Social segregation in Athens' metropolitan area in the pre-crisis period

Argyro, Gripsiou[1] Myrsini, Fotopoulou[2]

1   INTRODUCTION

This paper seeks to explore social segregation trends in Athens metropolitan area in the very first years of the economic crisis, and discuss the socio-spatial patterns of the metropolitan population, based on the 2011 statistical census data. The spatial aspect of social structures introduces a different dimension on social segregation trends, reflecting segregative outcomes of different socio-economic processes around the world. Varied and nuanced forms of social segregation present in various cities around the world, altering the way of measuring and evaluating the character of the progress. Nevertheless, a potential rise in social segregation depends upon certain mechanisms that allocate residential areas to different social groups (Maloutas, 2007). Hence, the contemporary economic crisis changes in turn the social impact of economic restructuring, and social segregation comes to terms with new realities.

Up until the early 2000s Athens hadn't undergone intense processes of socio-spatial division. Residential segregation in Athens remained relatively low by international standards before the outbreak of the economic crisis. During that period, the metropolitan area of Athens constituted a paradox paradigm of social segregation and social polarization, partially due to the spatial structure of the housing market and to the respective policy framework. Undoubtedly, eight years on since the outbreak of the crisis, the urban space of Athens has been exposed to the socially dividing effects of globalization, experiencing rising social inequalities, demographic changes, marginalization of lower income strata, reduction of social mobility, high unemployment rates, etc (Maloutas, 2007).

Exploring the factors that contribute to the development of social segregation patterns in Athens and elsewhere, one should certainly identify social polarization. According to some authors (Sassen, 1991),

[1] Professional address: Laboratory of Demographic and Social Analysis (L.D.S.A), University of Thessaly, Volos: Pedion Areos, 38334, e-mail: yrwgrips@hotmail.com
[2] Professional address: Laboratory of Demographic and Social Analysis (L.D.S.A), University of Thessaly, Volos: Pedion Areos, 38334, e-mail: myrsinifot@hotmail.com

social polarization is the key factor for the generation of such phenomena. However, various approaches of social segregation claim that the impact of globalization on cities is more complex and diverse than social polarization alone. Hence, it has been underlined that both the formation of socio-spatial structures and the distribution of social groups along residential areas constitute dynamic processes whose roots are identified not only at the economic restructuring process but also at several other factors of regulatory, social, and cultural origin (Préteceille, 1995; Hamnett, 1994; Maloutas, 2014; Marcuse and van Kempen,2002). Particularly in the case of Athens, the institutional and regulatory framework is considered to be the primary agent to define socio-spatial patterns. In this context, it is useful to draw attention to the particularity and the complexity of socio-spatial trends in the Greek capital city, and to approach social segregation as a dynamic and multifactorial phenomenon.

The idea of this paper is to designate the situation before the absolute sovereignty of the economic crisis in the Greek urban space, and should produce a basis for more effective social and spatial policies for the reduction of segregative trends. The first section of the paper introduces the social segregation context and the scientific discussion that has taken place approximately during the last decades. Emphasis is laid upon different approaches that have developed through the empirical analysis of the phenomenon in urban areas worldwide. The second section presents the methodological steps made in order to study the character of social segregation in metropolitan Athens. The third section discusses the research results, attempting also a comparative analysis based on previous studies. Finally, the concluding section provides some reflections about the socio-spatial composition of the Greek capital city in order to design the future of a metropolis in crisis.

2   SOCIAL SEGREGATION: A CONCEPTUAL APPROACH

The concept of social segregation was primarily introduced by the Chicago School (Grafmeyer and Joseph, 1990; Wirth, 1980). Following the economic restrictions imposed in the 1970s and their impact on the social composition of cities, social segregation constituted a large part of both social sciences and urban studies. The globalization process boosted the role of metropolises and cities in the advanced capitalist world, due to their attractiveness to new financial activities, banking services, IT systems, real estate management, etc. A major impact of this economic restructuring was the increase of social polarization and segregation tendencies, which were also expressed spatially. Social polarization refers to the increasing inequality between the transnational corporate elite and those at the bottom of the class structure, as well as to the higher concentration of people at these two extremes (Sassen, 1991).

'Innovative' spatial policies and strategies with a significant impact to the local housing and social composition of neighbourhoods, such as gentrification, have highly contributed to the establishment and the exacerbation of spatial division patterns. According to Sassen (1991), the gentrification process is defined as the appropriation of the urban space by the corporate elite – e.g. the new middle class – and, at the same time, the segregation of the impoverished population – lowest social strata, immigrants etc. Such processes,

however, have not been so widespread neither in European cities nor in the Global South, confirming the multifactoriality of the segregation phenomenon. In this context, several authors claim that the process of globalization and its impacts on the socio-spatial structure include more complex and various stratifications and separations (Maloutas, 2014).

