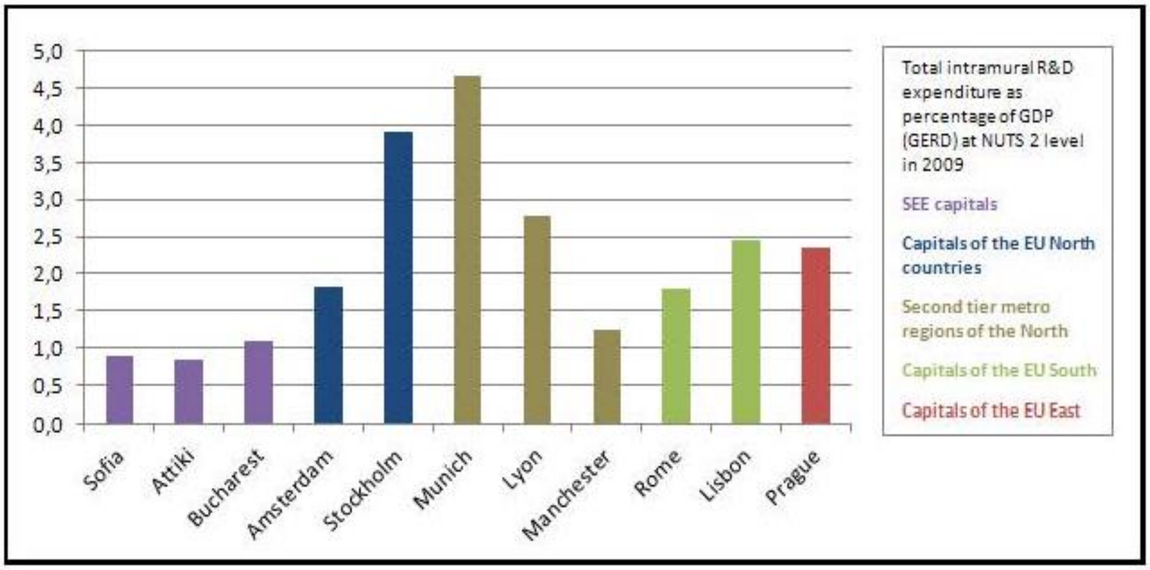

Figure 3: Total domestic expenditure in % of GDP R&D in NUTS2 2009 - Attiki and selected European metropolises.

Own elaboration, based on Eurostat data

With regard to the proportion of households with access to broadband networks for 2011, Attiki was far behind the metros of "the North". However, in the period 2008-2011, the percentage of Attiki was significantly increased. The most important finding relates to the very large difference of Attiki from the EU “North” capitals and "second tier" metros in terms of patent applications at the European Patent Office (EPO) per million of inhabitants in 2009 – indicatively, 10 for Attiki versus 481 for Munich (see more details and Figure 5 of Angelidis, 2016). The index value for Attiki was clearly better than the two other capitals of SEE.

As for the labour and human potential as a factor of competitiveness, the distance of Attiki from the metros of the EU core is shorter than the distance in terms of innovation. In particular, the proportion of tertiary education graduates (at ages 30-34 years old) in the entire population for 2012 in Attiki was above the EU27 average but still lags in comparison with the corresponding index values for Stockholm, a “North” capital, while it was significantly higher than the values for the capitals of EU "South" and "East". The percentage of Attiki grew rapidly in the period 2008-2012, exceeding the rates of most of the other case studies metros.

As for the labour productivity in 2010 (ESPON GROSEE, 2014), the index value for Attiki surpasses clearly those of the other capitals of SEE countries (Sofia and Bucharest) and is closer to those of the capitals and the "second tier metros" of EU “North”.

In the period 2008-2012 of the crisis, employment rate in Attiki dropped significantly (-12 percentage points). This rate was significantly lower than those of the capitals and "second tier metros" of EU “North” and approached those of the case studies metros of "South". Unemployment rates (in persons 15 years and over) in Attiki grew excessively in the period 2008-2012 (+ 19 percentage points, from about 6% to 25%) striking overcoming those of all case studies (Figure 4)

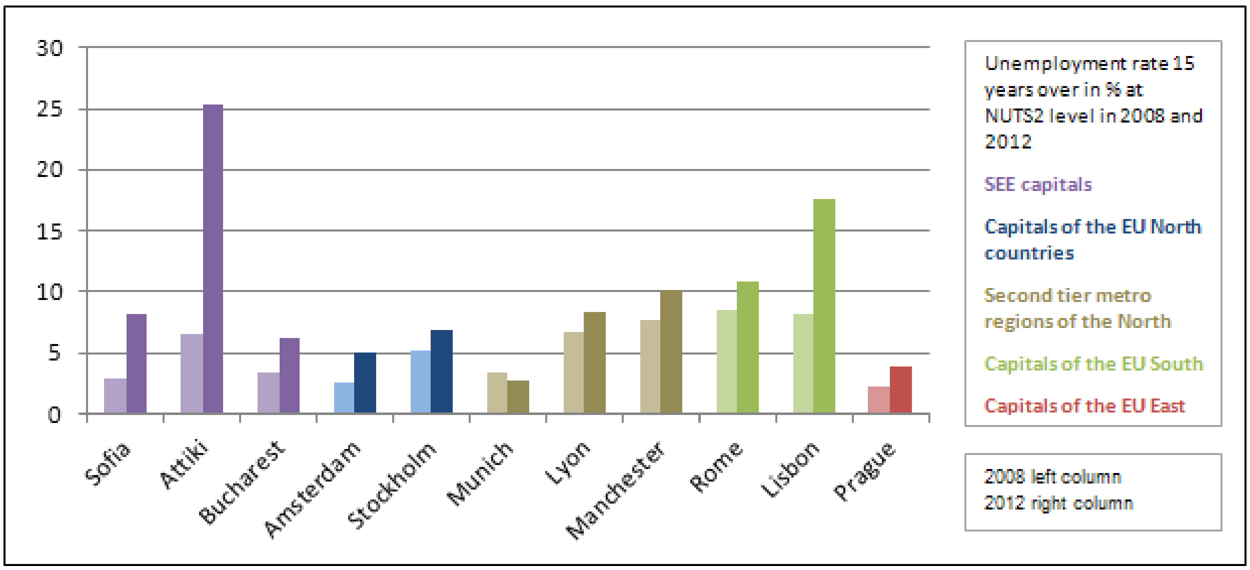

Figure 4: Unemployment rate (persons 15 years and over) % at NUTS2 regions in 2008 and 2012: Attiki and selected European metropolises.

Own elaboration, based on Eurostat data

4.5 Using the EU Regional Competitiveness Index for Attiki

DG for Regional and Urban Policy of EC has produced an EU Regional Competitiveness Index (EC / DG for Regional and Urban Policy / Annoni P., L. Dijkstra and N. Gargano, 2017) which “shows the continuing strength of the capital regions and other regions with metropolitan areas”. The respective 2017 report resulted to conclusions regarding the “North” – “South” (+ “East”) gap that converge with our own results described previously: " In the northwest of the EU, these competitive regions generate substantially spatial spillovers, improving the competitiveness of the neighbouring regions. In eastern and southern Member States, however, being close to the capital region does not seem to boost competitiveness".

According to the report, "the RCI builds on the approach of the Global Competitiveness Index by the World Economic Forum. It covers a wide range of issues including innovation, governance, transport and digital infrastructure, and measures of health and human capital. A growing number of regions use it to identify their strengths and weaknesses and shape their development strategies".

Analysing in particular the ranks of Attiki among the total of 263 metros examined by RCI 2017 (indexes for 2016), we reached the following conclusions:

(a) The results for the RCI 2016 converge with our previously mentioned conclusions: much higher index values for the "North" metros, low for the "South" and "East" metros (extremely law for Sofia and Bucharest). See in more detail in Table 1.

The ranks for all sub- indexes for Attiki are very low – Figure 5.