More recent approaches have highlighted the role of urban strategies and social policies, as well as the welfare state in the progress of social segregation (Hamnett, 1994; 1996; Marcuse and Kempen, 2002).Studying the metropolitan area of Paris, Préteceille (1995) has underlined determinants of segregation other than social polarization, such as the process of professionalization. Additionally, he has stressed the role of the welfare state as to the regulation of the impact of the economic to the social restructuring and to the determination of actual trends. Hamnett (1994, 1996) presented similar arguments regarding London. In the same framework, Musterd et.al. (2016) claim that there are four structural factors contributing to the exacerbation of social segregation, namely social inequalities, welfare regimes and housing systems, changing economic structures and the level of global connectedness.

The consequences of economic restructuring give some recognizable elements of polarizing and segregating phenomena in the post-industrial Western and Southern European cities. Recent studies have shown that social inequality has risen since the 1970s in many European countries. More importantly, research undergone by Musterd et.al. (2016) showed that, as far as European metropolitan cities are concerned, socio-spatial segregation is lower than North America, and that, among the European cities, segregation levels vary significantly. Moreover, in most occasions, segregation correlates positively with higher income disparities, more liberal forms of welfare regime and higher global connectedness. It is highlighted, however, that several factors can have effect well after a certain period of time.

The limited welfare state development in Southern European countries and the absence of policies against segregation tendencies attest the increasing difficulties to shape the outcomes of economic restructuring in terms of polarization, and to resist the rise of the social inequalities (Maloutas, 2014). It is worth noting that segregation stems from mechanisms that allocate the residential space on different social groups, and that it doesn't exclusively depend upon the development of social polarization. This is indeed the case in Southern Europe, where the processes of globalization couldn't gain influence against the traditional family system, in the allocation of residential space (Allen et al., 2004). As Maloutas (2007) also showed, segregation in Athens has decreased since the early 1990s, despite the fact that inequalities and social polarization had actually increased.

These approaches stress the contribution of local processes with diverse social and spatial attributes in the global and general context. Nevertheless, a large majority of the existing literature agrees that the outcome of capitalistic economic progress is always a rise in urban division and social inequality. Castells (2000:164-165) describes segregation as the phenomenon of "*multiple black holes of social exclusion throughout the planet n this new geography of social exclusion*". In fact, segregation constitutes a pattern of socially diversified areas. Some other approaches stress that segregation processes are visible in homogenous and isolated micro-areas in cities defined by specific socio-spatial characteristics. All such areas inhabited by certain social groups – such as the high and upper middle class, the lower middle class, the working class and the immigrants – are

characterized as ghettos or ethnic enclaves, in that they are inhabited by ethnic minority groups. Other categories of isolated and homogenous areas identified by their socio-economic status are defined as slums, squatter settlements or shanty towns and gated communities (Grzegorczyk, 2013).

Furthermore, the concept of social segregation proposes the hypothesis that there is a relation between social and spatial distance. Contrariwise, various examples of European cities underline that, even within socially mixed areas the social distance remains, due to the effects of the social structure itself. Most of the times, the analysis of social segregation is based solely upon the residential distribution. Residential division, however, isn't the only expression of segregation, as the latter can include and combine a number of other forms of the social hierarchy, such as social mobility and nationality (Frantz, 2011). According to Lajoie (1998), the concept of social segregation may be identified in its different forms as urban, social, residential or scholarly segregation. In their entirety, these forms of segregation are directly connected to socio-spatial inequalities, indicating each time a different 'type' socio-spatial injustice.

Thus, segregation patterns call for various approaches in different contexts, due to the complex pattern of the metropolitan areas, and to the complexity of the segregation mechanisms. However, enclaves of affluence, deprivation and ethnicity are dispersed across the metropolitan areas (Jalowiecki, 2010). In line with Jalowiecki (2010), the European cities are characterized by greater stability of social structure due to the lower spatial mobility of the residents and to the socially mixed city centers.

Based on the above analysis, this paper emphasizes the contextual diversity of determinant factors other than the market mechanisms, which in Southern Europe concern mainly the state and the regulatory framework, and can be described as the clientelist and familist social regulation, traditional family bonds, the traditional small-scale owner occupation pattern, etc. (Maloutas,2004). In the next sections, the paper aspires to present the socio-spatial pattern of metropolitan Athens in 2011, two years after the breakout of the Greek economic crisis, under the assumption that the negative effects of the economic crisis haven't presented still. The policies adopted to counteract the economic crisis have had multifaceted effects, such as rising social inequality, ongoing deregulation of the labour market, tax relief and other accommodations for investors, a declining public sector, privatizations, increasing housing taxes, etc. The neoliberal orthodoxy set in motion has dramatically deteriorated living conditions in Greece, questioning any prospect towards social equality. In this regard, it is expected that more recent data would present a rather different image of socio-spatial trends and particularly of social segregation in Athens. Although more recent data are not available, it is indeed useful to study the situation on the early stages of the economic crisis.

3   METHODOLOGY OF THE RESEARCH

Initially, the research examined the composition of the population under study, the area under study and the geographic units which compose this area. After selecting the variables to be elaborated, the data have been extracted from the dataset of the 2011 Greek census (Hellenic Statistical Authority, 2011).

Although the breakout of the Greek economic crisis was in 2009, it is useful to examine social segregation, even in reference to a period when the impacts of recession weren't as strong as today.

The urban population under study consists of age groups between 20 and 65+ years old. The potentially economically active population, along with the retirees – on a case-by-case basis – are the age groups which constitute the population that participates and contributes to the overall process of segregation. People under 20 years old have not been included in the overall research, as they mostly constitute dependent members, living in their parents' residences, scholar or university students and not economically active. Furthermore, the age group of 65+ was not included in the analysis of the employment and professional status variables, since it mainly consists of retired – not economically active – members of the population. This group has only been taken into consideration for the evaluation of the education level patterns in order to estimate the distribution of the educated population across the urban space.

Regarding the geographic zone, the Athens metropolitan area has been selected in that it constitutes a matrix of all the social groups and categories that we aim to investigate. Moreover, the geographic units under study are the 2011 census tracts, the lowest-scale units available from the Hellenic Statistical Authority at this time. The study area of metropolitan Athens is divided in 3.406 census tracts, after removing the 18 units of population less than 20 years old. Variables referring to socio-economic data as well as to personal characteristics and social mobility aspects – such as the education level, the employment status and the professional categories – are used in order to evaluate the "snapshot" of social segregation in Athens. It should be noted that, in absence of foreign-citizenship data at the census tracts level, this variable was studied at higher levels, as is explained in the next section.

Having elaborated the necessary variables for education, employment and professional status, and foreign citizenship concentrations, various hierarchical cluster analyses have been implemented according to each one of the aforementioned variables as well as personal characteristics and social mobility aspects. The objective of the analysis is to define an adequate number of groups clearly reflecting different levels of residential inequalities and disparities in the Athens metropolitan area.

Hierarchical clustering is a widely used data analysis tool allowing to successively merge data observations in similar groups of units (census tracts). The merging process is based on a measure of similarity as for example the Euclidean distance. It is a monotonic process in other terms, the similarity between merged groups is monotone decreasing with the level of merge. At the end of the process, when all units have been merged in a single group, the loss of information (variance) is maximal.

For each one of the hierarchical cluster analysis implemented, the main question was to define the most appropriate numbers of groups, reflecting the different patterns of spatial distribution of the population under study. This question has to be treated with caution, respecting two main criteria: (a) high intra-group homogeneity with high inter-group heterogeneity, (b) selection of a limited number of groups with limited loss of information. It is often admitted that this loss must not exceed 20%. Taking into account these two criteria, different alternative solutions have been systematically produced for each one of the variables. Through a cautious interpretation of each one of the selected partitions (different number of groups), it was finally possible to select the most adequate number of groups. Finally, the results of the different cluster

analyses are presented in maps in order to reflect and interpret the spatial distribution of the Athenian population.

4   INTRODUCING ATHENS' SOCIAL SEGREGATION

4.1   PAST AND PRESENT SOCIAL SEGREGATION PATTERNS IN ATHENS

It is clear that in Athens, same as in all the Northern European countries, social segregation doesn't present with high levels of socio-spatial division, such as in Anglo-Saxon metropolises (Frantz, 2011). Based on this remark, social segregation in Athens has generally been characterized as 'soft'. In line with Maloutas (2007), three causes have conduced to the minimal segregation patterns which characterize Athens. Firstly, the increased importance of intermediate social categories, as well as the significant social mobility driven by the broad access to higher education until 1990s. Secondly, the highest and upper-middle social strata had similar housing practices to the lower social strata, reinforcing social segregation only after the 1970s, by their movement to the suburbs. The third cause was the absence of large projects and building companies because of the high rates of individual homeownership, the organization of the Greek family occupational system, the constitution of stable self-help networks in residential areas, the low residential mobility, etc (Maloutas,2004).

Housing policies and practices in Greece is indeed a complex issue. The housing stock and the social composition of the metropolitan area were influenced by the self-promotion and the antiparohi systems[1]. Multistorey buildings were constructed within most of the urban areas in and around the city centre, resided by low, middle and high social strata, provoking vertical social segregation patterns. Since the 1990s the higher and middle social strata have moved towards the suburbs of Athens, reinforcing horizontal segregation in the periphery. The demand of new housing was limited to the suburbs and the existing stock in the central areas was socially redistributed. Furthermore, the access to the homeownership started to decrease following the deterioration of the two dominant housing systems. At the same time, an increase in the land values and housing prices was observed until the end of 2000s (Alexandri, 2014).