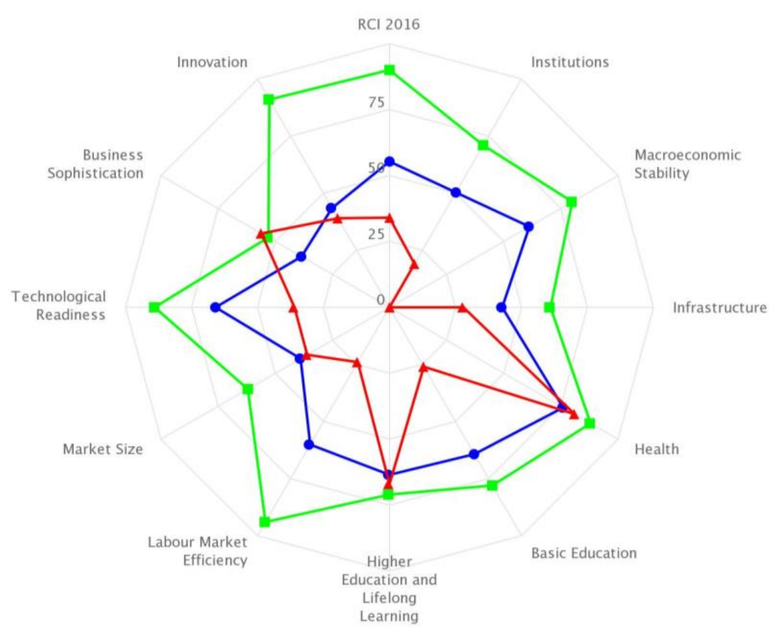

Figure 5: EU Regional Competitiveness Index 2016 and 2013 for Attiki (in red), Munich (in green) and the average of 263 EU metros (in bleu) by sub- indexes

Own elaboration, based on RCI report data

(b) The rank of Attiki worsened; it changed from 174 for the total RCI 2013 (263 for the less competitive metro) to 193 for the total RCI 2016. The most important deterioration for Attiki concern the efficiency sub-index value, which fell from the rank 156 in 2013 to the rank 179 in 2016. Inversely, the rank of Munich increased from 15 in 2013 to 9 in 2016 – Table 2 and Figure 6.

Country code	Country name	NUTS CODE 2013	merged regions_ code	NUTS NAME	Basic sub-index	Efficiency sub-index	Innovatio	RCI 2016
					rank	rank	rank	rank
EL	**Greece**	**EL30**		**Attiki**	**240**	**179**	**149**	**193**
BG	Bulgaria	BG41		Yugozapaden [Sofia]	241	166	179	207
RO	Romania	RO32		Bucuresti - Ilfov	238	112	159	161
IT	Italy	ITI4		Lazio [Roma]	178	158	143	156
PT	Portugal	PT17		Área Metr. de Lisboa [Lisbon]	183	140	91	139
DE	Germany	DE21		Oberbayern [Munich]	19	9	11	9
FR	France	FR71		Rhône-Alpes [Lyon]	102	50	73	68
NL	Netherlands	NL32	NL00	Noord-Holland Amsterdam]	22	11	12	12
SE	Sweden	SE11		Stockholm	17	4	3	4
UK	United Kingdom	UKD3		Greater Manchester	97	34	30	44
CZ	Czech Republic	CZ01	CZ00	Praha	146	93	62	102

Table 1: EU Regional Competitiveness Index 2016 for Attiki and 10 selected EU metros

Own elaboration, based on RCI report data

RCI	COUNTRY CODE	COUNTRY	NUTS CODE	NUTS NAME	Basic sub-index	Efficiency sub-index	Innovation sub-index	RCI 2013
					ranks	ranks	ranks	ranks
2013	GR	Greece	GR30	Attiki	236	156	144	174
2016	GR	Greece	GR30	Attiki	240	179	149	193
2013	DE	Germany	DE21	Oberbayern [Munich]	38	17	8	15
2016	DE	Germany	DE21	Oberbayern [Munich]	19	9	11	9