For all the aforementioned reasons, Athens constitutes a somewhat peculiar case of social segregation. The cluster analysis carried out in order to categorize the socio-demographic characteristics of the population showed that the social composition of Athens has generally kept the same basic structure and characteristics in comparison to previous periods. An accumulation of affluence along with richer housing settlements persists at the north-eastern and south-western city districts, making the Athenian region socially polarized in general. It is worth noting the increasing polarization and the simultaneously decreasing social segregation in metropolitan Athens during the 1990s (Maloutas, 2007). The two extreme poles of professional categories have since increased. On the one hand, there seems to be a growth trend for higher professional categories related to professionals and managers. On the other hand, the lower professional pole has

---

[1] "*Antiparohi system is related to the system where promotion is co-exercised by small owners and small construction firms in ad hoc joint ventures to produce small condominiums*" (Alexandri, 2014: 18).

increased its share partly due to the immigrants' waves in the 1990s. "*The demographic changes in the city have also had significant social effects*" (Maloutas, 2014 :156).

Another important demographic change concerns the significant waves of immigration which arrived in Athens in the last three decades. People from the Balkans, as well as from Eastern European countries, represented the majority of immigrant population at that time. In the 2000s a new wave of immigrants arrived in Greece, originating from war or poverty zones in the Middle East and Africa (Kandylis et al, 2012). Thus, the city of Athens had a new experience of immigration. As a consequence, different immigrant groups present a differential social integration history.

Immigrants who arrived in Greece between 1990 and 2005 were integrated socially, as well as into the local economies. They were occupied at various types of professions – the 2004 Olympic Games, housing markets and several other jobs abandoned by native Greeks. The immigrants arrived in Athens, settled in mainly abandoned and degraded housing stock, in neighborhoods around the inner city. It is worth noting that the central housing stock was abandoned before the arrival of the progressive waves of immigration, giving place to them. After 2005, the integration of immigrants in Athens and in Greece was more difficult due to their low educational skills and to the deterioration of the economic climate. Most of them are mainly men, originated from Middle East and Africa countries and they are confronted with the absence of immigrant integration policies (Maloutas, 2014). As a result, most recent immigrants are situated at the lower social strata areas and are faced with the danger of no mobility prospects and potential marginalization (Arapoglou et al, 2009).

As mentioned above, in the case of Athens – same as in other metropolises of Southern Europe – spatial proximity doesn't necessarily mean social proximity. The co-existence does not only have ethnic, but also hierarchical character, since the immigrants' origin and social status define the immigrant population hierarchy. Thus, many groups of immigrants settled in the same areas as the native middle or working class, but continued to live into much more degraded housing conditions. Second generation immigrants do not have the same social mobility prospects (Kandylis et al, 2012; Maloutas, 2014). The immigrants also didn't settle into areas of homogenous social categories but in the socially mixed areas of the antiparohi system contributing to the vertical social segregation patterns (Maloutas, 2014). The only exception is the Western side of Athens, which traditionally consists of areas resided by the working class. On the contrary, the foreign corporate elite and activities have been attracted by Athens in a small degree. Thus, the global corporate elite didn't put pressure to the distribution of the housing stock. Contrarily, the immigrants attracted massively by Athens belong to the lower social strata affecting the local housing stock (Kandylis et al, 2012; Maloutas, 2014)

4.2   MAIN FINDINGS OF THE RESEARCH: A COMPARATIVE ANALYSIS

Presenting the main findings of the cluster analysis conducted, the following maps (figures 3.1 to 3.5) depict the socio-spatial patterns of the Athenian urban population based on the 2011 census data which were extracted from the Hellenic Statistical Authority. The data with regard to the education levels, the

employment status and categories, and the professional status have been elaborated at the census tracts levels, whereas the foreign citizenship data were only available at the higher census tracts level. The findings provide us with the opportunity to conduct a comparative analysis for the aforementioned categories.
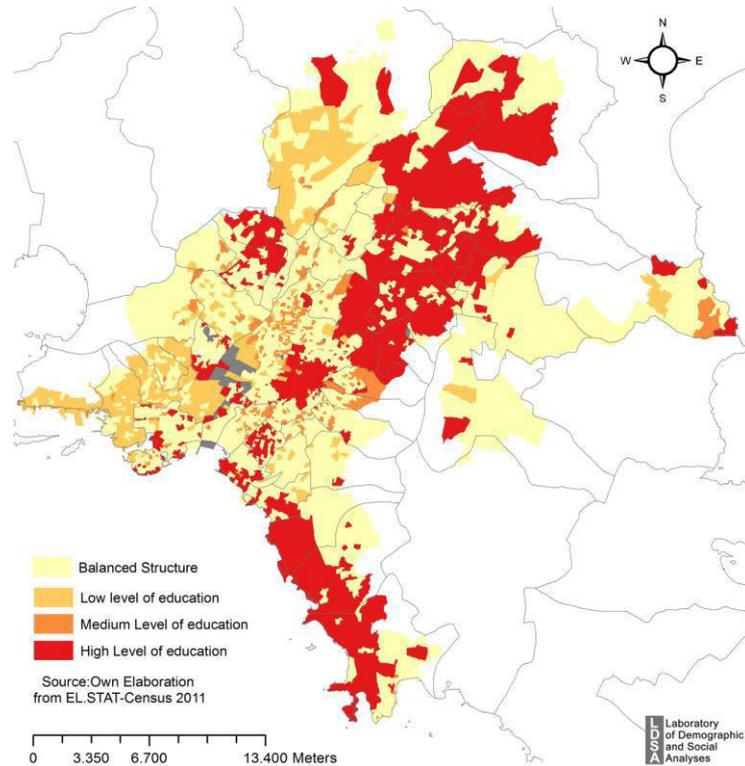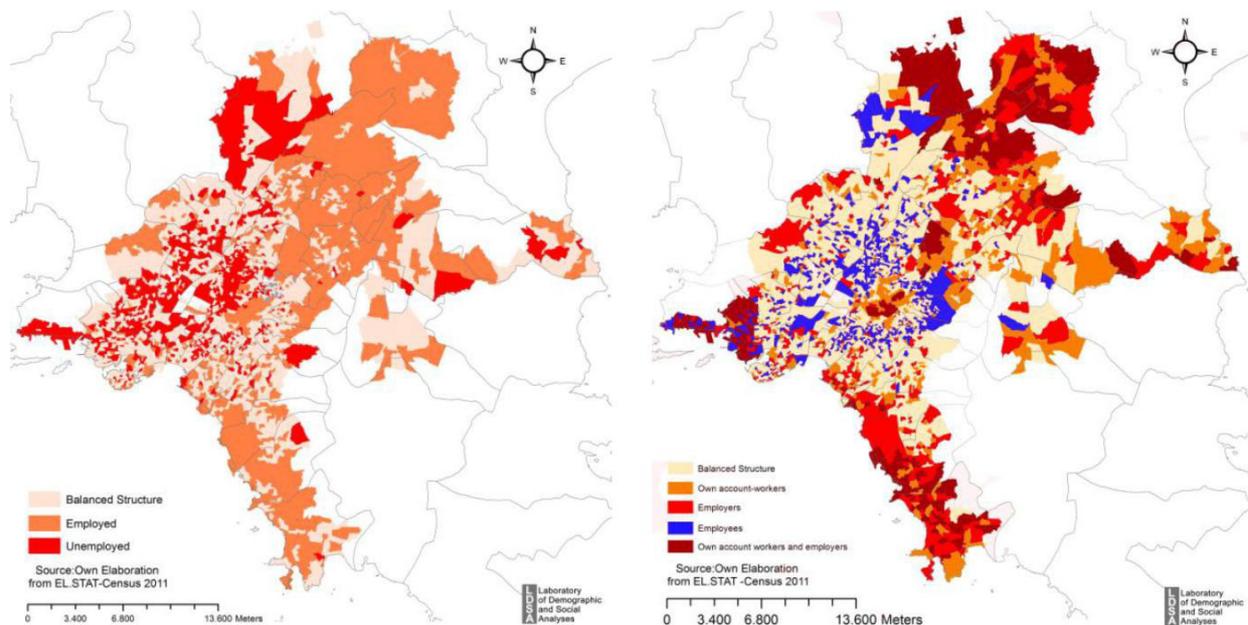

Map 3.1: Education level concentrations (2011)
Source: Hellenic Statistical Authority (2011), own elaboration (Laboratory of Demographic and Social Analyses)

The analysis regarding population categories by level of education resulted in findings as depicted on map 3.1. Population with higher level of educational attainment represent people who have completed tertiary or post-secondary education. Respectively, medium level stands for people who have completed secondary or vocational/technical secondary education, whereas low level stands for people who did not complete primary or secondary education. The findings of the analysis show that a large proportion of the population follow a balanced structure regarding education attainment, namely all of the categories are allocated evenly, based on each category's average. Furthermore, there is a clear image of over-representation of higher education that extends from the coastal south-western to the north-eastern districts of Athens. People with low levels of education are mainly located in western and north-western districts, within and around Piraeus. An interesting note is that the two main categories represented in the Athenian urban space are low and high education levels. The distribution of people of medium levels of education seems to be fairly even. In this sense, the distribution is very clear and corresponds to composition findings of previous studies.

The metropolitan space is divided into three prevailing groups of educational levels, reinforcing the 'traditional' image of social segregation in Athens. It should not be ignored that higher education attainment is a strong indicator of social mobility: The spatial distribution of education level may indicate the correspondence between education credentials and position in the labour market. Thus, it is a way to interpret the social patterns in urban space concerning social segregation. Nevertheless, some highly educated immigrants and native population "*systematically suffer from the incapacity of the local labour markets to provide jobs adequate to their skills and qualifications*" (Kandylis et al, 2012:271, Labrianidis, 2011). In summary, the differentiation among the clusters of education levels is clear: the suburbs of middle and middle-high social groups as well as the city centre exhibit the highest level of education, while the western and inner city districts display low levels of education. The level of education is thus corresponding to the prospects for social mobility introduced in the middle and high class areas.