Table 2: EU Regional Competitiveness Index 2016 and 2013 for Attiki and Munich

Own elaboration, based on RCI report data

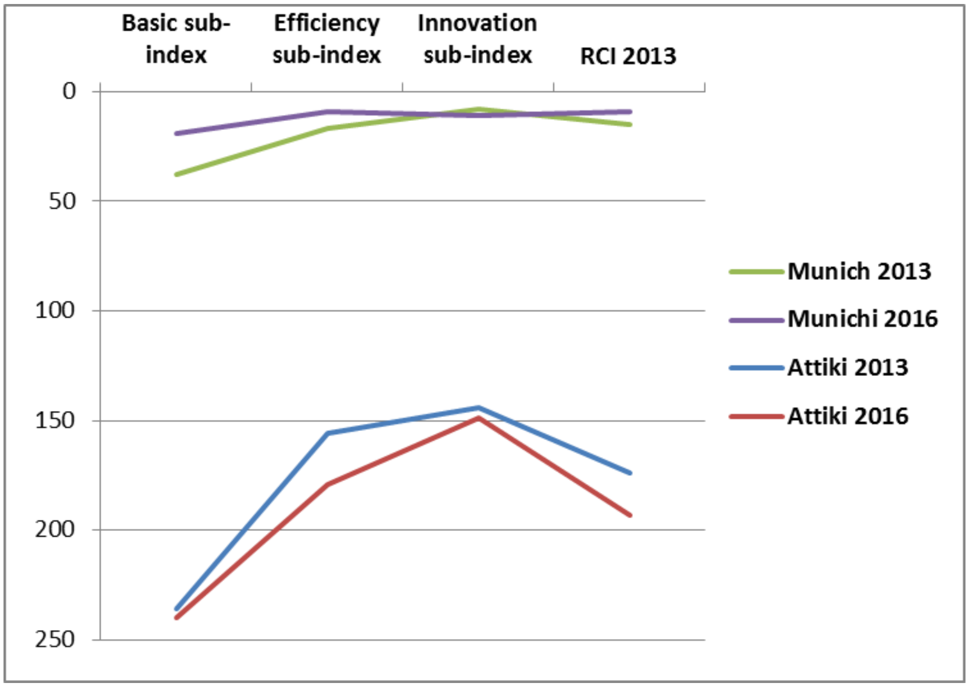

Figure 6: EU Regional Competitiveness Index 2016 and 2013 for Attiki and Munich

5 Territorial planning in Greece and the crisis

In Greece, prior to the crisis, cities exercised a limited role / below the requirements for the development of their wider regions and the whole of the national space.

Their spatial planning was even inadequate as it did not give the necessary importance to strengthening the competitiveness of Greek cities at European and international level, and any specific policy proposals to strengthen this competitiveness were little applied, "remained on paper". Even the CSFs (Community Support Frameworks) and the NSRFs (National Strategic Reference Frameworks), whose objective was to serve the "convergence" of the whole country and, of course, of the Greek cities and regions, with the more competitive EU development structures, did not implement it adequately. The respective declarations / “intention texts” of the Plans have not implemented in practice

This is clear, for example, in the field of the digital economy and more generally in the fields of Research / Technology / Innovation (RTI). While important infrastructures such as transport and (comparatively less) specific infrastructure for the RTI have been created in the entire country as well as in cities and regions, the RTI sector has not been given priority (even regarding the declared objectives). In particular, priority was not given to interconnecting business incubators with businesses in order to diffuse innovation and properly "feed" business operations in order to make them competitive at European and international level.

In some cases, the competitiveness of the economy was viewed as controversial; wealthy EU resources were available in all kinds of "public interest" projects, many of which were essentially impressive projects without substantial contribution to competitiveness and to the development of cities, their regions and the country in general.

In the period of the crisis, the regional centres, which have an important role to play in the development of their surrounding area, have faced and still have difficulties to play their regional role, since many of their activities which have a strong regional influence (e.g. large and / or dynamic production and service companies), are shrinking. Beyond that, however, it should be recognized that even in the period of "prosperity", the respective authorities had not enough support cities to develop competitive activities. In other words, the drafting of developmental and spatial planning and, even more so, their implementation, did not give sufficient priority to this aim and ultimately had little, very poor respective results.

In this context, the debate on investment and, in particular, on foreign investment, has often caused, if anything, embarrassment … Investment was seen in Greece as a necessary evil that could be limited to disappear. Instead of facilitating investment, while setting up an appropriate framework of public / state regulation, the state installed and maintained a too complicated system of controls that made it very difficult to make investments -without "regulating" anything.

The inadequacy of developmental and spatial planning objectives and the inadequacy of the implementation of the few positive objectives are also evident in the Regional Operational Programs (ROPs) and Regional Spatial Plans.

The main responsibility for these deficiencies belonged to the regional and local authorities, the proposals of which were strongly influenced by clientelism[1] (see, among others, in Trantidis, 2016) and thus they had large support from local communities; regional / local authorities and communities demanded from the spatial plans almost "everything" without taking into account the feasibility of their proposals, meaning, first, the cost of each proposed intervention in relation

[1] Clientelism: the allocation of selective benefits by political actors (patrons) to their supporters (clients) (Trantidis, 2016)

with the total available amount of financial resources and, second, the compatibility of the proposal with the general objective to enhance the competitiveness of cities, regions and the country. In other words, the drafting and implementation of spatial development plans did not follow a substantial commitment to the objectives. There was no required "targeting" (term that does not sound so pleasant), which is the strong point of spatial planning, since it simply allows the latter to yield "added value". Without "targeting", spatial planning is little or not at all useful.

We are deliberately highlighting these weaknesses of earlier spatial planning because precisely the overcoming of the crisis is strongly linked to the overthrow of this problematic model of spatial development and spatial planning.

6 Overcoming the Attiki model of spatial planning of together with the crisis

An important characteristic of the MA of Attiki is that it is located on the main development axis of Greece: Patras - Athens - Thessaloniki - Kavala – Alexandroupolis - Eastern border, which includes the eastern part (Thessaloniki - Kavala – Alexandroupolis) of the big axis of Egnatia Odos, which is traversing Northern Greece: Igoumenitsa - Thessaloniki - Alexandroupolis - Eastern border, with vertical connections to neighbouring northern countries. Piraeus is a very important port in the Greek land area, and has, in general, an important role in the South-eastern Mediterranean, the Middle East, etc. Attiki derives significant benefits from its inclusion in the above-mentioned poles-axes system, when of course other conditions are met.

Attiki has benefited greatly from the existence of Universities, Technological Higher Education Institutes, research centres etc. as well as from financial activities, administrative and health services, trade and service centres of regional and national levels etc.

The industrial sector, which is important for Attiki, needs to be adapted and modernized. Its prospects lie in competitive sectors at international level, which will emerge by taking appropriate initiatives with their own dynamics and requiring state support only to remove bureaucratic and other barriers and create a business-friendly environment, as well as improving the interface with the international environment.

The broader service sector, which can help greatly in the development of Attiki, has greater prospects in particular in the provision of services to businesses (advice, planning, etc.), services related with "new industrial activities", either with the transit role of the port of Piraeus and Attiki as a hub of the National road and railway network, or with the tourist-cultural activity.

Significant benefits can be expected from the further enhancement of Attiki's cultural profile and the improvement of its interconnection with the tourist development of Attiki and its wider region.

The upgrading of Attiki's international role has a strategic importance both for its own and its wider area of influence and for the whole country. This international role can focus largely on the financial sector and the high level services as well as on the wider transport sector, focusing on the points / nodes of the national and international transport networks. In a broader perspective, it is of great importance that Attiki be included in emerging international development axes, such as the "silk road" linking China to Europe.

We can draw important lessons from the case of the Piraeus port. Here, the activation of the Chinese company COSCO and the wider interest of the state of China facing Piraeus as one of the major hubs of the "silk road" linking China to Europe reminded us the importance of the international role of Piraeus. It was confirmed that the substantial use of this role, not only at the level of policy declarations, can lead to the development of many important activities. We need to emphasize that while the exploitation of Piraeus' international role has been related to all of our country's development programs shaped during the four past decades, there has been nothing specific about the effective use of this role.

This fact is a primary weakness of the way in which national and regional development policy is implemented in Greece, in comparison with the respective policy implementation in more developed countries.

Conclusion

The uneven interdependence of Attiki with the EU “North”

We note briefly here (see detail at: Angelidis 2013) that the dependency relationships of Greece with the economies of stronger EU countries in key factors for competitiveness, such as FDI and innovation, expanded considerably prior to the crisis, and more, during the crisis. The unequal character of trade of Greece with the EU "North" -Greece imports high-tech goods from the "North" and exports to this goods of low technological level- also increases.

In this context, promoting spatial integration of Attiki and Greece into SEE through the empowerment of the developmental axis Athens-Sofia-Bucharest (see ESPON GROSEE, 2014) presents important advantages, since it can contribute to the improvement of competitiveness and development model of Attiki and Greece through empowerment of their extroversion –an extroversion less dependent from the EU “North" and therefore less volatile and more resilient in times of crisis. The same apply for the improvement of spatial integration of Attiki and Greece into the EU “South”.

Considering the preceding, as well as findings of previous relevant studies developed by ESPON (see detail in ESPON INTERCO, 2012 and ESPON GROSEE, 2014), we arrive at the following conclusions. Attiki showed a significant increase in terms of GDP before the crisis, higher in percentage from the metropolises of the "North" of the EU. However, the distance of Attiki from the past with regard to activities that are of prime importance for competitiveness remained remarkably high and aggravated (increased further) in time of crisis. It should also be noted that the development model of Attiki remains closest to that of the "South" of the EU – but was downgraded in recent years more than the last.

It seems that the inclusion of Athens in EU cities' network has been considerably strengthened. Starting from the most potent poles of the "Pentagon" of the EU, incorporating in the community gradually expanded mainly to the metropolises of southern and Central-Eastern Europe and less for smaller and medium-sized cities. In particular the capitals of Europe, including Greece, have been incorporated into relatively large extent.