Maps 3.2-3.3: Employment status and employment categories concentrations (2011)
Source: Hellenic Statistical Authority (2011), own elaboration (Laboratory of Demographic and Social Analyses)

Maps 3.2 and 3.3 depict the distribution of the population in regard to the employment status and to the main employment categories. As can be observed on both maps, there is a particular trend expressed in the metropolitan area. North-eastern and south-western districts display high rates of employment represented by the employment categories of employers and won-account workers, namely the middle-high social classes. On the other hand, high percentages of unemployment correspond to areas of high percentages of employees. These areas are located in districts around the municipality of Athens and towards the North-west, and have already taken effect of the recent economic crisis outburst. Close proximity to the city centre as well as relatively low property values are two main factors contributing to the choice of residence for these social groups. Own-account workers are concentrated mainly in the same areas with or in

proximity to the employers, however there is a strong presence also in the city centre. This trend coincides with the traditional household structure in Greece, the traditional small-scale commodity production units and the freelance occupations of traders, architects, civil engineers, etc. Finally, a wider ring around the city centre of Athens is characterized by a balanced structure, as people from all social strata still choose to not abandon the city-center because of its significant importance, contributing to the mixed social distribution of the metropolitan population.
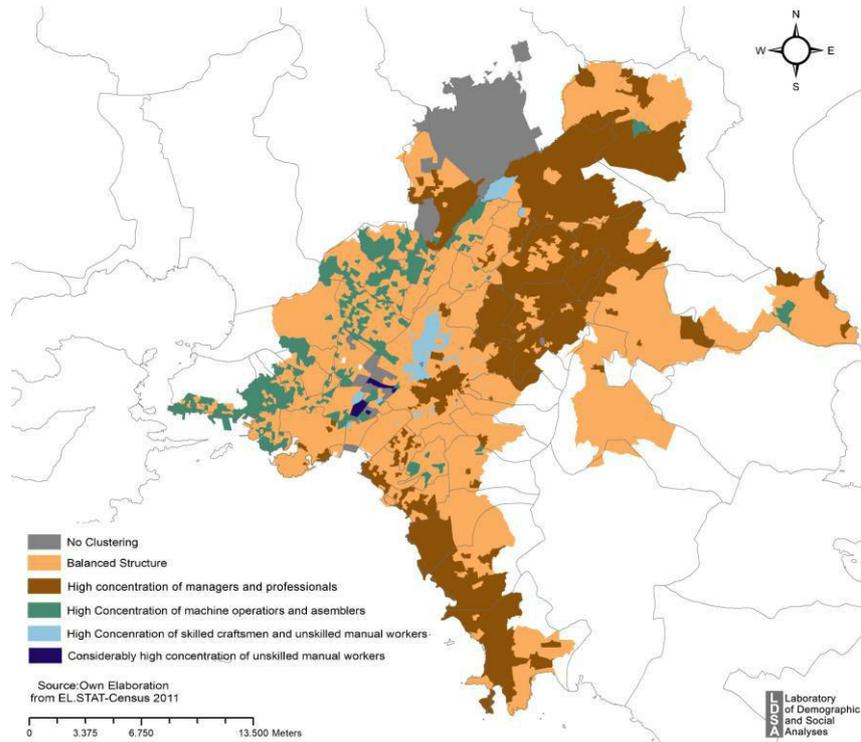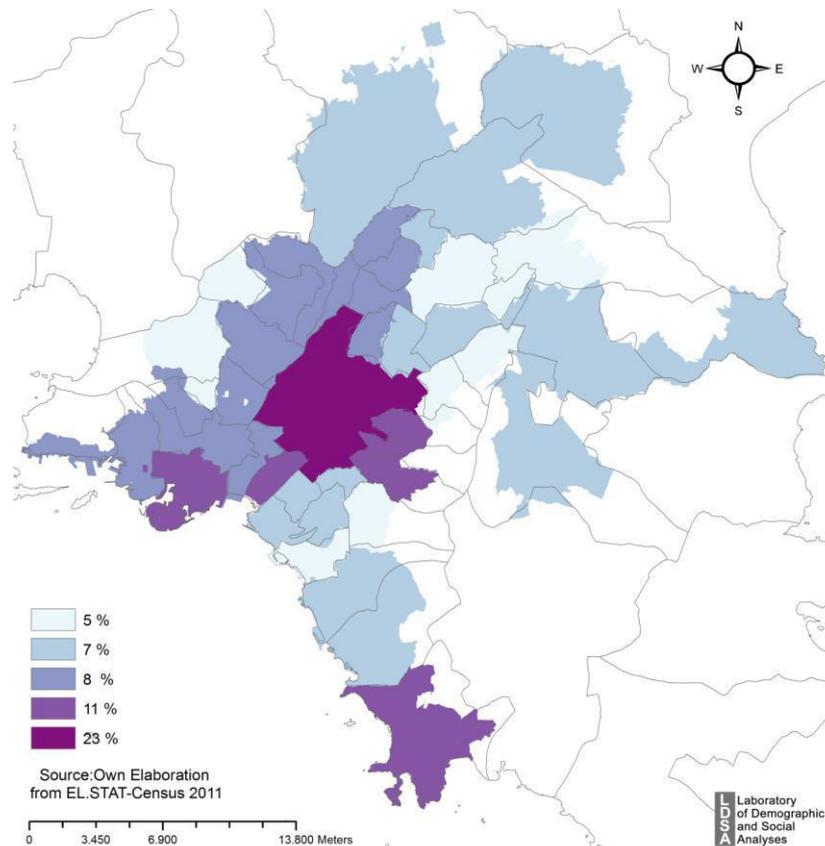

Map 3.4: Professional categories concentrations
Source: Hellenic Statistical Authority (2011), own elaboration (Laboratory of Demographic and Social Analyses)

In respect to the professional status (map 3.4), Athens seems to be fairly divided. It should be mentioned that the professional categories of technicians, service and sales workers, and clerical support workers, which represent a significant proportion of the Athenian working population, were not included in the final cluster analysis stages due to their relatively uniform distribution across the study area. The categories ultimately selected were those indicating relatively high coefficient of variation (CV) levels: administration managers, professionals, technicians, skilled craftsmen, plant and machine operators and assemblers, and manual workers.

In the north-east and south-west districts, as well as in some of the central areas, the dominant professional categories are both professionals and managers, members of the high and middle class of the urban population. This pattern is systematically present and expresses the need of higher classes to reside in certain areas. On the other hand, central and western districts are dominated by lower working classes,

namely machine operators and assemblers, skilled craftsmen and unskilled manual workers, most of whom work in the remaining large industries of a broader area extending around Piraeus and Perama.

Map 3.5: Foreign citizenship population rates (2011)
Source: Hellenic Statistical Authority (2011), own elaboration (Laboratory of Demographic and Social Analyses)

Map 3.5 shows the foreign citizenship population's concentrations across the metropolitan area. The research for this variable was conducted at the higher census tracts level, due to lack of lower-scale data. The available data are categorized according to the countries of origin into two groups, of intraEU and extraEU citizenship. This kind of information is useful for an analysis such as the present, however an interpretation at this level entails risks: a higher level census sector may be highly heterogeneous, consisting of municipalities or areas of divergent socio-ethnic features. A choice was therefore made to not present cartographically this information within the current analysis. In any case, some basic trends are present: north eastern and south-western districts are those with the most powerful presence of intra-EU immigrants, whereas extra-EU immigrants are located mostly in areas around the city centre, towards the western and north-western parts of the metropolitan area. Thus, most extra-EU immigrant groups live in areas accessible to the labour market or near neighborhoods with relatively low rent prices and a variety of accessible domestic services.

Bearing in mind the above remarks, as well as the fact that three out of four immigrants originate from countries outside the EU, the information provided in map 3.5 is not surprising. With the exception of the southest high-level census tract, high concentrations of immigrants appear in the central and western districts of Athens. As expected, the municipality of Athens has the highest rates of both intra-EU and extra-EU immigrants, respectively 4.5% and 18.4%. The socio-economic facilitations and opportunities that arise from residing in the city centre are apparent for the vast majority of the social groups, regardless of country of origin or position in the social class stratification.

5   CONCLUDING REMARKS

The analysis conducted has shown that, although less in comparison to other major metropolitan areas, Athens is indeed segregated. Two basic spatial patterns have been revealed, confirming previous studies.

The first spatial pattern extends from the north-eastern to the south-western suburbs and in part includes the city centre. The areas composing this pattern are mainly affluent suburbs where the high and middle-high social strata reside. The populations in these areas are mostly well educated, employed, employers or own-account workers and administration managers or professionals. The population of immigrants residing there is relatively low and consists mostly of people of origin from a county-member of the European Union.

The second spatial pattern includes areas in proximity to the city centre and most significantly the western and north-western parts of the metropolitan area. Local residents are usually low-educated, while they are characterized by high rates of unemployment and of people whose status in the employment hierarchy is 'employee'. The various concentrations of machine operators and assemblers are due to the various industries that are located in or around Piraeus, Perama, Korydallos, Aigaleo, etc. Immigrants who originate from countries outside the European Union have settled in these areas, seeking to join the local labour market and to live in areas where the cost of living is relatively cheap.

The Municipality of Athens as well as certain districts around it present as socially mixed. People of any social strata or country of origin choose to live there, since there are more opportunities in terms of job variety, cheap housing stock, accessibility, etc. The predominant social groups of the city centre are highly educated, unemployed, employers and own-account workers and, in terms of profession, managers and professionals. Manual workers also have a strong presence in some districts, working in construction services, manufacturing industries etc. The social mixture formed expresses the multiculturiality of the capital and the potentials towards an optimum coexistence amongst different social groups. This 'snapshot' presented corresponds with the contemporary social structure characterizing the Athenian city centre. It seems that, even at the very first years of the economic crisis, dismissals were already rising and own-account workers were unable to manage financially, ending up unemployed.