This integration remains uneven and “dependent” from metropolises of the EU “North”. In other words, the implementation of EU Cohesion Policy before the crisis did not respond (at least as it should be) the declared aim to achieve "balanced competitiveness” in this case. At the core of this is the fact that the metropolises of EU "North" do not redistribute adequately the factors that are most important for competitiveness in Attiki (as a node of the EU metros network) and also in Greece.

Strengths and weaknesses of Attiki

It is of great importance to discern here the major potential contribution of Attiki – strong and weak points of – to overcome the crisis of the country. The "weak points" of Attiki aggravated, while the "strong points" were losing in importance.

To sum up, with regard to the narrow economic aspect of competitiveness, recent declines in GDP in Attiki and Greece were accompanied by a decline in investments, both foreign (FDI), and total (GFCF), but also with a decrease in Value Added and business turnover.

Of great importance is the change in the structure of the economy per sector and branch. This "seems" to be improved, since the participation of sectors that are primarily introspective (such as construction and a variety of services) is limited, though this is not a "positive" change, since investments in extroverted sectors do not increase, nor – in particular– the diffusion of technology and innovation in the economy improves radically, nor highly developed sectors of the economy that are of strategic importance develop significantly.

The specialization of Greece within the framework of the EU and the world in products and services of low competitiveness, something that was true, though to a lesser extent, for Attiki before the crisis, did not seem to change.

The human resources of Greece and, even more so of Attiki, was a comparatively strong point. Labour productivity was compared with the overall economic performance, quite high before the crisis, while in the period of crisis, at least in the short term, tends to decrease. Therefore, this factor of the Attiki' competitiveness model, while had improved before the crisis, has deteriorated during the crisis.

Attiki accumulated before the crisis, albeit fragmentary, driving factors enhancing its competitiveness at European and international level, such as the financial sector as well as tourism and some brunches of services developed in Attiki, in relation with the improvement of its infrastructure in transport and communications. All of these apply to the whole of Greece, but with comparatively less intensity.

Potentials of Attiki which could be exploited to overcome the crisis

Extending the discussion of the "non-exploitation" of the international role of Attiki, we need to discuss in detail some of its main potential (there are, of course, other relatively less important ones) that have not been sufficiently exploited before and during the crisis, Which must be supported as a matter of priority because they can lead to the exit of Attiki from the crisis - obviously in interaction with the country's overall attempt to exit the crisis.

In the current period of the crisis it is difficult to support the exploitation of Attiki's potential through a very large amount of public investment in technical infrastructure etc. Therefore, an important criterion for choosing the priorities of spatial development policy is to give priority to sectors that can developed with fewer public infrastructures and interventions, after careful exploration of all the development potential of Attiki. A second criterion for the selection of sectors or cross-sectoral interventions should be whether they can enhance the character of the Metropolitan Area as a "development pole", and thus have a catalytic effect on the development of Attiki itself as well as of its wider area of influence. The use of the above criteria is part of the wider logic of "smart growth".

Based on the above, we propose the following priority areas for the exit of Attiki and its area of influence from the crisis (there are, of course, other areas of intervention, relatively less important). Activities related to these priorities do not require significant new infrastructure but mainly "intangible" actions, they can become internationally competitive as well as contributing to the sustainable development of the Metropolitan Area.

a. The role of Attiki as the gateway to the rest of the EU – leading in enhancing activities directly linked to the port of Piraeus (and the other ports of Attiki), railways or motorways, as well as Logistics activities and activities developed in business centres.

In other European countries, many “gate” cities have made significant exploitation of this role.

b. The role of Attiki as a development focal point for its (very wide) area of influence. This role is related to business services, cross-tax services of other categories etc. The development of the respective activities can contribute significantly to the strengthening of the overall Greek system of regional centres.

c. Activities related to research and innovation on the cutting edge of digital technology, developed on the basis of the cooperation of Universities and Technological Education Institutes, research centres, Technological / Scientific Parks etc. with companies in the relevant sectors and with the regional and local authorities. Attiki already has these pre-requisites to some extent and steps have already been made in the direction of the cooperation that has been mentioned, but these steps are still insufficient.

D. Culture with an international and regional range in connection with tourism development and the further consolidation of the cultural identity of Attiki itself and its wider region.

E. Agricultural sector and selected industrial sectors

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