Certainly, the impact of the economic crisis during the past six years since the last census has dramatically changed the socio-economic landscape of Greece, particularly of Athens. It is expected that

more recent data would show an even more polarized image of the metropolitan area. What is to be seen is if the current economic climate is going to persist and, if so, how it will have impacted the spatial patterns currently characterizing Athens. Previous studies (Maloutas, 2007) had shown that a rise in social inequality does not necessarily mean a respective rise in socio-spatial polarization and segregation. An open question, therefore, rises as to the development of social segregation patterns in the event that social inequalities reach considerably high levels, as in the case of contemporary Greece.

BIBLIOGRAPHIC REFERENCES

Arapoglou, V.P., Kavoulakos, K.J., Kandylis, G., Maloutas, T. (2009). The new social geography of Athens: Immigration, diversity and conflict. In Ventoutra, L. & Papataxiarchis, E. (eds) *The challenge of Migration*, *Synchrona Themata* (Special issue), 107, pp.57-66.

Alexandri, G. (2014). Reading between the lines: Gentrification tendencies and issues of urban fear in the midst of Athens‟ crisis. *Urban Studies*, *52*(9), pp. 1631-1646. Doi: 10.1177/0042098014538680.

Allen, J., J. Barlow, J. Leal, T. Maloutas and L. Padovani (2004) *Housing and welfare in Southern Europe*. Oxford:Blackwell.

Castells, M. (2008). *End of millennium*. Malden, MA[u.a.]: Blackwell..

Frantz, D. (2011). La ségrégation : la division sociale de l‟espace dans la reproduction des rapports sociaux, Retrieved from https://hal.archives-ouvertes.fr/halshs-00642719/document.

Grafmeyer, Y. & Joseph, I. (1990). *L'école de Chicago: Naissance de l' écologie urbaine*. Paris: Aubier. Grzegorczyk, A. (2013). Social and ethnic segregation in the Paris metropolitan area at the beginning of the 21st century. *Miscellanea Geographica - Regional Studies On Development*, *17*(2). http://dx.doi. 10.2478/v10288-012-0040-3

Hamnett, C. (1994). Social Polarisation in Global Cities: Theory and Evidence. *Urban Studies*, *31*(3), pp.401-424. Doi:10.1080/00420989420080401

Hamnett, C. (1996). Social Polarisation, Economic Restructuring and Welfare State Regimes. *Urban Studies*, *33*(8), 1407-1430. Doi:10.1080/0042098966727

Jałowiecki, B (2010). Miasto i przestrzeń w perspektywie socjologicznej. *Wydawnictwo Naukowe SCHOLAR*, Warszawa, pp.246-262.

Hellenic Statistical Authority (2011). Census data 2011.Data base after a request of Laboratory of Social and Demographic Analysis

Kandylis, G., Maloutas, T., & Sayas, J. (2012). Immigration, inequality and diversity: socio-ethnic hierarchy and spatial organization in Athens, Greece. *European Urban And Regional Studies*, *19*(3), pp. 267-286. Doi : 10.1177/0969776412441109.

Labrianidis, L. (2011) *Investing in Getting Away ; Brain Drain from Greece in the Globalisation Era:*, Athens: Kritiki [in Greek].

Lajoie, G. (1998). La ségrégation des populations urbaines de 1982 à 1990. *Données urbaines*, eds) Pumain, F. Godard, A. Chenu. Anthropos, Paris, pp. 191-206.

Maloutas, T. (2004). Segregation and residential mobility: Socially entrapped social mobility and its impact on segregation in Athens. *European Urban and Regional Studies,* 11(2), pp.171–187.

Maloutas, T. (2007). Segregation, Social Polarization and Immigration in Athens during the 1990s: Theoretical Expectations and Contextual Difference. *International Journal Of Urban And Regional Research*, *31*(4), pp.733-758. Doi:10.1111/j.1468-2427.2007.00760.

Maloutas, T. (2014). Social and spatial impact of the crisis in Athens: From clientelist regulation to sovereign debt crisis. *Région et Développement,* 39: pp.149-166

Marcuse, P. & van Kempen, R. (2002). *Of states and cities* (1st ed.). Oxford: Oxford University Press.

Musterd, S., Marcińczak, S., van Ham, M., & Tammaru, T. (2016). Socioeconomic segregation in European capital cities: Increasing separation between poor and rich. *Urban Geography*, pp.1-22. Doi: 10.1080/02723638.2016.1228371.

Preteceille, E. (1995). Division sociale de l'espace et globalisation: Le cas de la métropole parisienne. *Sociétés Contemporaines*, *22-23*(1), 33-67.

Sassen, S. (1991). *The Global City: New York, London, Tokyo,* Princeton: Princeton University Press.

Wirth, L. (1980). *Le ghetto*, Grenoble: Presses universitaires de Grenoble :